

More Than Hardware

By Kenneth Larsen, President, Professional Rescue Outfitters

In the post-Katrina world of public safety, we have seen an explosive growth of new aviation programs, as well as existing programs pushing to increase their emergency rescue capabilities. The images of the New Orleans' skyline filled with civilian and military rotorcraft conducting reconnaissance, rescue and firefighting operations provided the catalyst for a shift in thinking among agency administrators and emergency managers across the country. It didn't require a degree in aeronautical engineering to see the next hot topic for our industry – rescue hoist operations.

From the beginning, the belief that a helicopter would be a vital tool in saving human life has been a driving force in the development and design of new aircraft. The combination of the helicopter and a rescue hoist result in a platform capable of conducting rescues where no other tool would be successful. Following this line of thinking, one might think, "we'll get a hoist for the ship, and we'll be in the rescue business." But will you? For the helicopter unit thinking of making the transition into the rescue arena or for the rescue program looking to increase their capability, there are several factors that need to be identified and addressed before purchasing a rescue hoist.

As units look toward expansion, one of the first things that should be completed is a realistic threat assessment. What are the current problems faced by your jurisdiction? Flooding, swiftwater, mountaineering accidents, lost person SAR or medical rescues in remote areas? The threat assessment can sometimes turn into a "Pandora's box," where one mission type leads to another, which bleeds over into the next. How far are you willing to proceed down the path? How much "mission creep" will the department's budget sustain? These are all questions and issues that need to be resolved at the beginning of the process, as each answer will directly impact the outcome of the next steps in developing a rescue capable program.

For each problem identified in the threat assessment, you next need to determine whether or not a hoist-based rescue is the appropriate solution. While this sounds simple, it can be a very difficult and time-consuming endeavor. Few airborne programs have the luxury of on-staff rescue expertise in many of these environments. To answer these questions, you will likely need to involve your partners in the public safety sector – your local fire, rescue, EMS, SAR and emergency management agencies just to name a few.

Contacting other air rescue units can also provide answers and valuable guidance through this phase of the process.

The next step in the development process involves the evaluation of crew structure. What staffing does the unit currently have? Do you routinely fly with a dedicated pilot and observer or two pilots? Do you carry a flight medic? Who will you train as your hoist operators? Will you train your own rescuers or outsource? At a minimum, the rescue flight crew should consist of a pilot, observer/hoist operator and rescuer/medic. While the rescuer/medic position may not come from within the unit, they should be trained and qualified for the task and participate in ongoing training with the aircrews.

Training crews for air rescue operations can be a significant undertaking, depending on the current operational capability of the unit. For programs with limited vertical reference or precision hovering/HOGE, the transition can be a challenge at times. While the pilots have to maintain a stable hover with sometimes limited visual references, the observer training for rescue duty must learn to shift their visual perspective directly beneath the aircraft.

Using this vertical sight picture, the observer acts as the "eyes" of the pilot, relaying directional commands in multiple planes (left/right, forward/back, up/down) while determining angle of approach, load stability, load altitude above the ground and load clearance from obstacles, along with the ever present situational awareness and collision avoidance duties. Now, add to the mix poor lighting, weather, excited radio traffic and the knowledge that there are two (or more) lives outside the aircraft cabin connected to you by a 3/16-inch steel cable, and you begin to realize there is much more to the rescue mission than just adding some hardware.