

# USAF To Bolster Pilot Rescue Ability

ROBERT WALL/WASHINGTON



active duty five HC-130s from a reserve unit in Portland, Ore. Moreover, four EC-130s and two WC-130s will be converted into HC-130s, Schmidt said. The service also hopes to convert four more C-130s into CSAR tankers, but those funding decisions won't be made until next summer.

Similarly, eight HH-60Gs will be taken from Portland and moved to the new active duty unit to be established at Davis-Monthan AFB, Ariz., where five HH-60Gs are already stationed and operated by the 305th Rescue Squadron, another reserve unit. Adjustments also may be necessary to overseas basing plans, Schmidt added.

Even after the adjustments have been made and additional airplanes fielded, "more aircraft may be necessary," Schmidt said. The service will still have a force structure shortage of two HC-130s and four HH-60s. Additionally, upgrades, particularly self-protection enhancements for the HC-130s, are also deemed necessary. The HH-60s are already undergoing an

**The U.S. Air Force views Sikorsky's S-92 helicopter (artist's rendering) as its preferred option for a future combat search-and-rescue aircraft.**

**H**oping to revitalize its ability to rescue a downed pilot, the U.S. Air Force plans to field a new radio, increase the inventory of search-and-rescue aircraft, establish a new combat search-and-rescue unit and initiate development of a new helicopter, with Sikorsky's S-92 the preferred candidate.

The moves are part of a long-term campaign to improve combat search-and-rescue (CSAR). The thrust has already yielded improved survival radios and upgrades to the HH-60G helicopter, but more significant steps lie ahead.

The highest profile activity, although the one that will take the longest to show results, is development of a helicopter to replace the aging HH-60s. The Air Force spent considerable time assessing alternatives and has now determined the S-92 is the "front-runner," according to Maj. Gen. Randall M. Schmidt, the service's assistant deputy chief of staff for air and space operations. The S-92's preferred status "has to do with the entire suite [it offers], including range and speed," Schmidt told *Aviation Week & Space Technology*.

Also in the running are the EH-101, marketed here by Lockheed Martin and AgustaWestland as the US101; the CH-53, an upgraded HH-60X Black Hawk with a more powerful engine and the S-92's drivetrain and rotor system; and the HV-22, a slightly modified version of

the CV-22 that Bell and Boeing are developing for Air Force special operations forces. Serious funding for the effort isn't expected until 2005.

Field commanders are urging that the new helicopter be able to address CSAR demands in rugged environments. Search-and-rescue forces in Afghanistan were strained because of the long distances, high altitudes and poor weather they had to operate in, noted USAF Maj. Gen. Victor E. Renhart, Jr., director of operations for U.S. Central Command. The units operated out of Jalababad in southern Pakistan and Kharsi-Khanabad, Uzbekistan; both locations involved several hours' flight times to central locations in Afghanistan.

**AIR FORCE PLANNERS** believe that, with a lot of work, they should be able to keep HH-60s in service through 2014. The HH-60s soon will undergo a service-life extension program to remain viable. Currently, the replacement aircraft is supposed to be fielded by 2015. An initiative to accelerate the fielding by at least a year didn't receive the required funding support in the service's internal deliberations, but Schmidt said the issue is being treated as an "unfunded requirement" and could receive support later.

To mitigate the existing shortage of aircraft in both helicopters and HC-130 refuelers, the Air Force is adjusting its force structure. For instance, it will move to

extensive upgrade program to give them better communications, navigation and self-protection gear (*AW&ST* Mar. 11, p. 60).

The most immediate enhancement for search-and-rescue forces will be the fielding of new survival radios that are intended to cut the time it takes to locate a soldier or pilot in need of rescue. After years of development in which the project encountered technical problems that delayed fielding, the Air Force is about to begin a graduation exercise for the Combat Survivor/Evader Locator (CSEL) system this fall. The event could lead to the first devices being given to operational units early next year. A small number of the devices might be available in case of conflict with Iraq early next year, although users would still be learning how to use them.

CSEL is designed to provide for the first time a personnel recovery data link with over-the-horizon transmit and receive capability via UHF satellites. The handheld device also is fitted with an antijam GPS subsystem to provide a CSAR cell with precise information on where a pilot has been downed.

"We've gotten past the technical issues with the radio," said USAF's program manager Lt. Col. David Madden. However, procedural issues still need to be worked out by the different user communities, he noted. For instance, special operations

forces would use the system only intermittently to maximize battery life—the power supply should last up to four days. However, a downed pilot wouldn't have to be as conservative and would probably want to communicate more. Procedures worked out so far are primarily for special operations users, since they will get the first 800-900 production CSELS. The Army should have a limited operational capability around March. However, even before then, the Air Force could receive 376 radios that are test assets.

**PRODUCTION IS** expected to increase quickly with the Pentagon planning to buy 3,500 more of the Boeing-built systems next year. Full-rate production that could lead to the manufacturing of more than 55,000 radios is expected to start in 2003. Those developments are contingent on successful completion of the multi-service operational test and evaluation in October at the Army's special operations base at Ft. Bragg, N.C.

When CSEL enters operational use, it still won't be fully functional. Managers deferred the full integration into theater battle management systems because of the complexity involved. In the interim, command cells would receive CSEL data on one of nine stand-alone workstations. Those are to be available in December and distributed in places such as the Combined so it can move CSAR forces more efficiently, Renhart said. In Afghanistan, "just getting the [personnel recovery] forces in place was a challenge," he noted. That's one reason Centcom is backing a plan to increase C-17 procurement to 222 airlifters.

During the initial period of combat, it wasn't USAF forces that provided CSAR support, but Navy aircraft operating from the USS Kitty Hawk. The off-shore basing added about two more hours to rescue missions. Moreover, most of the Navy's

Air Operations Center at Prince Sultan AB in Saudi Arabia; in Incirlik, Turkey, from where U.S. and British pilots patrol the northern no-fly zone over Iraq; in South Korea, Ft. Bragg and Hawaii. Moreover, two would be ready for ship use. Madden said compatibility with aircraft carriers has already been worked out. The CSEL workstation was tested on the USS Abraham Lincoln that is now en route to the U.S. Central Command area of operations.

In a recent exercise, users also found they could use CSEL for more than just search-and-rescue. One international operator—Canadian, Italian, British and Australian forces were introduced to the system—used it to transmit intelligence information on activities in his direct vicinity while he was waiting for the rescue party to arrive.

While CSEL and the other planned enhancements should provide a significant boost to CSAR operations, Schmidt stressed that much has been done in the last several years to improve how those helicopters aren't air refuelable, which further complicated CSAR operations. "This has been a huge wake-up call," said Rear Adm. Joseph J. Krol, the Navy's deputy chief of plans, policy and operations. The Navy is getting ready to field a new helicopter that would be used for CSAR, the MH-60S, and it will have air refueling capability, Krol noted.

In Afghanistan, search-and-rescue forces of various types, including special operations units, have conducted more than 75 missions and retrieved more than



**Warfighting commanders want the Pentagon to buy more C-17s to meet airlift demands for HH-60G CSAR helicopters.**

high-risk missions are carried out. Most notably, the fielding of the modified PRC-112 survival radio, designated the "Hook-112B" and "Hook-112B-1" has given operators a much better idea of where a pilot is down. The modification includes a GPS receiver to transmit exact coordinates.

Moreover, Madden said the first improvements to CSEL are already being planned. In particular, managers are mulling enhancing communications for the terminal phase of rescue operations to exchange more information between the radio and the rescuing helicopter.

The Air Force also needs to increase lift 340 personnel. It is already the largest search-and-rescue operation since Vietnam, according to Renhart. About 20% of the operations involved coalition members.

Renhart noted that coalition partners need to pay more attention to CSAR as well. Too few of their helicopters can be air refueled, and he noted that only two of eight countries providing special operations troops also came with lift aircraft for them. Moreover, only two allies provided air refueling assets. ▶