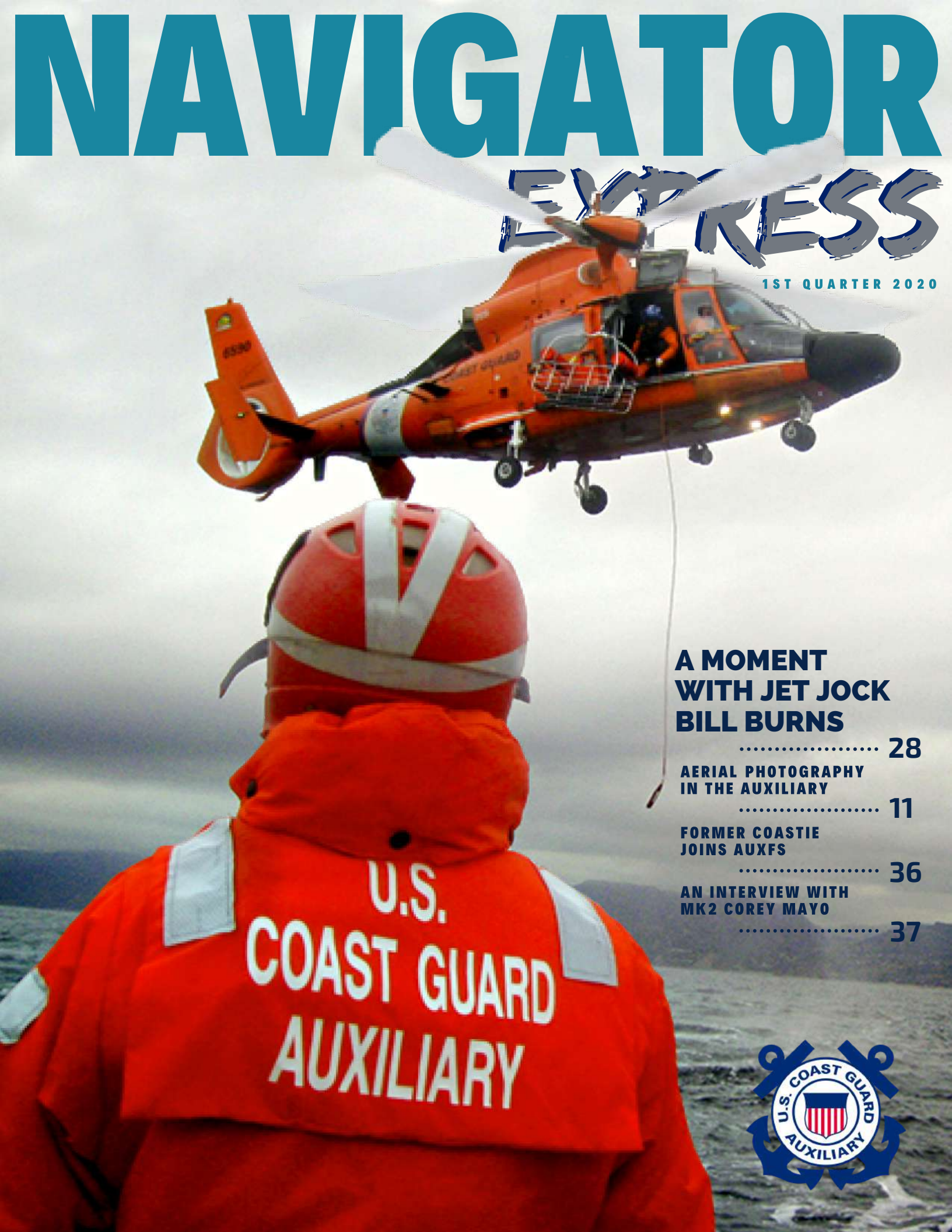
NAVIGATOR

EXPRESS

1ST QUARTER 2020



HOW WE MAKE A DIFFERENCE IN THE COAST GUARD AUXILIARY

Boater Safety Education

The Auxiliary's most prominent role is promoting recreational boating safety ("RBS") among the general public. The Auxiliary has several distinct programs that support this mission. Providing free Vessel Safety Exams to recreational boaters is one of the Auxiliary's longest running and most visible activities.

Public Affairs

Public Affairs (PA) assists in publicizing the missions and accomplishments of Team Coast Guard. Public Affairs provides a direct link between the Auxiliary and the public through recruitment and retention of membership. Public Affairs is important for recruiting membership, and providing boating safety education to the public.

Augmenting The Coast Guard

The Auxiliary serves as a force multiplier for the Coast Guard by promoting safety, security, and assisting boaters and paddle-craft using our national waterways, via ports, bays, rivers, lakes, and coastal areas. Improving recreational boater safety was delegated to the Auxiliary as our “job one”. The Auxiliary also directly supports active duty and reservists in carrying out search and rescue, marine safety, waterways management, environmental protection, and homeland security missions.

Coast Guard Auxiliarists Bill Fithian (Air Crew), left, and Howard Davis (Aircraft Commander), right, prepare for a training mission. Photo by Joseph Giannattasio.

ABOUT THE AUXILIARY

The United States Coast Guard Auxiliary (USCGAUX) is the uniformed auxiliary service of the United States Coast Guard (USCG). The Auxiliary exists to support all USCG missions except roles that require "direct" law enforcement or military engagement. As of 2019, there were approximately 24,000 members of the U.S. Coast Guard Auxiliary.

Established by Congress in 1939, the United States Coast Guard Auxiliary motto is *Semper Paratus (Always Ready).* We invite you to learn more about who and what we do as members of *TEAM COAST GUARD.*

The Auxiliary operates in:

- **Recreational Boating Safety and Education**
- **Public Affairs and Community Outreach**
- **Safety and Security Patrols – Ports/Waterways**
- **Search and Rescue Mission Support**
- **Food Specialists for USCG events/ships**
- **Mass Casualty and Disaster Assistance**
- **Pollution Response & Patrols**
- **Commercial Fishing Vessel and Recreational Vessel Exams**
- **Platforms for USCG Training – Helicopter OPS**
- **Recruitment for Coast Guard Auxiliary/USCG**

In addition to the above, the U.S. Coast Guard Auxiliary operates in any mission as directed by the Commandant of the U.S. Coast Guard or Secretary of Homeland Security. Our mission is to promote and improve Recreational Boating Safety, to provide trained crews and facilities to augment the Coast Guard and enhance safety and security of our ports, waterways, and coastal regions, and to support Coast Guard operational, administrative, and logistical requirements.

NAVIGATOR EXPRESS

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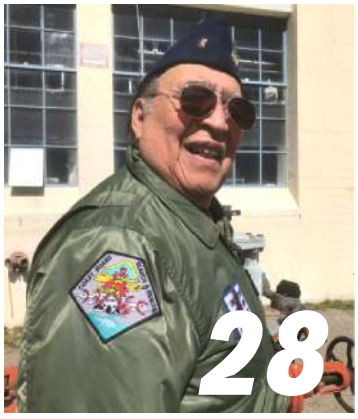
Journey through picture-perfect aerial scenes as you learn about aerial photography, and the best tips to getting you the perfect shot while flying with the Auxiliary.

U.S. Coast Guard Air Station San Francisco has a rich aviation history. Dive into this article to learn about the station and its impact on USCG aviators.



Commander Bill Burns was a Jet Jock in the U.S. Air Force. Learn about his story, and his path to becoming a member of AUXAIR.

NAVIGATOR EXPRESS

Andrew Niquette, BA-AMEB

Roger Bazeley, BC-AME

NAVIGATOR EXPRESS

LETTER FROM THE EDITORS

Dreams of flight: …I have slipped the surly bonds of earth and danced the skies on laughter-silvered wings; Sunward I've climbed, and joined the tumbling mirth of sun-split clouds, and done a hundred things you have not dreamed of. Wheeled and soared and swung…" *Ref: High Flight John G. Magee RCAF Fighter Pilot 1922-1941.*

Are you in awe looking out the window of an airliner on take-off as you view the streets, houses, cities, and land features or the patchwork quilt of farms and forests in their multitude of colors and thinking you would like to be an Auxiliary Aviation (AUXAIR) pilot or operational crew member? How about taking part in a search and rescue (SAR) mission, pollution patrol, or as a public affairs aerial photographer? Or participate in an incident response or disaster survey to support and augment the United States Coast Guard? Joining the AUXAIR program as a trainee is your ticket!

You can even train to help at a USCG air station in many capacities as an AUXAIR watch stander, an Auxiliary Food Service Specialist (AUXFS) volunteer at changes of command and special events, as well as other areas of support. USCG air stations like San Francisco, established in 1941, demonstrate USCG aviation's evolution. During World War II, when called Mills Field, it was home to rescue seaplanes including the famous PBY-5 Catalina and RD-4 Dolphins. Even in 1945, the Boeing PB-1G flying fortresses were used for rescue/patrol. In 1978, all fixed wing aircraft were moved to Sacramento and in 1978, San Francisco became a helicopter-only air station. Through a sophisticated communications network, AUXAIR, USCG air stations, and aircraft are connected along with water/surface Auxiliary patrol facilities and USCG boat stations when working combined efforts in search and rescue (SAR) missions as Team Coast Guard.

With the Navigator Express' 2020 first quarter issue, we start the issue with everything AUXAIR in a diagrammed graphic design format created by our Navigator Express Layout/Design Editor Andrew Niquette. This technique will be applied to articles about our Auxiliary specialties using this creative informative format. Next, the history of Air Station San Francisco as it transitioned from fixed wing aircraft to an all helicopter station currently using M65-D Dolphin Helicopters in high visibility safety orange. There is an article with tips on aerial photography from a fixed wing Cessna 172 similar to many owned and flown by AUXAIR specialists and used by qualified AUXAIR crews and observers, as well as a platform for AUXPA photographers. We end our AUXAIR feature theme with the amazing interview story of and by Commander "Bill" Burns, Jet Jock to AUXAIR crew trainee.

We continue with new features and changes in the issue in layout design that include articles in every issue on Auxiliary Food Services, Sea Scouts, AUX Fitness, Navigator's Corner and Scuttlebutt. They are inserts describing the Auxiliary and the programs we participate in, and exciting photography and articles reflecting our efforts to cover a broad base of topics. We strive for geo-diversity in our articles to illuminate the national diversity of our Auxiliary membership and missions. Our main goal as editor and layout editor is to make our contributors' work shine and communicate with impact. Our door is always open to new and intriguing articles from around the country and globe that tell the story of the USCG Auxiliary in serving our communities, and participation with the United States Coast Guard as members of Team Coast Guard.

Roger Bazeley, Editor, BC
Andrew Niquette, Layout/Design Editor, BA

COVID-19 FAQ

OFFICIAL USCG INFORMATION ON NOVEL CORONAVIRUS

PREPARED BY ANDREW NIQUETTE FOR USE IN THE U.S. COAST GUARD AUXILIARY'S NAVIGATOR EXPRESS

Q: I may have been exposed to someone with COVID-19. What should I do?

Your first step is to assess the risk. Call the TRICARE nurse hotline or your health insurance beneficiary hotline for support. They'll help you assess the risk, including duration of contact and exposure to body fluids.

Q: I'm experiencing flu-like symptoms. What should I do?

The most common symptoms of COVID-19 are coughing, fever and shortness of breath. If you are experiencing any of these symptoms, notify your command, call – do NOT visit – your primary care manager, the nearest CG clinic or emergency room, and follow your doctor's directions. Remain in your home or quarters while recovering. If you are experiencing a medical emergency, call 911.

Q: Should I change my upcoming official travel within the United States?

Official travel to U.S. locations experiencing sustained community transmission of COVID-19 should only be performed if it is mission-essential, time-sensitive work that cannot be handled via distance or remote means. Commands should consult cognizant state, local, tribal, and territorial public health authorities to determine if sustained community transmission is occurring. Commanders should also consult with their cognizant USCG clinic senior medical executive for guidance on official travel.

Q: Should I change my upcoming personal travel within the United States?

All Military Personnel, including Reservists on Orders: Leave travel within the U.S., including territories, experiencing sustained community transmission is prohibited, including leave that was previously approved. Consult the cognizant state, local, tribal, and territorial public health authorities to determine if sustained community transmission is occurring. In extenuating circumstances, members may request a waiver from their chain of command.
Civilian Personnel, Dependents and Auxiliarists: Leave travel within the U.S. including territories, experiencing sustained community transmission is highly discouraged.

Q: What happens if the Coast Guard closes my worksite?

If you are telework ready, you would be expected to telework. In some situations, you may be granted excused absence if a USCG facility is closed due to a contingency or pandemic event. However, USCG does not anticipate the need for widespread use of excused absences, which would be regarded as a last resort. USCG will follow the Office of Personnel Management (OPM) guidance on the use of excused absence (e.g. administrative leave, weather and safety leave) in pandemic situations.

For the full FAQ, please visit:
https://www.uscg.mil/Coronavirus/FAQ/

The Centers For Disease Control and Prevention (CDC) provides helpful guidance at:
https://www.cdc.gov/coronavirus/2019-ncov/faq.html#protect

AUXILIARY AVIATION

TEAM COAST GUARD

U.S. COAST GUARD AUXILIARY

JOIN AUXAIR **JOIN TODAY!**

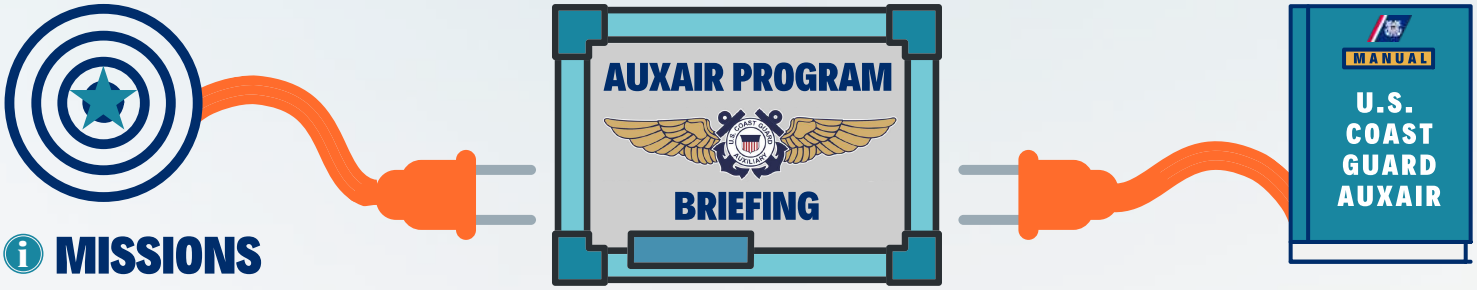
AMERICA'S VOLUNTEER GUARDIANS

WWW.CGAUX.ORG

EVERYTHING AUXAIR

BY ANDREW NIQUETTE

Auxiliary Aviation (AUXAIR) is an operational program that is organized on a district level rather than on a flotilla and division basis. AUXAIR aviators have varied aviation backgrounds and many have prior military experience. AUXAIR aviators volunteer their aircraft for use as facilities, just as surface operators volunteer their boats.



MISSIONS

AUXAIR participates in many Coast Guard missions, including:

- SEARCH AND RESCUE
- PORT OPERATIONS
- WATERWAYS AND COASTAL SECURITY
- MARINE SAFETY
- POLLUTION RESPONSE
- AIDS TO NAVIGATION
- ICE RECONNAISSANCE

It also conducts logistic transport missions. AUXAIR is an integral part of the Coast Guard search and rescue team and its homeland security forces. As with surface operators, air facility operators are issued patrol orders. Orders are issued based on schedules created by crew and facility availability and the needs of the Coast Guard. Coast Guard Air Stations are the order issuing authority for AUXAIR. This alignment of Auxiliary aviation assets in a district with an air station is known as the "squadron concept", because aviation orders and direction flow directly between the air station and the district aviation staff.

Auxiliarists involved in AUXAIR take Auxiliary aviation training, completing the syllabus for their level of qualification. After having their knowledge and skills approved by an Auxiliary Flight Examiner, they may be certified by the District Director of Auxiliary (DIRAUX) as pilots, observers or air crew in the AUXAIR Program.

TRAINING

In addition to self-study and hands-on training, the Auxiliary provides instruction through various C-Schools:

PILOT QUALIFICATIONS

There are three qualification levels for pilots, similar to active duty Coast Guard:

AIRCRAFT COMMANDER	FIRST PILOT	CO-PILOT
1,000 hours with Instrument Flight Rules (IFR)	500 hours	200 hours

These levels of qualification are also linked to the types of missions they are authorized to fly. All pilots must pass recurrent flight checks and undergo annual safety training. Pilot candidates must successfully pass a written open book test, take water survival training, and pass a check flight.

HOW DO I GET STARTED?

First, one joins the Coast Guard Auxiliary and becomes a Basically Qualified (BQ) member. This involves getting some education about the Auxiliary, its structure and organization. As the Auxiliary predominantly deals with boating safety, some background knowledge about boating is a necessity. New Auxiliarists therefore take an Auxiliary boating safety course, another qualified course or self-study, and then pass an examination. Once obtaining BQ status, they may undertake study in any of several Auxiliary programs, including AUXAIR. Members involved in AUXAIR must earn their qualifications through advanced training. This training is designed to develop observers and pilots for Auxiliary service.

NON-PILOT ROLES

Non-pilot crew positions include **observer** and **air crew**. Observers must pass air operations training and egress/water survival training. Air crew are observers with additional training and qualifications. Observers generally handle communications between aircraft and Coast Guard units, assist the pilot with navigation, keep records in the air, and focus their attention outside while searching. Observers are the payload for search missions. AUXAIR can not perform most missions without the observer.

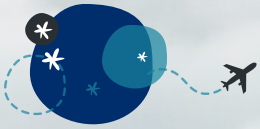
Observer training includes:

- AVIATION ORIENTATION
- OBSERVATION TECHNIQUES
- COMMUNICATIONS
- SEARCH TECHNIQUES AND PATTERNS
- SAFETY AND SURVIVAL SKILLS

Observer candidates must successfully pass a written open book test, take water survival training, and gain experience in the air on missions, then demonstrate their skills to a first pilot or aircraft commander.

Experienced observers may be eligible to earn the air crew rating. The training for the air crew rating rounds out the observer's knowledge with more instruction on:

- AVIATION AND AIRCRAFT OPERATIONS
- CREW RESOURCE MANAGEMENT
- AVIATION COMMUNICATIONS
- NAVIGATION PROCEDURES



OPERATIONAL FACILITIES

Pilots may offer their aircraft for use as Coast Guard Auxiliary operational facilities. Planes are inspected to verify that they meet requirements and that all paperwork is in order. A marine radio must be available for use in the plane and an external antenna must be installed. All aircraft used in AUXAIR operations must be USCG approved facilities. Auxiliarists using their own aircraft on ordered missions may be eligible for reimbursement for fuel and maintenance expenses.

CURRENCY MAINTENANCE

Currency maintenance insures that members maintain their proficiency and ability to safely perform their duties.

ORDERS - AUTHORIZATION FOR PATROLS

Orders for facility movement is one of two general kinds of orders that may be issued to Auxiliarists. Such orders are considered assignment to duty. These orders may be either written or verbal, and may be reimbursable or non-reimbursable. Auxiliarists may not use any facility or special purpose facility for any Coast Guard or Coast Guard Auxiliary purpose or mission unless appropriate patrol orders have been issued and the facility has been properly offered and accepted for use. The AUXDATA Order Management (AOM) system is the mandatory method of issuing patrol orders to operational facilities. This system is an online web-based tool. An OIA must issue or authorize orders before an Auxiliarist conducts any patrol activity.

Candidates for air crew pass a physical exam, learn the contents of the Air Crew Training Syllabus, are trained and examined on that material by instructor pilots and flight examiners and, if successful, are certified by the Director of Auxiliary. All flight crew members (including all observers, air crew, and all pilots) must have annual emergency egress training and water survival training. This includes a 75-yard swim, life raft and emergency gear familiarization, and may include optional training in the shallow water egress trainer.

AUXAIR training is ongoing, with aviation training workshops held at least annually. Recurrent training is conducted in crew resource management (CRM), aviation decision-making, risk management, aero- medical topics, Federal Aviation Regulations (FARs), and general aviation safety topics. AUXAIR patrol and administrative topics are included as well.

Dolphin MH-65-D Helicopter on tarmac with AUXPA.
Photo by Roger Bazeley.

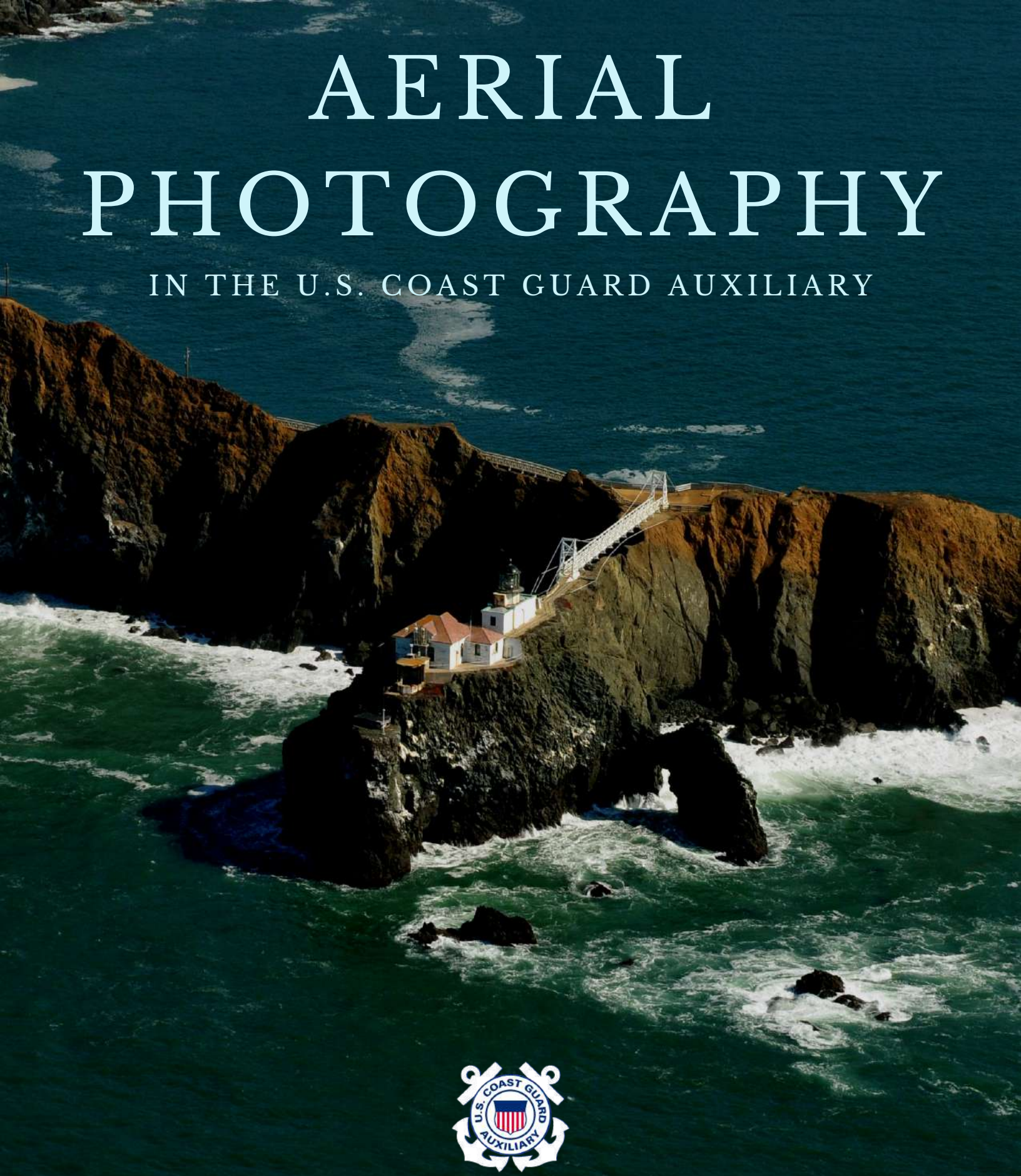
FLOTILLA POINT BONITA SUPPORTS AIR STATION SAN FRANCISCO

MH-65C — MH-65A/B upgraded with new 934 shp (696 kW) Arriel 2C2-CG engines that provide 40% more power and higher performance, plus an upgraded tail gearbox, long-nose avionics compartment, increased 9,480 lbs. (4,300 kg) MTOW, expanded lateral flight envelope and Vehicle and Engine Multifunction Display (VEMD) with First Limit Indicator (FLI). First retrofit completed in October 2004.MH-65C — Initially intended only for use by the Multi-Mission Cutter Helicopter (MCH), a further enhancement of the HH-65C within the USCG's Deepwater effort, includes the installation of a 10-blade low-noise Fenestron, relocated avionics, and an airborne use of force package (in common with that of the modernized HH-60T) which provides the capability to fire warning and disabling shots from the air.

USCG Auxiliarists who attended included flotilla members Roger Bazeley, Derek Lam, Bill Burns, Neil Nevesky, Charles Johnston, Robin Stewart, Cynthia Dragon, Diana Serchia, Bart Rugo, Stan Teng, Gerald Norton, Julie Vincenzini and family, Joel Hammer, Simone Adair, Charles Warren, and Air Station San Francisco Dolphin 65C Pilots.

AERIAL PHOTOGRAPHY

IN THE U.S. COAST GUARD AUXILIARY



ARTICLE & PHOTOS BY ROGER BAZELEY

Point Bonita Light House Station, Marin, CA.

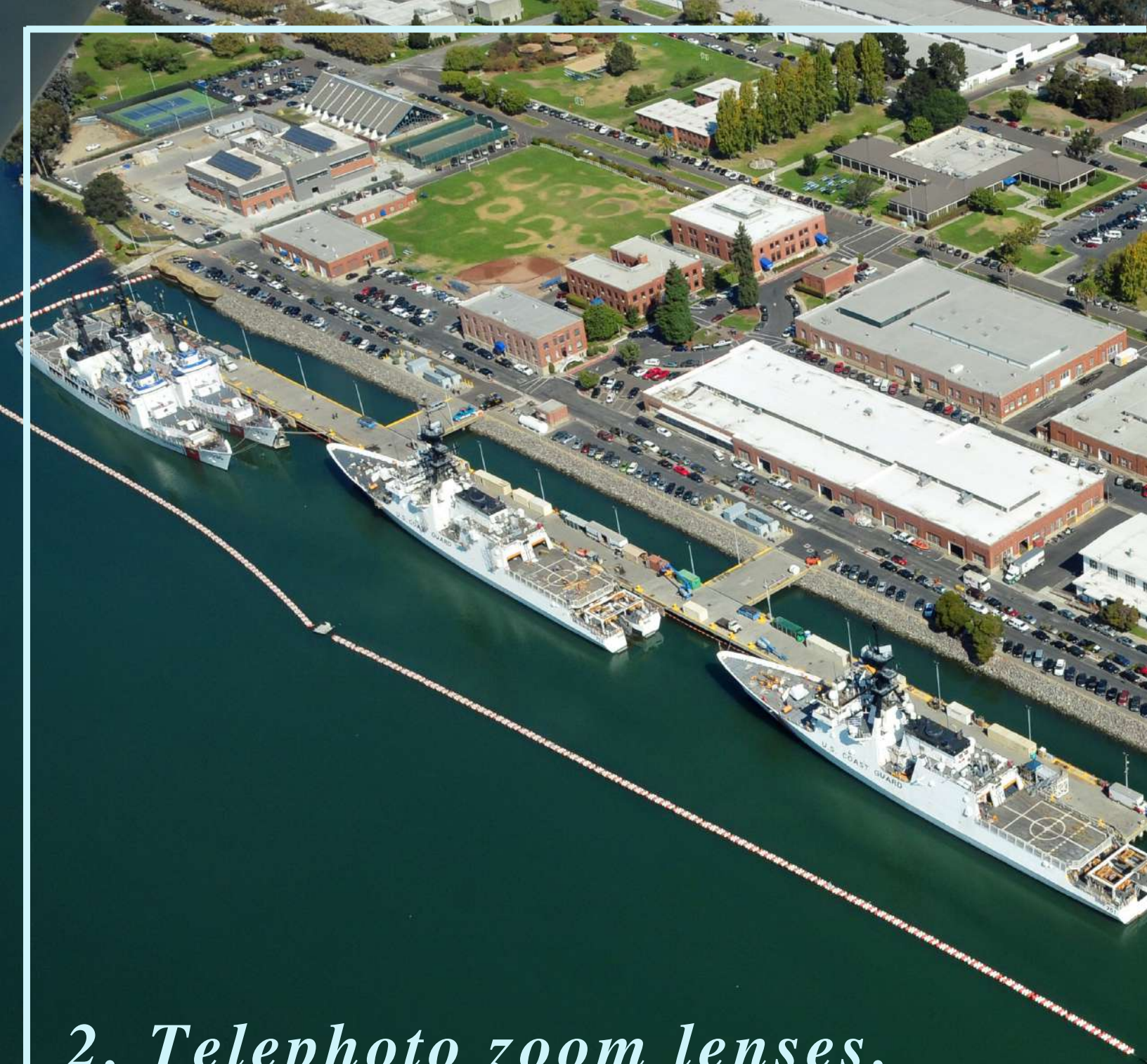
Wheels-up at 13:00 from the Concord airstrip in a Cessna 172, just in time to make the early afternoon lighting coming over the Golden Gate Bridge. This Bay flight and public affairs mission presented incredible views of the entire San Francisco Bay, and allowed for ample opportunities to photograph at many different angles. It was an incredible experience, and I came away with some great images. However, there are definitely some crucial things to be learned from this experience.

1. Choose your aircraft wisely.

The only way that this was going to work was to have an unobstructed field of view from the airplane. Since I place a priority on sharpness and image quality, shooting from behind the Plexiglas window of a plane was challenging. Luckily, the Cessna single engine four-seater that my pilot Jim flew had newly polished fixed windows where some other planes have windows that open from the bottom out to a 60-degree angle, allowing a clean open-air view. This meant that in order to get into position for a shot, the pilot would bank and tilt the aircraft by following my hand signals. While this worked out just fine, and I was able to capture every angle and lighting scenario that I had in mind, it definitely wasn't easy.

San Francisco Golden Gate Bridge.

Aerial photographers definitely have their share of challenges. Sometimes, a helicopter is preferable for an aerial photography shoot for a number of reasons. Many helicopters like the USCG Dolphin M65 have sliding doors. That way, when you are properly strapped in, you can hang out into the open air and fire away rapidly, granting you an unobstructed view below. A plane with windows or sliding doors that opens, or a helicopter with sliding doors can allow for the highest resolution photos.



2. Telephoto zoom lenses.

On land, I usually use a wide angle lens. But sometimes they are too wide with certain aircraft designs and placement of wings and struts to be clear of the picture view. However, even though we were flying at fairly low altitude (1,500-800'), subjects on the ground such as the Golden Gate Bridge, Alcatraz, or downtown San Francisco are close enough that a wide angle or mid-range lens worked with excellent sharp results when avoiding sunlight glare and equipped with lens or camera stabilization technology. With my minimal field of view, it was advantageous to be able to zoom into a specific subject.

(A great telephoto lens is a 16-85mm VR DX or 24-128mm FX)

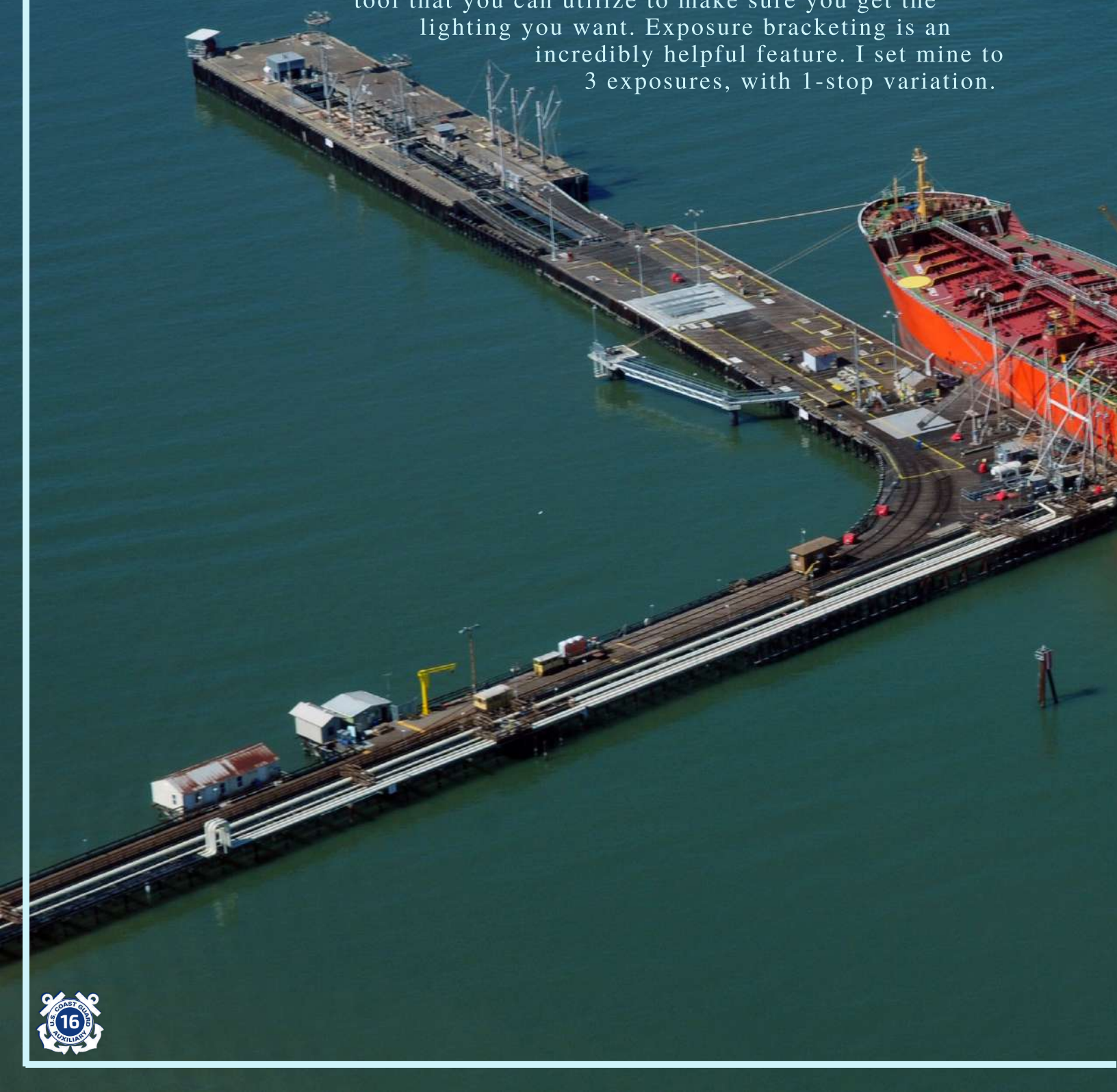
U.S. Coast Guard Island, Alameda, CA National Security Cutter berthing area.

3. Fast shutter speed is key.

In order to avoid any kind of motion blur, you have to use every tool available to keep the shutter speed as fast as possible. Due to the vibrations of the plane, it is also critical to always handhold your camera. Leaning or resting the camera or lens on any part of the plane can cause the camera to vibrate and create blurry images. Several tips in equipment are to use lenses with stabilization or vibration reduction technology. Also, do not press the camera lens directly on the plexiglass aircraft windows. Instead, use rubber lens shades, pillows, and bean bags for arm and camera support to absorb aircraft vibrations.

4. Having optimal settings.

Given the importance of tip number 3 (maintaining a fast shutter speed), all of the other camera settings revolve around that. In manual mode, my settings were: **shutter speed - 1/500**, **aperture - f/4**, **ISO - auto**, **EV - +0.7**, **autofocus**. Late afternoon, the golden hour with the light decreasing, having the ISO continually adjust to the changing conditions was essential. All these settings should be "good to go" on your camera before you get in the plane. It's important not to be fiddling with camera settings mid-flight. There is another tool that you can utilize to make sure you get the lighting you want. Exposure bracketing is an incredibly helpful feature. I set mine to 3 exposures, with 1-stop variation.



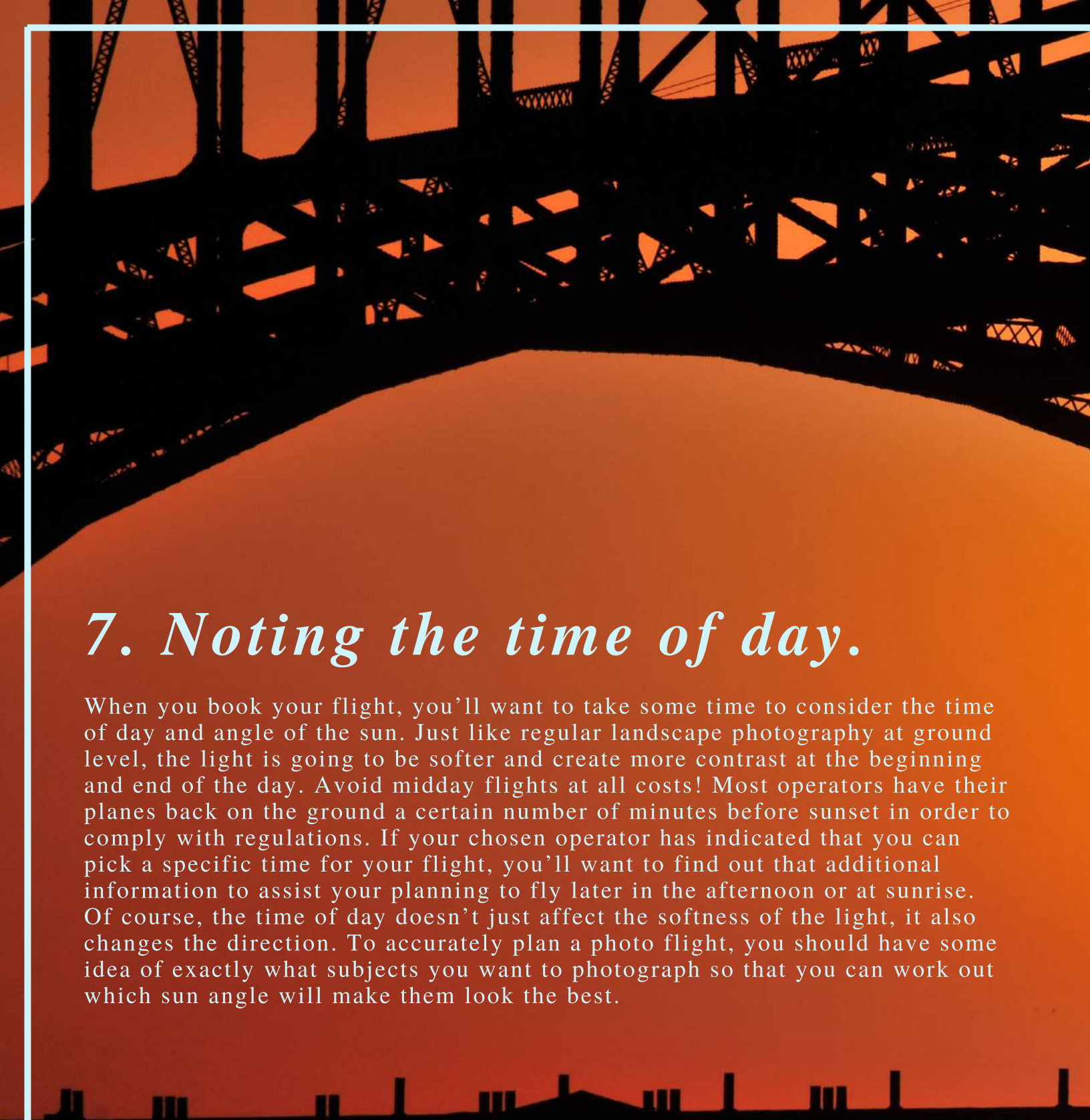
5. Choosing the best camera.

The light was fading fast, and it was a goal of mine to capture shots of the San Francisco illuminated by the city lights. Given everything mentioned about the importance of maintaining a minimum shutter speed, it was crucial to have an aerial camera with the flexibility of higher ISOs while maintaining low noise and high quality sensors. The Nikon D750 and D7200 bodies I use have those capabilities. In aerial photography the difference between the pro DSLRs and the entry-level or even mid-range camera bodies is significant in your photos results. The best camera for aerial photography is one with a high ISO range, custom programming and easy to hold-ergonomics.

6. Having the right tools.

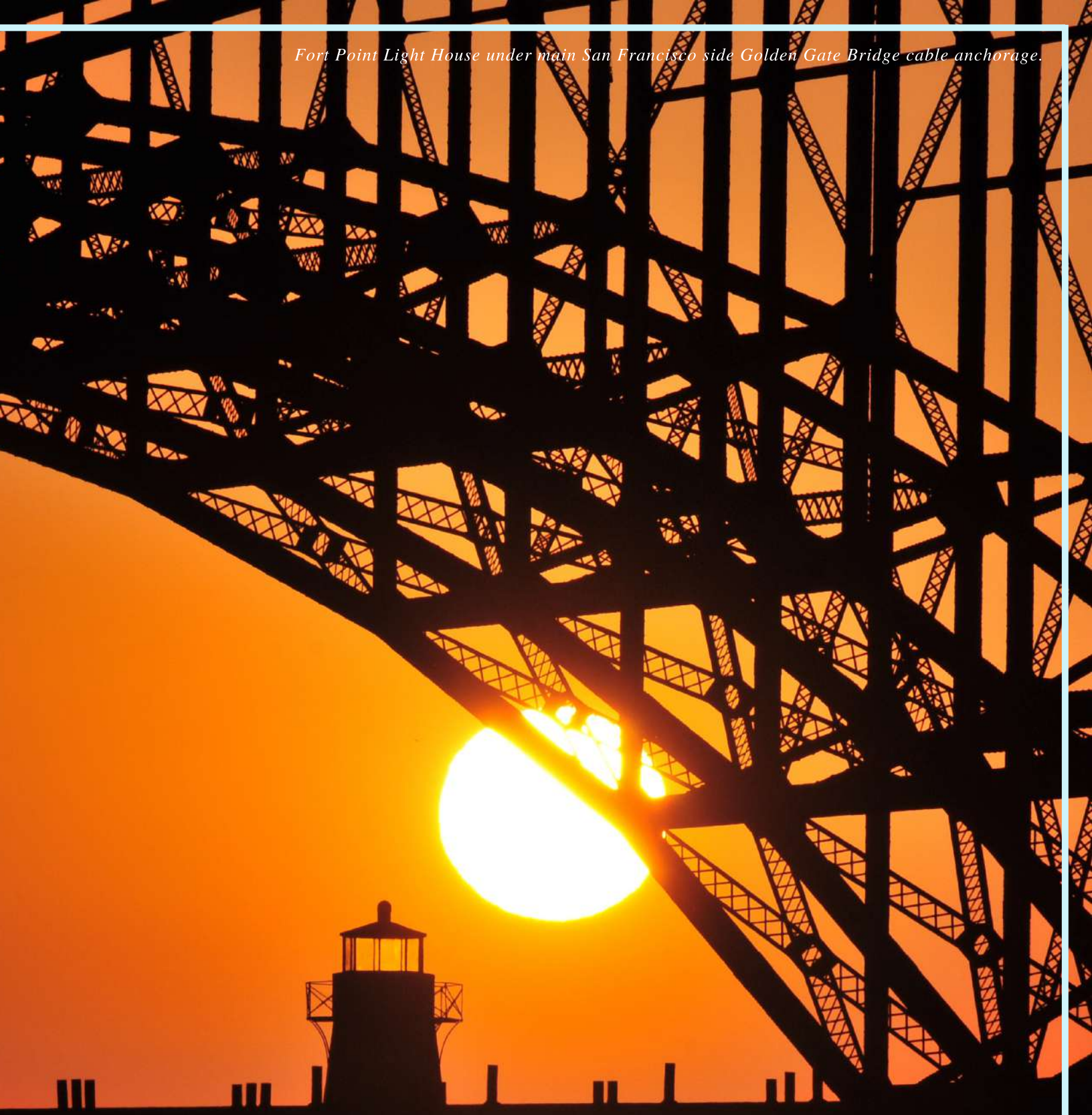
Timing is a critical factor here: the sun is setting. You are in a circular holding pattern with minimal time over your subject. You do not want to be fumbling with your gear, looking for that extra battery, or replacing a lens. You want to have your head and camera out the window the entire time. I had all of my equipment within reach and didn't have to switch lenses. There are two camera choices that are recommended, either full frame FX or DX cropped sensors. For the cameras, 24mm-85mm VR zoom, 18-35mm zoom, 70mm-200mm F-4 VR (D750, D610) is recommended, and for the bodies, 16-85mm VR zoom, 10-24mm wide-angle, 70-200 VR DX (D7200).

Conoco Phillips Oil terminal and pipeline hookup dock with workman's rail transport system.



7. Noting the time of day.

When you book your flight, you'll want to take some time to consider the time of day and angle of the sun. Just like regular landscape photography at ground level, the light is going to be softer and create more contrast at the beginning and end of the day. Avoid midday flights at all costs! Most operators have their planes back on the ground a certain number of minutes before sunset in order to comply with regulations. If your chosen operator has indicated that you can pick a specific time for your flight, you'll want to find out that additional information to assist your planning to fly later in the afternoon or at sunrise. Of course, the time of day doesn't just affect the softness of the light, it also changes the direction. To accurately plan a photo flight, you should have some idea of exactly what subjects you want to photograph so that you can work out which sun angle will make them look the best.



Fort Point Light House under main San Francisco side Golden Gate Bridge cable anchorage.

8. Protecting your gear.

It's very important that nothing can fall from the aircraft. Whenever you're sticking camera equipment out of an open aircraft door or window, it needs to be securely attached to you. A neck strap is the first precaution, but it can limit your movement. There are certain angles you may want to achieve where it isn't possible wearing a restrictive seatbelt or full harness if you are "doors off" in a helicopter. You might want to use a rotating LCD screen on your camera to compose a shot at arm's length where a regular neck strap can cause problems.

9. Try different altitudes.

A thousand feet can have a dramatic effect on the composition of your images if you are flying close to protruding landscapes versus just shooting ground-level patterns. If you climb higher, much more will be revealed in the background of your images. If you have a subject in your foreground that you want to isolate from a surrounding landscape, a lower altitude is better.

Last mothballed U.S.Navy vessels anchored in Sansun Bay, Martinez, CA.

10. Yaw, pitch, and roll.

It's a good idea to know how to correctly communicate with your pilot by understanding yaw, pitch, and roll maneuvering. In a high winged aircraft like a Cessna, it might seem like a real problem to have the wing and the wing strut right outside your window, but actually this is a problem that is solved relatively easy when you have good communication with your pilot. As you approach your intended photographic subject, the pilot can yaw the plane to the left (assuming you are on the right), and this will move the strut out of your way. You can also roll it slightly to the left which will bring the wing tip up and usually give you plenty of viewing space to get a clear shot. I was pleasantly surprised how easy it was to get a clear view from the side of the Cessna as well. Make sure you discuss this with the pilot before you take off, and be aware that these adjustments to the aircraft will ultimately result in a change of direction if they are held for a long time so any request to perform them should be left right until the best shot is approaching.

FROM THE ARCHIVES

USCG Aviation History Archives photo, 1941.

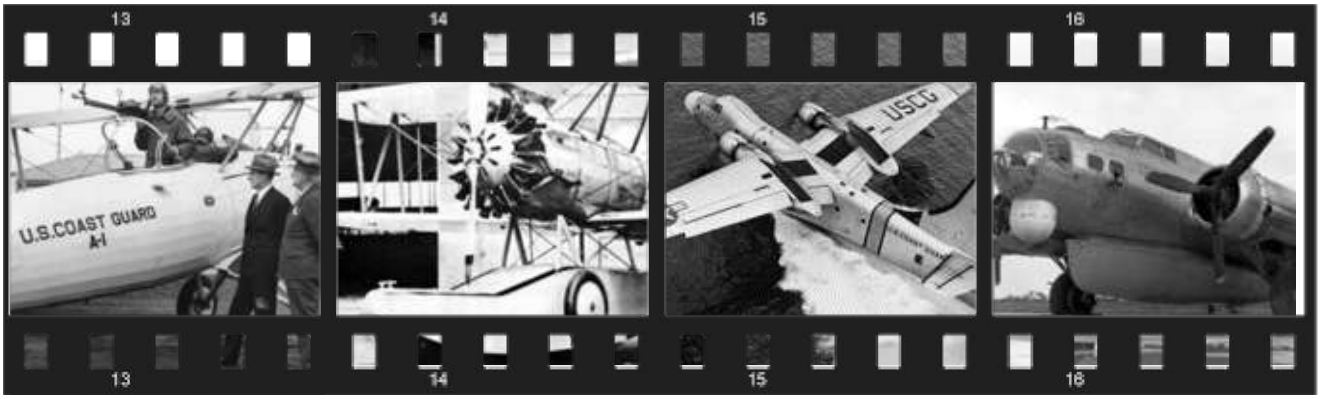
USCG AIR STATION SAN FRANCISCO

USCG Aviation History Project, contributed by Roger Bazeley.

1941: Coast Guard Air Station San Francisco establishment.

Coast Guard Aviation expanded significantly during a nine-year period which saw the construction of nine aviation patrol stations along the coastlines of the United States. The construction of the Coast Guard Air Station San Francisco was the last of this group. The station was constructed during 1940 on a 20.5 acre piece of property adjacent to San Francisco Airport, known as Mills Field.

The air station was formally dedicated on February 15, 1941, with Lieutenant George H. Bowerman commanding. The facility was designed to operate seaplanes and also had access to the runways at Mills Field for landplane operations. The initial aircraft complement was a PBY-5 Catalina and two RD-4 Dolphins. The primary mission was the saving of life and property in the maritime environment.



1. First USCG armed aircraft. 2. USCG early 1937 sea plane. 3. Martin M3 Flying Boat. 4. PB 1G Flying Fortress.

In addition to PBY-5A Catalina, the PB2Y Coronado flying boat had been flown out of San Francisco in the last years of World War II. In 1945, Boeing PB-1G flying fortresses were assigned and then replaced by P4Y-2G Privateers. In 1947, the first helicopter, a HO3S-1 Dragonfly, arrived and was followed by the HO-4S. The HU-16 Albatross, known to many as the "Goat," arrived in the 1950s and was supplemented by R5Ds until the C130s came on the scene. The HH-52 amphibious helicopter came on board in 1963. In 1978, due to space limitations and an increase in operational requirements, all fixed-wing aircraft were moved to the newly constructed Coast Guard Air Station Sacramento. San Francisco became a helicopter only air station. The HH-52As were replaced by HH-3F Pelicans which were in turn replaced by HH-60 Jayhawks. A restructuring within Coast Guard aviation lead to the replacement of the HH-60s by the HH-65C in June of 1996. The HH-65C are equipped for airborne use of force.

While the airframes evolved, the primary mission of Air Station San Francisco remained unchanged for six decades: maritime search and rescue along 300 miles of coastline from Point Conception to Fort Bragg. In addition to SAR, Air Station San Francisco expanded its missions to include maritime law enforcement, environmental, aids to navigation, and logistics. In 2003, the USCG became part of the Department of Homeland Security, further expanding the Air Station's role in protecting America's shores and its citizens. This includes airborne use of force missions.

1941: Coast Guard acquires consolidated PBY-5/-5A/-6A aircraft.

USCG PBY-5A on the ramp with airborne droppable life boat attached. Photo by USCG.

The Consolidated PBY Catalina was created in response to the U.S. Navy's request to replace the Consolidated P2Y and the Martin P3M. The XP3Y, designed by Isaac Laddon, distinguished itself clearly from its precursors by its monoplane configuration. First flown in 1935, it was an all-metal flying boat with internal wing bracing which greatly reduced drag. The wing tip floats retracted upward into the wing tip adding to the aerodynamics of the wing. Performance was modest but it was a sturdy, reliable aircraft, ideally suited for long patrols over the oceans. The U.S. Navy had given the prototype the designation P3Y, but then changed it to PBY because of the Catalina's ability to carry four 1,000 pound bombs under the wing. PB meant "patrol bomber", and Y was the manufacturer letter assigned to Consolidated.

The fuselage was wider than it was high, an unusual feature for a flying boat, and inside there was only one deck. In the nose, there was a position for a gunner/bombardier. Behind him was the cockpit for the two pilots, and immediately aft of the cockpit there was a cabin for the navigator and the radio operator. Behind them was the flight engineer, whose workplace extended into the wing pylon. Aft of the wing there was a cabin with bunks; finally, there were two waist gun positions covered, in most versions, with large blisters. The PBY was one of the first U.S. aircraft to carry radar.

The first PBY obtained by the Coast Guard, V189, was purchased from the U.S. Navy in the spring of 1941. It was specially outfitted at Air Station San Francisco with a nine lens camera for mapping coastal regions around the country. While the arrangement worked well in the lower 48, after two mapping trips to Alaska, the camera was transferred to a newer PBY-5A (PBY BuNo 08055), an amphibian, making it more versatile in the extreme environment of Alaska. The detachment operated out of Naval Air Station Kodiak.

In December of 1943, the Navy established its' first Air Sea Rescue Squadron at Air Station San Diego. An all Coast Guard unit, it led to the Coast Guards heavy involvement in Air-Sea Rescue. Starting in 1944 the Coast Guard had the Search and Rescue responsibility for the Continental Sea Frontiers. PBY-5A Catalina the PB2Y Coronado flying boat had been flown out of San Francisco in the last years of World War II. By the end of 1944, there were 114 PBY-5A/6As in Coast Guard service. The following fixed wing from those early years are represented by photographs of the USCG PBY-5A/6A Catalina on display at the Sacramento Aerospace Museum next to USCG Air Station Sacramento

Last version of the USCG PBY Catalina on display at Sacramento Aerospace Museum. Photo by Roger Bazeley.

In November of 1951, the Coast Guard acquired the first of seven HO4S-1s modified for search and rescue purposes. The modification was designated HO4S-2G. These helicopters were powered by 550 horsepower Pratt & Whitney R-1340 engines. In January of 1952, the first of 23 HO4S-3G helicopters, powered by the 700hp Wright R-1300 engines, were delivered to the Coast Guard. All were fitted with a rescue hoist and in 1954, the Coast Guard designed rescue basket became standard equipment. An additional eight HRS-3s were obtained from the U.S. Navy and modified for Coast Guard use. The HO4S-3G was the first helicopter to be equipped for night operations and instrument flight.

The HO4S helicopter - In November of 1951, the Coast Guard acquired the first of seven HO4S-1s modified for search and rescue. Photo by USCG Aviation History Project.

The HO4S helicopters extended the Coast Guard's rescue capabilities far beyond what was imagined 20 years prior. Although underpowered by today's standards, it was the first operational helicopter capable of carrying multiple survivors in a cabin and carry heavy loads. It had a rescue hoist capable of lifting 400 pounds and could fly at a normal forward speed of 80 knots with a range of 350 nautical miles.

It proved, beyond all doubt, the capabilities and value of the helicopter for Coast Guard operations. They performed numerous rescues during the next decade, some best described as miraculous, within parameters never before achieved. The helicopter became the primary asset for the saving of life.

Operation Tug-Bird, an Air Station San Francisco historic story.

In August of 1957, Headquarters authorized the Coast Guard Air Station St. Petersburg to conduct Operation Tug-Bird with a HO4S helicopter to determine the practicability of towing disabled vessels. The project helicopter successfully towed various craft ranging in size from the Air Station's 18 footer to the 794 ton buoy tender Juniper. At no times did the tows require more than 3,000 pounds line pull under test conditions. Tow speeds averaged 12 knots.

Headquarters directed that each air station should have at least one HO4S helicopter permanently equipped for towing. This HO4S had a reinforced tail plate with a stainless steel line attached on the rear of the helicopter by U-bolts equipped with an explosive device. The helicopter could tow a disabled vessel away from the rocks to deep water and lay the tow line over the bow of a Coast Guard cutter or patrol boat. When the vessel's crew had the line, the explosive bolt was fired and the line dropped on the forecastle.

The following is a narrative of a towing mission of San Francisco HO4S CGNR 1309: *"A towline was put aboard the 36 foot fishing vessel Pirate II that had lost an engine and was going on the rocks. The helicopter commenced towing in a position less than 50 yards from Seal Rocks. At first it appeared that little progress was being made. The wind at this time was 22 -28 knots and the tow was directly into seas of 10 to 15 feet. With towing tension surging as high as 3,100 pounds the helicopter gradually succeeded in towing the Pirate II out of danger to a point one half mile off shore where the tow was turned over to a Coast Guard patrol boat CG-82328. The mission was a complete success."* (Reference: The Coast Guard Aviation Society)

A new era in search and rescue helicopters for the USCG Sikorsky HH-52A Seaguard.

A 1963 Sikorsky HH-52A "Seaguard" parked on USS Intrepid flight deck NYC (99 were ordered by the USCG). Photo by Roger Bazeley.

This is the helicopter that truly made rotary-wing aviation the backbone of Coast Guard aviation. The HH-52A's versatility and reliability were legendary, as was its ability to work with the cutters of the Coast Guard's fleet including its icebreakers. During 26 years of service, the HH-52, with over 15,000 lives saved in its twenty-six years of service, has the honor of having rescued more persons than any other helicopter in the world. It had an enormous impact on Coast Guard aviation.

A HH-52A landing on the USCGC DECISIVE. Photo by Coast Guard Aviation History.

Today's operations: current search and rescue (SAR) missions.

Air Station SF Dolphin MH-65-D, pilot and co-pilot with SAR equipment displayed. Photo by Roger Bazeley.

Coast Guard Air Station San Francisco hosted multiple state and local response agency aircrews and personnel on April 25th, 2019 for their annual Inter-agency Day. Inter-agency Day is an interactive exchange that allows Bay Area first responders to share best practices, develop life-saving skills and foster partnerships. This was Coast Guard Air Station San Francisco's third annual Inter-agency Day that it hosted, where local first responders come together to show how each agency can help one another more effectively.

The Bay Area first responders gathered at the Coast Guard Station at San Francisco International Airport to develop lifesaving skills that will help during an emergency by conducting vertical surface training regularly to ensure that they are always ready to high-risk rescues, along the unsafe costal cliffs and rocky coastlines of California.

A MOMENT WITH

BILL BURNS

AVIATOR ⅄ JET JOCK ⅄ AUXAIR TRAINEE

Auxiliarist William Burns, FC - Point Bonita, CA District 11 North (D11) (2017-18) is an invaluable and amazing multi-tasking flotilla mentor and leader with decades of aviation experience. Bill is a veteran of the U.S. Air Force and flew jets in the late 1950's. He participates in many areas of marine safety from vessel exams to recreational boating safety. Bill has contributed thousands of hours supporting and mentoring our flotilla members. He is an incredible resource of USCG information and a hands-on flotilla member.

Q: What drew you to aviation and your path to the joining the United States Air Force (USAF) and AUXAIR?

A: My very first flying lesson was taken on June 21, 1951, when I was just 15 years old. My first solo flight was in a Cessna 120 on November 2, 1951, at Felts Field in Spokane, Washington. A few months later, I was to take my first of several take offs and landings with an aircraft fitted with skis for snow covered runways. I had to wait until I was 17 before I could take my flight test to get my private pilot's license. I actually learned to fly before I learned how to drive a car.

Q: Please expand upon your young years taking flying lessons and plane types?

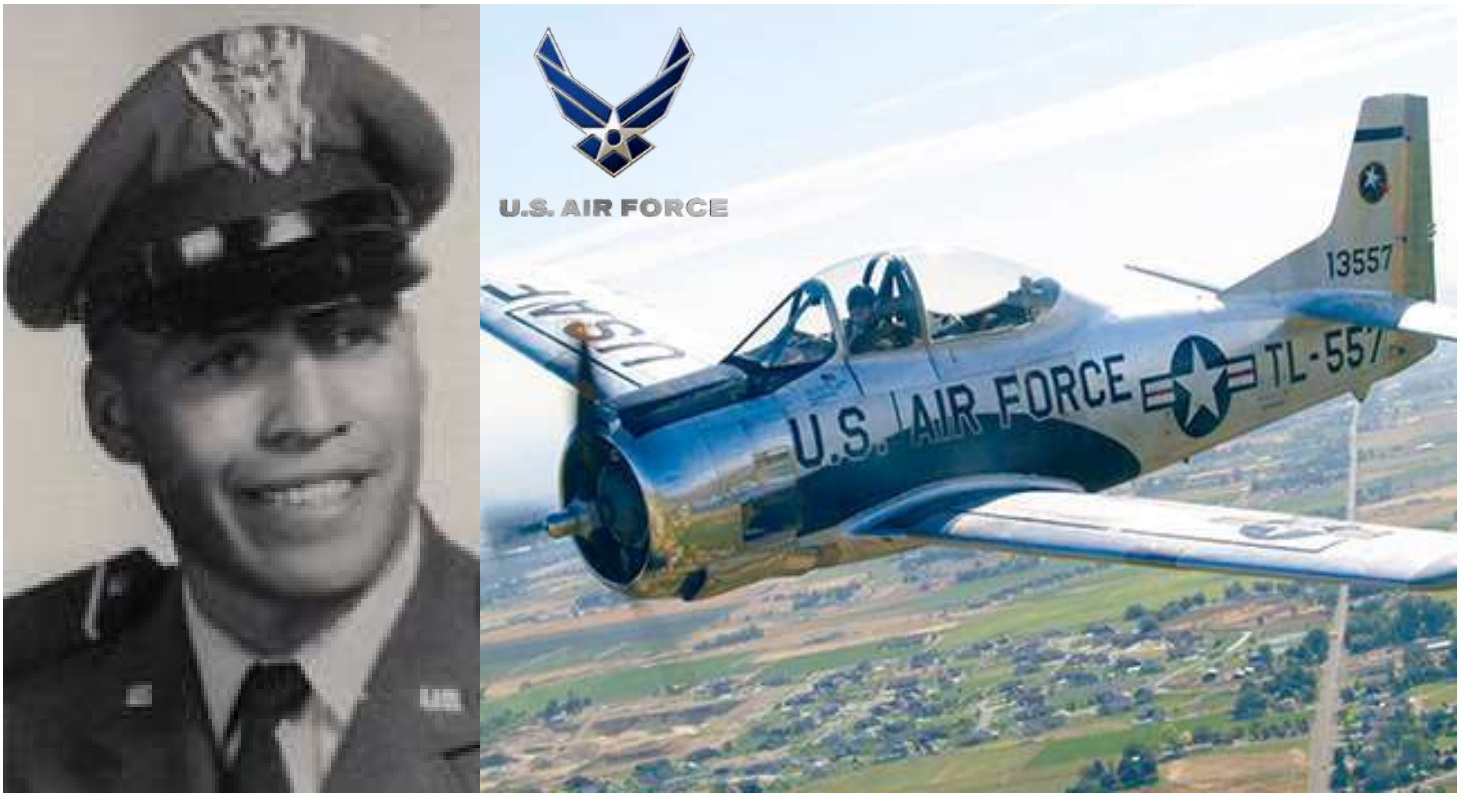
A: I was able to pay for flying lessons by working as a "gas boy" for VanderVert's Flying School at Felts Field. In addition to refueling airplanes, I had to learn how to prop them (start them up by hand rotating the propeller). It was scary process at first, but after having propped hundreds airplanes, I finally got used to it, where I could swing the prop of airplane as easy as tying my shoe.

One of the best parts about this job was that they had me train to be able to start up and taxi aircraft from the fuel pump to parking and tie down areas. Starting as a 15-year old kid, and for the next several years, I got the chance to start up, taxi to park and tie-down places of just about any kind of Piper, any kind of Cessna up to and including the big 300 hp Cessna 195's, Norden Norsmen, Howards, Navions, Beechcraft, Globe Swift's, Trojans, Aircoupes, Luscombs, Ryan PT-19, PT-26, Stinsons, and best of all, one day, as 16-year old after gassing up, the opportunity to taxi an old WWII Curtess P-40 War Hawk to be moved to a park and tie-down area.

Q: How did you apply your high school life experiences to your decision to join the USAF?

A:After leaving high school in 1954, I wound up taking the special USAF pilot training program that was open to high school graduates who could pass a special week-long test given by the Air Force to open up pilot training to any who could pass their test on a high school education alone. I passed!

Bill Burns, F-94 pilot, at Laughlin AFB, Del Rio, Texas for T-33 Jet Training. Photo by Bill Burns.



Left: Bill Burns, 1954/55 Lackland Air Base. Right: T-28A in flight. Photo by USAF History Museum.

Q: Could you elaborate on your USAF aviation training?

A: I went to Lackland AFB for the "Tiger Program" basic pre-flight 90-day endurance orientation an initial elimination phase for the USAF pilot training program. After getting through pre-flight, I was sent to Stallings Air Base in North Carolina where for 6 months I learned to fly North American T-28As. After the T-28 phase of training, I was sent to Laughlin AFB, Del Rio, Texas for Jet Training in the T-33. Here is where the flying really started to become serious. Here is where we flew in groups, to develop close, very close, formation flying, "rat racing," and acrobatics with some mock dog fights. It was not without danger. There a few fatal accidents that occurred during my T-28 training and my T-33 jet training.

Q: Could you describe the decision on not making a career out of the USAF?

A: Normally there is a 5-year minimum in the Air Force after pilot training, but because I was flying jets with only a high school education where there was normally a 2-year minimum education requirement, I was able to get an early release for the purpose of getting 2 to 4 years college, and by keeping "militarily fresh" by also taking Reserve Officers' Training Corps (ROTC) in college or getting in an Air Force Reserve unit, I would be able to return to the Air Force a pilot with a better career potential in the Air Force. So, I took advantage of it.

Q: Describe the other USAF jets you flew or checked out on.

A: I flew the F-100 *(USAF photo of F-100, pictured).*

Q: Could you tell me how you incorporated your USAF flying and aviation experiences and training into your educational career at UC Berkeley?

A: Jumping a few years later, I wound up getting into UC Berkeley. At Berkeley, I took a number of courses that dealt with environmental protection, environmental design, conservation of natural resources, and some special remote sensing courses with Professor Robert N. Colwell with CAL's Space Science Laboratory. I also joined the UC Flying Club and the Civil Air Patrol. It was at CAL where I was able to take a number of remote sensing courses that involved the use of special cameras, U-2 Imagery, and satellite imagery. It was during this phase of my involvement with this course discipline where we were given an assignment to write a grant proposal. I did one that was based on using special techniques for an airborne surveillance instrument for locating oil spills and other petrochemical pollution of the aquatic environment. After I handed the paper in, I was surprised that my professor, R.N. Colwell, encouraged me to go ahead and actually submit my proposal to NASA at Ames.

NASA at that time was involved in a program to research and develop new oil spill surveillance equipment applications that could be used aboard U.S. Coast Guard patrol aircraft as the means to locate and identify oil and other petrochemical pollution events in the waters under U.S. Coast Guard protection. John Arveson from NASA brought idea to the attention of the U.S. Coast Guard to request funding for the development and field testing of a device that was later to be called by the Coast Guard "LAOSS" the Light Aircraft Oil Surveillance System.

Left: Burns climbing into F-94 jet. Right: Bill Burns on tarmac reading T-33 flight map.

Beech T-34A aircraft with Bill Burns as pilot and photographer rear seat area, Oakland, CA.

Q: What was your experience with the Civil Air Patrol and accomplishments?

A: For one, we needed a way to communicate between our headquarters at Fort Mason and the aircraft in flight. Also, we needed a way to communicate between headquarters and the boats. We also needed a way for planes and boats to talk to each other, as well as communicate with headquarters. The Auxiliary currently has the advantage of having USCG Sector San Francisco becoming the radio guardian, and requires that all Auxiliary facility aircraft have to have marine band radios installed.

Q: What was your experience with the Oceanic Society's aircraft and the USCG?

A: The Oceanic Society's aircraft did not have any marine band radios, nor did we have the advantage of the U.S. Coast Guard's communications network through sector. So, how did we deal with this problem? Simple. I went to the Federal Communications Commission in San Francisco, and requested they give us a license to operate a "Unicom" radio (like the kind they have at uncontrolled airports). They refused, at first, but I got their manual out and showed the title where Unicom radio licenses can also be given out to forest fire monitoring stations, and conservation organizations in the business of protecting the environment. I claimed that since the Oceanic Society was a nonprofit conservation organization, we should be given a license, and it was approved! We installed the radio and antenna at our Fort Mason location. We also had a marine band radio installed at the office. This way, we were able to relay communications between any or boat on the water, or any of our aircraft in the sky. The O.S. Conservation Air Patrol consisted of over 80 pilots and observers and a collection of roughly 20 aircraft. This group was in operation from about 1974 to about 1980.

Q: What were your other Civil Air Patrol accomplishments and leadership roles?

A: As Air Patrol Director, it was part of my job to find funded work our aircraft could do. I was able to get an Air Patrol contract with a number of environmental regulatory agencies such as flying aerial recon and photography missions for the Regional Water Quality Control Board who paid us to check out dairy farms that were polluting water with cow manure runoff.

Bill Burns holding a Light Airborne Oil Surveillance System test unit. Photo by Bill Burns.

We were able to check on and photograph 150 dairy farms and furnish evidence that led to a number of these farms being fined for water pollution. We also did work for and received letters of commendation from the Air Pollution District, the U.S. Army Corps of Engineers, the San Francisco Bay Area Conservation and Development Commission, the California Coastal Zone Commission, the Sierra Club, and Friends of the Earth.

The Oceanic Society went through some major changes and involved into a different organization where the Conservation Patrols were left out of the equation. It was disbanded in the early 1980's. After the Conservation Air Patrol's demise, I joined the Civil Air Patrol, checked out in the Beech T-34 and became a qualified SAR pilot. I flew a number SAR missions for CAP including one where I had to search for a Cessna 182 that belonged to the UC Berkeley Flying Club that crashed in the Sierras with two fatalities. This was especially harrowing for me since the crashed airplane that we were searching for was a Cessna 182 that I had also flown and logged several hours in.

Left: North American T-33 "Starfighter" with canopy open . Right: T-33 cockpit. Photos by USAF.

Q: How did you get involved with the USCG Auxiliary and decide to join?

A: It was a few years after 9/11 when I was contacted by a friend to join the Coast Guard Auxiliary. One of the Auxiliary programs included environmental protection, and where there were boats and airplanes involved in operations and environmental and marine safety missions. I joined the Auxiliary in 2008. Since that time, I have earned the AUXOP, the Trident, and the Recreational Safe Boating Device.

One of my main objectives was to get into flying status with the Auxiliary Air group. But, all pilots in the Auxiliary have to go through an Observer Training Program. I passed all the written tests for both Observer and Pilot (where I scored a perfect score of 100%). I also went through the ground school training.

Q: What is your current AUXAIR training status and future Auxiliary goals?

A: After getting the clearance to go and do my AUXAIR 10 hours of familiarity flight, I was only able to get in about 5 hours when I was informed by the Auxiliary Observers who were doing the training, that I had failed to pass their evaluation because, as they said, I was not able to do well enough in the navigation class, and that I "did not have situation awareness." So I was dropped from the AUXAIR program, a real disappointment for a former USAF "Jet Jock" and experienced civilian Air Patrol SAR pilot.

I had a hard time dealing with this situation considering my extensive USAF military flight training hours in jets, as well as the flying hours I did for the Conservation Air Patrol, and flying numerous successful SAR missions with the Civil Air Patrol, as a qualified Search Pilot. I also, currently hold a FAA Commercial Pilot's license with an Instrument Rating. I also earned my private pilot's license in 1951. So qualifying and maintaining AUXAIR qualifications as an Auxiliary Pilot, Co-Pilot or Air Crew member becomes more challenging as many Auxiliarists develop non-qualifying health issues or just age out.

The great thing about the Auxiliary with so many diverse programs one can apply the skill sets to many other areas such as being and instructor, mentor, or using learned skills and qualification for Marine Safety and Environmental specialties. "But, I am still trying to qualify as a Coast Guard Auxiliary Observer.

It has been a great ride and overall experience being in the USCG Auxiliary. I continue my journey in aviation and relish my years in "high-flight-flying" USAF jets.

THE NAVIGATOR'S CORNER

A collection of notices, awards, articles, and information of the U.S. Coast Guard Auxiliary.

CONTENTS

Former Coastie Joins AUXFS

Coast Guard Island, Alameda, CA

"My name is Konstantin Yevstratenko, and I was born in Kazakhstan. I grew up in San Diego, and I enlisted in the U.S. Coast Guard after high school to avoid going to college, but after 4 years as an USCG culinary specialist, I ended up in college after all; with the GI Bill financing my bachelors in electronics and computers. I'm also back as part of Team Coast Guard, by serving as a member of the USCG Auxiliary, and as an AUXFS specialist to keep my mind from drowning in school work. While food service is my specialty, I also plan to dive into the aviation area with the AUXAIR program." - K. Yevstratenko

(Pictured: Yevstratenko preparing dishes with fellow members of AUXFS)

An interview with

COREY MAYO

FORMER SEA SCOUT TURNED
COAST GUARDSMAN

PROVIDED BY AUXILIARY PUBLIC AFFAIRS
EDITED BY ANDREW NIQUETTE

Corey Mayo is a Machinery Technician in the U.S. Coast Guard. Before his career protecting our nation's coastlines and waterways, MK2 Mayo was deeply involved in the Boy Scouts, Sea Scouts, and the U.S. Coast Guard Auxiliary. When asked about implementing experiences gained from being involved with the Boy Scouts and Sea Scouts, Mayo expressed: "There are a number of skills that I picked up in my time in scouts that have helped me to succeed in the coast guard today. In Sea Scouts, I learned a lot of the nautical terminology and skills such as charting, knot tying and basic rules of the road which have helped me to get qualifications in the Coast Guard faster. The biggest thing I got from scouting overall that has led my success and making second class quickly was leadership experience."

As an Auxiliarist, MK2 Mayo learned about the importance of the Auxiliary as a component of Team Coast Guard, saying: "Many of the skills I learned in Sea Scouts helped me in the Auxiliary. Once I became active duty, I realized how big of an impact the Auxiliary has on the success of the Coast Guard. Being the smallest branch of the military with 11 missions, the Auxiliary plays a vital role in educating and assisting boaters to create a safer maritime environment."

MK2 thoroughly enjoys his role as an active duty Guardsman, saying his most exciting experience was "... assisting in the seizure of about five thousand dollars of salmon caught by illegal means and about one thousand dollars in gear. It was our fourth boarding of the day and the wildlife officers I was with found that the vessel was using barbed hooks, which is illegal for salmon."

MK2 Mayo aspires to become a Command Master Chief "...so I can help junior members find success and be their voice to the Coast Guard leadership." He also contributes much of his leadership abilities to TW Cook, stating: "I aspire to lead in the Coast Guard as he did in scouting and the auxiliary which has been a key to my success. His advice on those in Sea Scouts wishing to join the Coast Guard: "Learn as much as you can about charting and seamanship, and be active in your ship."

AUXILIARY PHOTOS OF THE QUARTER

SUBMITTED BY THEA NARKIEWICZ, DIR-A & ROBIN PRIESTLEY, BC-ASP

1

FACEBOOK PHOTO CHALLENGE WINNER

2

FACEBOOK PHOTO CHALLENGE WINNER

3

FACEBOOK PHOTO CHALLENGE WINNER

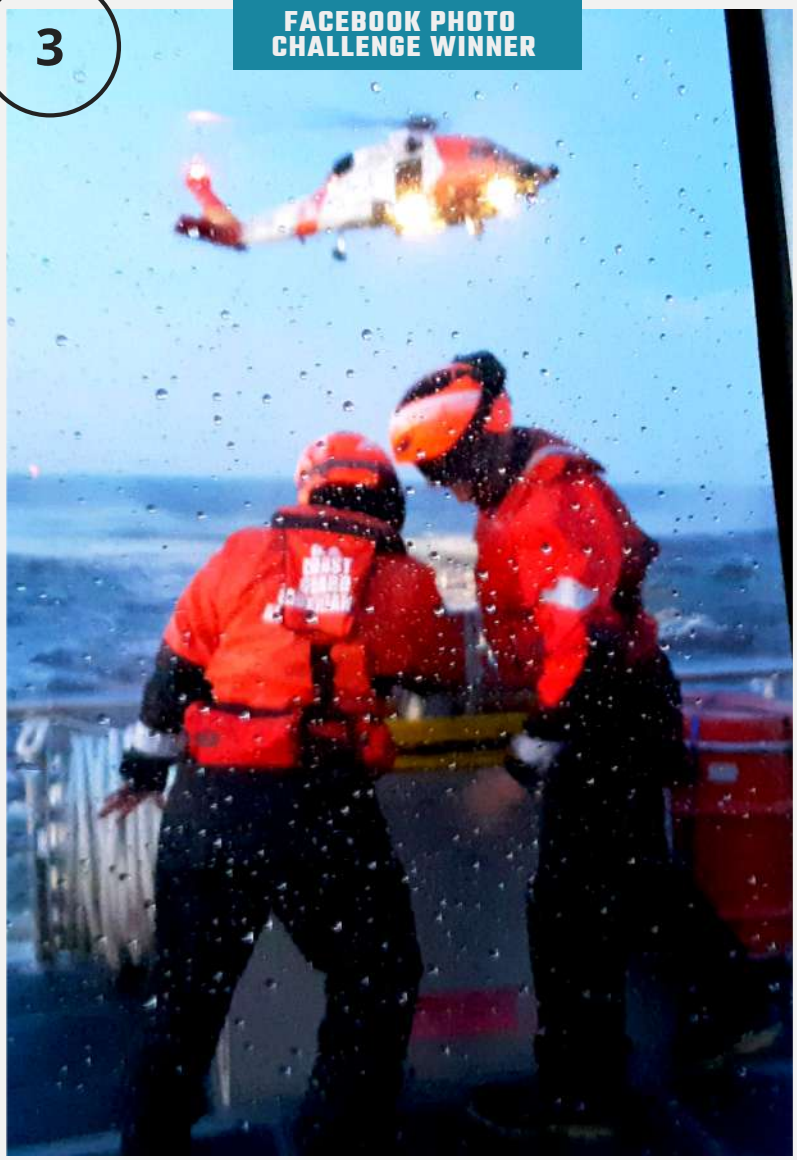


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PHOTO OF THE QUARTER WINNER

1: WILLARD BAY, Utah - Auxiliarist Anthony King of the Ogden Flotilla (113-07-06) operates a personal watercraft facility while towing a disabled vessel in the bay. Coast Guard Auxiliary photo by Roy Vandermolen.

2: LAKE ERIE, Ohio - Members of Sea Scout Ship 280, Columbus, Ohio participate in "Safety at Sea" event at Coast Guard Station Lorain on Lake Erie. Photo by Steve Bratton

3: HUDGINS, Va. - Station Milford Haven and Auxiliarists from the Kilmarnock Flotilla (054-03-03) battle water spray, bright lights, and whipping wind to train during helicopter evolution training. USCG Auxiliary photo. Submitted by Mary McCoig.

4: MEBANE, N.C. — Scott Spillman, the division commander of Division 9 in District 5 Southern Region, salutes the U.S. flag while Fred Carden, a retired member of Flotilla 9-9 (Burlington), receives the flag during the funeral for Ted Schmidt, a retired member of Flotilla 9-9, Jan. 11, 2020. Schmidt served on active duty with the Coast Guard and was a member of the Coast Guard Auxiliary for more than 20 years. USCG Auxiliary photo by Sherry Spillman.

AUXILIARY SCUTTLEBUTT

AUX JACK

Aux Jack is the creation of Auxiliarist and cartoonist Brady McNulty of District 13. This is the fifth one in the series.

"Go have fun, 'Maverick.' Just be home in time for our grandson's recital."

AUXILIARY SCUTTLEBUTT

Cover Photo:

ST. SIMONS ISLAND, GA — An Auxiliarist looks ahead towards an incoming Dolphin helicopter dropping a basket during a helicopter operation mission. Photo provided by Brunswick, GA Flotilla 7-10-10.

AUXAIR Poster

AIR STATION SAN FRANCISCO — AUXAIR pilot Peter Todebush,and Auxiliary photographer Roger Bazeley at San Francisco Air Station Interagency Day exercise. Photo by Tiffany Townsend, MD.

Masthead Photo

SAVANNAH, GA — An active duty rescue swimmer poses on an Auxiliary facility during helicopter operations. Photo provided by Savannah, GA Flotilla 7-10-2.

Back Cover:

Top photo: ALAMEDA, CA — USCG Air Station Pilot Lt. Murphy with Dolphin M65D Helicopter at USCG event.

Bottom photo: SAN FRANCISCO, CA — USCG Air Station San Francisco - 2019 Interagency Day rescue, hoist demonstration and training. Photos by Roger Bazeley.

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AUXILIARY SCUTTLEBUTT

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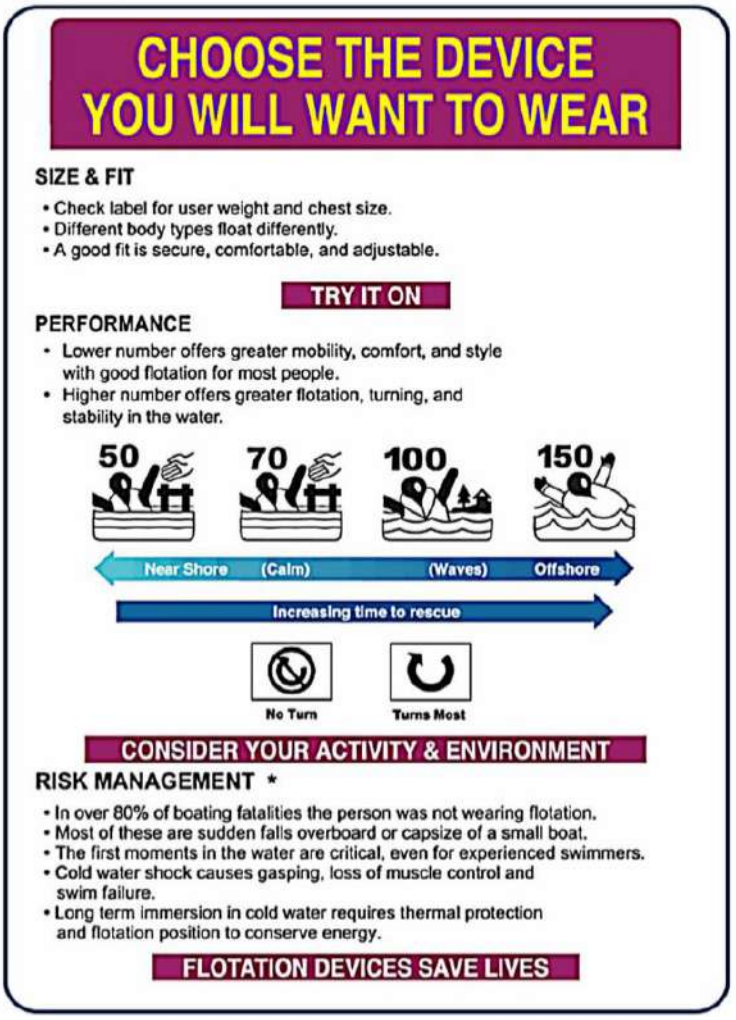

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