



Chinooks Relieve El Nino-Ravaged California Coast



Vice President Al Gore (in cabin doorway) boards a Stockton Chinook with other staff members while inspecting recent flood damage in Sonoma and Monterey counties in California. □

by Steve Roberts, SI Stockton AASF

As the wettest winter in California was recorded, homes sliding down hill-sides, mudslides forcing residents to flee their homes, highways wrecked in river torrents, the **Delta Schooners of Co. G, 140th Avn.** went into action in Sonoma County's wine country and the Big Sur in Monterey County.

In Sonoma County, Chinooks transported emergency equipment into the Rio Nido area, devastated by mudslides. In Monterey, CH-47Ds airlifted 600 people, trapped in Big Sur, to the airport. Chinooks also carried relief supplies into the peninsula after mudslides closed the highway.

In three weeks, Delta Schooner Chinooks flew 88 hours, carried

1,245 passengers, 259,700 pounds of internal cargo, and 10,000 pounds of slingloads, including heavy electrical generators.

As flood relief services began winding down, the Schooners provided transportation for Vice President Al Gore, who viewed much of flood-damaged northern California from a Chinook.

Standing by at Travis Air Force Base as "Air Force Two" touched down, three CH-47Ds assisted Gore and his party on their fact-finding mission. The military aide to the vice president expressed appreciation for the Chinook crews' disaster relief expertise and flying skill.

Although El Nino is dissipating, the Delta Schooners remain ready to handle any further flood relief flights for California's citizens if the need arises. □

Dear Chinook and Sea Knight User:

Being has major changes ahead in our rotorcraft business.

First, and most importantly to the Tandem Rotor community, we have launched a new Chinook model, the CH-47SD, or "Super D," aimed primarily at the international market.

The Super D will incorporate many technology improvements. The longer "radar nose" and long-range fuel tanks will now be standard. AlliedSignal T55-L-714A engines, with 4,075 continuous shaft horsepower and FADEC, will improve performance. The operational lives of the fuselage and avionics and other systems will increase with machined airframe structures and strengthened skin panels to reduce vibration effects.

The first CH-47SD, already on order, will roll out in late 1999, and continued Chinook production will keep CH-47s at the forefront of heavy-lift rotorcraft for decades.

Also, Boeing Philadelphia has recently been named Program Management Center for all Boeing military helicopter programs ensuring customer support continuity for years to come!

As always, send all correspondence to Jack Satterfield, Boeing Philadelphia, P.O. Box 16858, M/S P10-18, Philadelphia, PA 19142-0858. Ph: (610) 591-8399; Fax: (610) 591-2701, e-mail: john.r.satterfield@boeing.com

Good luck and good flying!

**John Gilbride
Director - Global Rotorcraft
Customer Support**

GA G Co., 244th Avn. from Hunter Army Airfield in Savannah, Georgia, recently assisted the Coast Guard at Winyah Bay on the state's coast. Two buoy hulls had broken free from their moorings in a storm and washed ashore. A G Co. Chinook easily slingloaded the buoys for the flight to a Coast Guard maintenance facility in Charleston, South Carolina. The buoys will be repaired and put back in service elsewhere. □

Iowa Guard Flies New Horizons '97

by Maj. Randy Warm
Maint. Officer
Davenport AASF

Hot and Humid! Those are the words most often used by the men and women of Det. 1, F Co., 1/106th Avn. during their most recent deployment to Guyana, South America as part of the U.S. Air Force's Task Force Falcon during Operation New Horizon '97.

Located on the eastern shore of South America, just five degrees north of the Equator, Guyana is most notable, to Americans anyway, for Jim Jones and bad Kool-Aid. Fortunately for Task Force members, there were plenty of air-conditioned tents for sleeping and enough bottled water for everyone during the three-month deployment.

Det. 1, as part of an Illinois/Iowa aviation task force, supported the Air Force's 820th "Red Horse" Squadron (construction engineers) with two CH-47Ds from AASF 3 in Davenport, IA. Crews and maintenance personnel were based with the Guyanese Defense Force at Temerhi Airport, located near Georgetown, the capital city.

Daily, crews flew personnel and equipment to remote jungle locations where members of the 820th were building schools and medical facilities for village inhabitants. Both aircraft had been modified with GPS, making navigation over jungle terrain much easier. "Flying over this jungle is like flying over a giant head of broccoli," remarked CW3 Dennis Lane about the triple canopy jungle. "There is absolutely no place to land in an emergency." What wasn't jungle in Guyana was water.



This Chinook's rugged construction enabled the aircraft to land safely after a mid-air collision with a private airplane, despite hydraulic system damage. No crewmen were injured in the incident. (See story, p. 3) □

From the Field...



Iowa National Guardians CW3 Weil and SSG Williams relax at LZ/PZ Kumaka, Guyana, with local children. □

LZ/PZs were nothing more than small, sandy clearings just large enough to drop external loads, then land the Chinook.

Despite the difficult conditions, the unit received top-notch, quality training. Operational readiness was nearly 80 percent as crews learned to support aircraft in an austere environment. According to CW3 Bob Weil, a full-time flight instructor at AASF 3, the aircrews received invaluable training by conducting

flights with combined internal and external loads at high density altitudes. In total, Det. 1 flew 185 hours, moved 1.5 millions pounds of material, and carried 1,224 people during the three-month deployment, a new record in support of the 820th "Red Horse."

The deployment for New Horizon '97 is a fine testament to the reliability and the capabilities of the CH-47D and the soldiers who fly and use them. □

Chinook Lands Safely After Mid-Air Strike

While returning to base in Stockton, California, after helping to evacuate flood victims in Monterey County, a Chinook from **Co. G, 140th Avn. Rgt.'s "Delta Schooners"** successfully handled a mid-air crisis.

The CH-47D completed an emergency landing after a small, single-engine aircraft flew into the helicopter, despite damage to its hydraulic system.

The CH-47D withstood significant damage to its right rear fuselage and hydraulics after a white Beech Bonanza struck it, but no crewmen were injured. (See photo, p. 2)

However, the pilot of the Bonanza, who had recently celebrated his 80th birthday, died when his aircraft hit the ground, minus one wing, in a hilly area south of Anderson Reservoir, near Morgan Hill.

The damaged Chinook, accompanied by a second CH-47D not involved in the accident, landed near a golf course immediately after the collision.

Both Chinooks had been working on the coast by the Monterey peninsula for about a week in early February, operating from a temporary base south of Monterey. They evacuated about 1,000 people and transported tons of food and other supplies into the flooded region. Another pair of Chinooks from Stockton provided similar support services in Sonoma County.

Lt. Col. Maurice Villegas, the Delta Schooners' operations officer, told local newspapers that the accident was the unit's first since its inception in 1971. The Delta Schooners currently operate eight CH-47Ds.

The National Transportation Safety Board and local authorities initiated an immediate investigation. Witnesses in the area said the collision occurred in clear weather at about 3:25 p.m. The helicopters were flying in formation, heading east, and the Bonanza was flying north at about 2,500 feet. □

Delta Schooners Go To Birds



A Delta Schooner Chinook prepares to lift crane cable boxes at the Farallon Islands National Wildlife Refuge in California. □

by **Steve Roberts, SI Stockton AASF**

As the CH-47 approached the LZ on the Farallon Islands, thousands of sea gulls swarmed in uneasiness to the unfamiliar sound of turning rotor blades. After the Chinook landed, the gulls returned to their nesting areas, keeping watchful eyes on their strange new visitors. For the **Co. G, 140th Avn. Rgt. "Delta Schooners"** aircrew, visions of Alfred Hitchcock's classic film, "The Birds," came to mind.

The U.S. Wildlife Service needed to complete a renovation project at the Farallon Islands National Wildlife Refuge, 30 miles west of the Golden Gate Bridge in the Pacific Ocean, but storms and corrosion had damaged a crane used to lift heavy materials delivered by boat. Loads were too heavy for HH-60 helicopters that had previously flown missions, so the call went out for heavy-lift from the Schooners.

The unique internal and external loads to be carried required special coordination between wildlife officials and AASF mission specialists. Among the loads were a solar-powered generator, batteries, electrical transfer unit and construction supplies, all carried internally. External loads included two four-ton cable drum boxes, part of the island's crane, were to be

flown back to the mainland for repair, then returned. The Schooners flew several sorties to complete the entire mission.

Since there was no forklift on the island, a special challenge faced aircrew and island refuge workers as unloading aircraft began. Special dollies were constructed to handle 45,000 lbs. of internal cargo, all of which was delivered without damage to equipment or injury to personnel.

Margaret Kolar, Farallon Islands national Wildlife Refuge director, expressed gratitude to members of the Schooners in a letter to the California Army National Guard. "Despite El Nino storms, with CH-47s out on flood relief missions, the Delta Schooners made an extraordinary effort to complete a mission in an environmentally sensitive area. Their dedication to duty has been satisfying to observe."

By mid-March, the Delta Schooners had completed additional missions to the island, including sling-load transport and installation of a double-walled diesel fuel storage tank and delivery of hazardous spill control supplies. The March deadline was critically important, since the sea gull mating season on the island has begun, and the gulls don't like disturbances -- even from the friendly Chinooks of Co. G in nearby Stockton! □

A Letter From Germany

by Noel C. Seale,
Flight Operations Officer
12th Avn. Bde.

My name is Noel C. Seale, and I am currently Flight Operations Officer for the **12th Aviation Brigade** in Germany. I wrote you on 20 October 1994 when I was in **2nd Plt., B Co., 214th Avn. Rgt. (Freight Train)** stationed in Ft. Lewis, Washington. Articles about the Freight Trains appeared in **Tandem Notes** Vols. 1.4 and 3.1. I left Ft. Lewis and was assigned to **Co. E, 502nd Avn. Rgt. (Load)** in Aviano, Italy, before that unit deactivated in September 1997. **F/159th Avn. Rgt. (Big Windy)**, the only CH-47 unit left in Europe, is part of my brigade. You published an article on them in **Tandem Notes** Vol. 3.3, about their experiences in Operation Joint Endeavor. They are still deployed, and I would like to provide you with their latest update.

For 1997, the four CH-47D aircraft supporting the Operation Joint Guard mission provided heavy-lift aviation assets and reported the following statistics:

Total Hours -- 1,303.9

Total Cargo -- 3,243,050 pounds

Total Passengers -- 5,607

Total Missions -- 505

If possible, I would like to get on your mailing list, and receive any missing issues to complete my historical **Tandem Notes** library for the brigade. □

(Ed. Note -- Happy to comply, Noel. You should now have a complete set of Tandem Notes in hand. Thanks for your interest. You really get around!)

Tandem Notes/Phrog Phorum on Web

Web surfers take note! You can now access **Tandem Notes/Phrog Phorum** on the Internet. The address is: [http://www.boeing.com/rotorcraft/military/CH-47D\(or CH-46\)/tandemnotes/](http://www.boeing.com/rotorcraft/military/CH-47D(or%20CH-46)/tandemnotes/). It's in Acrobat format, downloadable from the Boeing home page! □

A Blast From The Past



Historic Boeing (nee Vertol) H-21 tandem rotor in pristine polished aluminum, thanks to the extraordinary restoration efforts of former Army aviator Max Hall in Springdale, Arkansas. Max flew the renovated "Work-horse" in 1997, the first flight for this beautiful Army bird since 1968. Since then, he has flown the '21 to unit reunions and to the EAA annual show in Oshkosh, Wisconsin. □

...In All Shapes And Sizes



Another former Army aviator, Bill Ailes of North Canton, Ohio, proudly displays his flyable Chinook model, featured last year in **Tandem Notes**. Obviously, Ailes' Chinook handles weather well, just like the real thing! □

ICH Passes Pre-JROC Review

The Army's Improved Cargo Helicopter Program (ICH) has cleared another approval on its way to production and completed a review by the Joint Requirements

Board (JRB).

ICH will add several system improvements and extend the useful service life of at least 300 Army Chinooks until the introduction of the Joint Transport Rotorcraft (JTR) for the Army and Marine Corps in about 2020. □

Morgenstern's Photo Gallery

Boeing Tech Rep John Morgenstern of Quantico, Virginia, knows Phrogs and rarely misses a chance to document their activities. Here are some candid from recent **HMX-1** missions with John's captions!



Now they're both Boeing products! The Marines' CH-46 and F/A-18 at Beaufort, S.C. □



The HMX-1 H-46 maintenance crew in "cold" South Carolina, with Air Force One in the background. □



An HMX-1 Phrog stands guard for the back-up Air Force One (the older 707) in St. Louis, Missouri. The airplane is retiring, but not the Phrog! □



A typical rehearsal for HMX-1 -- two H-46s and two VH-3s line up at the Hilton Head, S.C., airport for a Presidential visit last December. □



During a visit to Kennedy Airport with HMX-1 in New York after the first of the year, I had a chance to take a look at Air France's Concorde, waiting for another hop across the Atlantic. It was a treat to see something quite special. I wouldn't mind flying in it some day. □



While on board the Concorde, I got an opportunity to check out the cockpit. For such a speed demon, it has an old-fashioned steam gauge instrument panel. The plane is single-aisle, with two seats each side. It can carry 100 passengers, who pay \$7,500 for a New York-Paris round trip. The airplane carries 25,000 gallons of fuel for a one-way trip. □ **5**



Phrog Phorum

Vol 5

No. 1

“Average” USMC Phrog Now 30

Major Marine Milestone

from an article by
Jay P. Spenser

A Navy-administered procurement for a new Marine Corps assault helicopter prompted Boeing Vertol to extensively revise the Model 107, first flown in April 1958, with two 1,250-shp General Electric T-58 turboshaft engines. The marines were then flying piston-powered Sikorsky CH-34s, which were far from old but had been rendered obsolete overnight by turbine propulsion.

Boeing Vertol's proposed replacement, the Model 107-II, flew on October 25, 1960, and won this Marine Corps competition in February 1961. Briefly known as the HRB-1, this twin-turbine transport helicopter was redesignated the H-46 Sea Knight when U.S. military designations were standardized the following year.

Deliveries of CH-46A Sea Knights to the Marine Corps began in October 1964. These helicopters greatly enhanced the Marine Corps' ability to rapidly deploy large numbers of combat troops to remote areas. From Vietnam to Desert Storm, USMC Sea Knights have earned a reputation for utility, ruggedness and reliability in aerial assault, search and rescue (SAR) and other roles.

Depending on fuel load, the H-46 can carry up to 25 combat-equipped troops, a mix of troops and cargo, or more than 6,000 pounds of dedicated cargo. Because of the addition of larger fuel tanks, emergency flotation gear, electronic countermeasures, additional avionics and new dynamic components, however, typical payloads today are 12 troops



Aviation photographer Randy Jolly captured this and many other images of USMC Phrogs in action for his book, *Marine Air Power*. Anyone interested in a copy can contact Randy at 972-276-2544. □

and 4,000 pounds of cargo. When required, USMC Sea Knights can be quickly reconfigured for aerial evacuation with provisions for two medical attendants and as many as 15 patient litters.

Today, the Marine Corps operates more than 230 CH-46Es in squadrons attached to the U.S. Atlantic and Pacific Fleets as well as land-based units. This year, the average age of the USMC CH-46E fleet turns 30 years, and many of these hard-working helicopters have entered their fourth decade of service. They will soldier on until the Bell Boeing MV-22 Osprey tilt-rotor is operational and fully fielded well after the turn of the century.

Boeing delivered 624 Sea Knights to the Navy and Marine

Corps between 1964 and 1971. Beginning with 177 H-46As, this production went directly to 273 H-46Ds and 174 CH-46Fs. The CH-46E modernization program began in 1975 and ended in 1983.

Marine Corps CH-46 Sea Knights will remain reliable and capable for another 15 to 20 years, until fully replaced by MV-22 Ospreys. By then, the H-46 will have served for half a century. □

Boeing writer Jay Spenser's forthcoming book, *Whirlybirds: A History of the US Helicopter Pioneers* (University of Washington Press, Museum of Flight, 1998), includes the first comprehensive history of Boeing Philadelphia. □