



Sikorsky Archives News

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That Others May Live Sikorsky Helicopters in U.S. Air Force Rescue Squadrons

The first HH-60W Combat Rescue Helicopter (CRH) now in final assembly in Stratford is the latest in the life-saving line of Sikorsky helicopters made for U.S. Air Force Rescue Squadrons. With 30 years expected service life ahead, the Whiskey will round out a century of vertical flight rescue heroism. The Sikorsky Archives Newsletter is proud to tell the story.

The first helicopter rescue behind enemy lines was made in Burma by the U.S. Army Air Corps in a Sikorsky S-47 (R-4) on April 26, 1944. When the Air Force gained independence in September 1947, the subordinate Air Rescue Service had about 20 S-48s (H-5Ds) built in Bridgeport for the Army Air Forces. The new U.S. Air Force (USAF) bought the civil-certified S-51 (H-5F) and sponsored further rescue developments. In 1949, an H-5G set an unofficial altitude record for an operational helicopter with a hovering rescue at

13,500 feet in California's Sierra Nevada mountains. The August 12, 1949 Sikorsky News pictured the H-5H with metal rotor blades, floats, and a bulged cabin big enough for three litter patients. Late that year, the 2nd Air Rescue Squadron (ARS) on Guam received two H-5Hs -- one with pontoons for water pickups and the other with a hoist for inland rescues. The February 10, 1950 Sikorsky News reported, "The H-5H is currently being used by the Air Rescue Service in all parts of the globe. It was designed and built by Sikorsky Aircraft especially for use in rescue work."



The U.S. Air Force became an independent Service in 1947 with Sikorsky S-48 (H-5D) helicopters from the Army Air Forces. (Sikorsky Archives)

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Contact us at iisha@snet.net 203.386.4356

At the start of the Korean War in June, 1950, the 3rd ARS had a mix of fixed-wing aircraft and nine S-51 helicopters in Japan. The squadron first deployed H-5Fs to Taegu, Korea to rescue downed aircrew and evacuate wounded soldiers – Air Force S-51s could carry two external litter capsules. In February, 1951, Lt. Daniel Miller earned the Air Force humanitarian Cheney Award for landing three times under fire and in deep snow to rescue six wounded soldiers. Another H-5 evacuated two more soldiers on the same mission. By mid- 1951, USAF H-5s had airlifted 1,722 wounded in Korea, and the 3rd ARS became the first Air Force unit awarded a Distinguished Unit Citation.

The dangerous business of Combat Search And Rescue (CSAR) was still in its infancy. In March 1951, now-Capt. Miller flew his H-5 through intense fire to rescue a Marine Corsair pilot downed near Munsan and was awarded a Silver Star. Sikorsky S-51s would remain in Korea throughout the war and in Air Force squadrons until 1962.



*The S-51/H-5H with floats, hoist, and cabin litter provisions remained in Air Force service until 1962.
(Sikorsky Archives)*



*The S-55/H-19 in Korea rescued downed pilots and airlifted wounded soldiers throughout the war.
(Sikorsky Archives)*

S-55s and (briefly) S-58s

Air Force orders totaled 131 S-51s, but Air Rescue Service capability grew significantly with the Sikorsky S-55 (SH-19A and -19B). Two YH-19 prototypes joined the 3rd ARS in Korea. The first arrived on March 23, 1951 and carried wounded soldiers the next day. The July 17, 1951 Sikorsky News quoted visiting Air Force Capt. Richard McVay saying, “We want more H-19s over there.” McVay reported, “Ninety percent of our behind-the-lines pickups of crashed pilots have been successful. We have made 463 such rescues behind the enemy lines.”

One notable combat rescue came on April 12, 1953 when fighter pilot Captain Joseph McConnell claimed his eighth MiG over Korea but felt his Sabrejet falter over enemy territory. McConnell radioed for help and ejected over the Yellow Sea. Two H-19s from the 3rd ARS launched from Cho-do Island and recovered the ace minutes after he hit the water.



The S-55 SH-19 rescue helicopters deployed with Air Rescue Squadrons around the world. (Sikorsky Archives)

The Air Force ultimately acquired 320 S-55s deployed around the world. In July, 1952, two H-19s flown by Capt. Vincent McGovern and Lt. Harold Moore crossed the Atlantic from Westover Air Force Base, Massachusetts to Prestwick Scotland enroute to Wiesbaden, Germany. Sikorsky News reported, "Two days after arrival in Wiesbaden, the two H-19s rescued the crew of an American bomber that had crashed in the Rhine." In April 1954, H-19s of the 59th ARS hauled 30,000 lb of food to flood refugees in the Tigris River Valley of Iraq. That same month, an H-19 of the 56th ARS hoisted 18 men from a Swedish freighter run aground near Casablanca, Morocco. On 19 October, 1959, Captain Herbert Mattox flew an H-19 of the 33rd ARS to hoist 29

crewmen from the grounded Japanese vessel Zenko Maru and earned the 1959 Cheney Award.

Sikorsky Stratford opened in April 1955 and made S-58s (military H-34s) for the U.S. Navy, Marine Corps, and Army, and for global customers until 1970. The Air Rescue Service became the Aerospace Rescue and Recovery Service in 1966 and flew 32 retired Navy Seabats as HH-34Js from 1971 to 1974 in Air Force Reserve units awaiting turbine-engined helicopters.

Jolly Green Giants

Soon after the first twin-turbine S-61A (HSS-2 or SH-3A) Sea King flew on March 11, 1959 for the US Navy, Sikorsky proposed a stretched S-61R with a rear ramp unsuccessfully to the Marines. However, the Air Force needed helicopters to shuttle to and from Atlantic radar towers, recover target drones, and service missile sites. The S-61R/CH-3C flew in June 1963, and went to Vietnam with the Tactical Air Command (TAC) in 1965. Sikorsky News in January 1965 carried a story on rescue HH-3Cs in Florida standing ready during Gemini space launches. The June issue reported, "Authorization also was received by Sikorsky for a special rescue mission configuration (with armor, self-sealing fuel tanks, and rescue hoist) for delivery to the Air Rescue Service."



The S-61R/HH-3E Jolly Green Giant with air refueling capability extended rescue range in Southeast Asia. (Sikorsky Archives)

The Air Rescue Service borrowed two CH-3Cs from TAC in July 1965 and assigned them to the 38th ARS at Udorn, Thailand. The helicopters were quickly camouflaged in green paint and dubbed Jolly Green Giants, popular imagery from canned vegetable ads. In November 1965, the 38th ARS received two HH-3Es with 1,500 shp T58-GE-5 engines, 1,000 lb of guns and armor, self-sealing internal fuel tanks, and sponson drop tanks.

Armed Jolly Greens flew with four crew -- pilot, co-pilot, flight engineer, and pararescueman or PJ. HH-3E pilot Lt Forrest Kimsey earned the Silver Star for efforts to recover a Navy Phantom crew down in a very 'hot' location near Tchepone, Laos on April 22, 1966. Jolly Greens operated in flights of two – a Low Bird to make the rescue and a High Bird orbiting in case the Low Bird was downed. The Low Bird leading Kimsey's flight picked up one aviator, but when the helicopter tried to recover the second, groundfire knocked the PJ off the hoist jungle penetrator and badly wounded the flight engineer. Kimsey's High Bird withdrew under heavy fire but refueled at the Khe San fire-base and returned to the scene, again under fire, to pick up the second fighter crewman. Kimsey yet again returned at first light to recover the PJ.

By 1966, HH-3E detachments of the 37th and 38th Aerospace Rescue and Recovery Squadrons (ARRS) covered Vietnam, Laos, and the Gulf of Tonkin. A CH-3C with trial air refueling probe made dry hookups with a Hercules tanker in December 1965. First fuel transfer between an HH-3E with extendable probe and the new Air Force HC-130P Hercules tanker took place in December 1966, and air refueling was used in combat in 1967

HH-3Es rescued 92 aircrew in 1966, 122 in 1967, 163 in 1968, 72 in 1969, and 47 as the Jolly Greens were phased out of the theater in 1970.

In a single mission on March 30, 1968, four HH-3Es rescued 14 Marines from six helicopters shot down in South Vietnam. To aircrew "saves" were added wounded soldiers flown to hospitals.

The Air Force ultimately flew 50 HH-3Es around the world. In October and November 1969, Jolly Greens from the 58th ARR Squadron at Wheelus Airbase, Libya saved 2,516 Tunisians from floodwaters. On April 16, 1979, an HH-3E from Osan Air Force Base in Korea rescued 24 people from a sinking vessel. The Air National Guard received HH-3Es in 1975 and continued to operate them until the arrival of HH-60Gs. The last Special Operations MH-3Es deployed in Operation Desert Storm in 1991 and were retired in 1995.



*Air Force HH-3Es served in the Air National Guard until replaced by the HH-60G Pave Hawk.
(Sikorsky Archives)*



*MH-3Es of the 71st Special Operations Squadron were CSAR and Special Warfare assets in Desert Storm.
(Frank Colucci)*

Super Jollies

Even with aerial refueling, the Jolly Green Giant was slow and struggled with high mountain rescues. Sikorsky News in March 1967 reported first flight of the new HH-53B rescue helicopter based on the S-65/CH-53A built for the Marine Corps. "The big, camouflage-painted helicopter carried auxiliary fuel tanks and a retractable probe for mid-air refueling as visible evidence of its long-range capability." The Super Jolly Green Giant arrived in Vietnam in September 1967. In January 1968, two Super Jollies recovered crews from an RB-66 jamming aircraft and a downed HH-3E. HH-53Bs of the 40th ARR Squadron made 99 combat saves in 1968. Super Jollies were soon the primary rescue helicopters in Southeast Asia. The interim HH-53B, with distinctive struts to support auxiliary sponson tanks, was soon replaced by the HH-53C, the final configuration delivered to the Air Force. In August 1970, two new HH-53Cs were ferried from Eglin Air Force Base, Florida to Danang, South Vietnam with air refueling in the first trans-Pacific helicopter flight.

In March 1972, five HH-53s recovered all 15 crewmen of an Air Force AC-130 gunship shot down in Laos. Even with coordinated CSAR task forces, rescue missions were not without heavy losses. Super Jolly crews flew dangerous rescue missions through the end of the conflict in Southeast Asia and evacuated personnel from Saigon in 1975.

The U.S. Air Force bought 72 HH-53B/C helicopters. Select Super Jollies returning from the war were modified with longer-range fuel tanks and special equipment to recover space hardware with the 6594th Test Group at Hickam Air Force Base in late 1974. The aircraft had a secondary Search And Rescue mission, and on January 7, 1985, an HH-53 from Hawaii hoisted a seriously ill crew member from a distant cruise ship. The 1,380-mile round-trip marked a world record for the longest overwater helicopter rescue without a landing.

Super Jolly rescue helicopters made early use of primitive night vision equipment in 1972 and started the evolution of Pave Low night/adverse weather navigation capability. The first HH-53 rescue helicopters with low-light television and hover couplers were deployed to Nakhon Phanom, Thailand with limited success. The Pave Low program continued the evolution of night and adverse weather capability with the addition of Forward Looking Infrared sensors, terrain-following radar, and precision navigation capability. Initially, only nine HH-53H helicopters were planned for Pave Low conversion, but the success of the program led to all USAF HH-53s being modified. Pave Low HH-53H helicopters with improvements became MH-53J and -53M Special Operations aircraft flown around the world until their retirement in 2008.



*The Sikorsky S-65/HH-53B Super Jolly Green Giant replaced the HH-3E in Southeast Asia.
(Sikorsky Archives)*



*The HH-53C went to war in 1969 and gave the Air Force a more powerful rescue/Special Operations aircraft.
(Sikorsky Archives)*

Pave Hawk to Whiskeys

The Secretary of the Air Force approved a Mission Need Statement in November 1980 for a version of the Sikorsky S-70/UH-60A. Sikorsky News in December 1982 announced the Air Force contract to convert two BLACK HAWKS into HH-60D Night Hawks. The same agreement also gave the Air Force 11 Army UH-60As from the Stratford line for pilot and maintenance familiarization. Sikorsky President Robert Daniel said, "The HH-60D will greatly enhance Air Force capabilities to conduct aircrew rescue operations deep behind enemy lines, in darkness or bad weather, and at treetop level, avoiding radar detection."

The Night Hawk flew for the first time on February 4, 1984 at the Sikorsky Development Flight Center in West Palm Beach, Florida and was actually credited with a save that September when it retrieved two hikers at 10,000 ft in the High Sierras near Bishop, California.

The Air Force upgraded the 11 BLACK HAWKS to MH-60G Special Operations Pave Hawks with refueling probes in 1984, folding stabilators in 1985 and some special mission avion-

ics in 1986. MH-60Gs flew in Operation Just Cause in Panama in 1989, and provided CSAR coverage for coalition forces in Operation Desert Storm in 1991. Further-modified HH-60Gs were based on the more powerful UH-60L and ultimately gave the Air Force 112 Pave Hawks for Rescue Squadrons (RQs) starting in 1990.



The HH-60G Pave Hawk has been flown extensively in combat and relief operations. (U.S. Air Force)



The Pave Hawk evolved from the BLACK HAWK with air refueling and rescue avionics. (U.S. Air Force)

Two HH-60G crews from the 56th RQS earned the 1994 Cheney Award for rescuing six sailors in extremely bad weather from a sinking tug off the coast of Iceland. During Operation Allied Force over Serbia in 1999, Pave Hawks helped recover two Air Force pilots down behind enemy lines. Operations Enduring Freedom in 2001 and Iraqi Freedom in 2003 put extraordinary demands on the helicopters. The 26th Expeditionary Rescue Squadron (EQRS) alone left Afghanistan in 2014 with 2,400 lives saved and more than 3,300 life-saving assists over five years, never with more than four Pedro HH-60Gs on-hand. Peacetime utilization was also high. After Hurricane Katrina in September 2005, more than 20 Pave Hawks flew in and around New Orleans to save more than 4,300 Americans. In August 2017, Pave Hawks from the 920th Rescue Wing reportedly saved 146 people in one day when Hurricane Harvey flooded Texas towns.

Attrition has trimmed the Air Force Pave Hawk fleet to 96 helicopters. The first of 21 Operational Loss Replacement aircraft converted from UH-60Ls to HH-60Gs for Air National Guard squadrons was accepted in June 2017. With greater range, truly integrated avionics, and en-

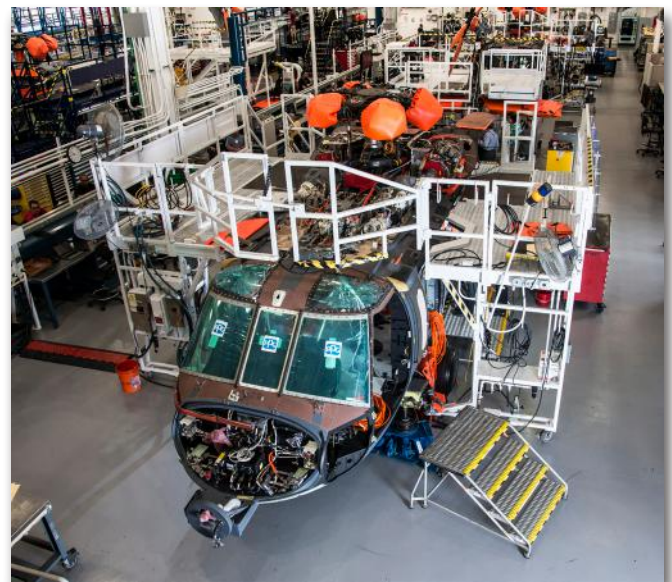


The Aerospace Rescue and Recovery Service was disestablished in 1993, but the Pave Hawk remains in today's Air Combat Command, Air Force Reserve, and Air Guard. (U.S. Air Force.)

hanced digital connectivity, 112 new Sikorsky HH-60W Combat Rescue Helicopters are to achieve Initial Operational Capability in 2020. They promise Air Force rescue crews new tools for their noble mission — *That Others May Live*.



Air Force Pave Hawks routinely operate from Navy Ships. (U.S. Air Force)



Now in final assembly, the Sikorsky HH-60W gives rescue crews greater range and new connectivity for Combat Rescue and Isolated Personnel Recovery. (Sikorsky, a Lockheed Martin Company)

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Igor I. Sikorsky Historical Archives
MS S578A
6900 Main Street
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The 2018 John J. Schneider Historical Achievement Award was presented to Mr. Dan Libertino, president of the Igor I. Sikorsky Historical Archives. In the photo, Mr. Libertino (center) is flanked by David Koopersmith (VFS Chair of the Board) and Mike Hirschberg (VFS Executive Director).

Prepared by Frank Colucci and John Bulakowski with graphic art and layout by Jodi Buckley.

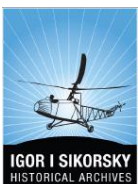


“It would be right to say that the helicopter’s role in saving lives represents one of the most glorious pages in the history of human flight”

Igor Sikorsky – The Story of the Winged-S

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