

LOCATION, LOCATION, LOCATION

Personal locator beacons cut down on time and money it takes for rescues

Eight years ago, a visitor in the Ketchikan area pressed his “help” button on his personal beacon after breaking his leg at a lakeside cabin. At the time, the handy beacon technology was fairly uncommon for travelers in that area. Once it was determined that a person needed help, a volunteer aircraft from the Ketchikan Volunteer Rescue Squad flew to the GPS coordinates that accompanied the beacon activation. The volunteers splinted the man’s leg and flew him to a medical facility.

“No fuss, no muss. This guy would have laid there for the next three days for his next pick-up” said Jerry Kiffer, current KVRS president.

This compelled KVRS to start a free beacon loaner program aimed at cutting down response time for rescues. This loaner program, one of the few in the state, is beneficial for both the adventurer, who could be in a precarious life or death situation, and rescuer, by cutting down the time volunteers are exposed to elements and terrain during a search and rescue. It also greatly reduces the cost of a search for the volunteer organization that relies on donations to pay for rescues that it provides free of charge.

Each of the 24 beacons cost roughly \$180 annually to maintain the service, according to Kiffer. However, he estimates that in 2014 alone beacons saved somewhere in the area of \$30,000 for SAR operations. A great portion of the savings is by reducing an operation that often took days of searching via a chartered helicopter into something that now takes sometimes 45 minutes of flying time. But what is invaluable is preventing prolonged pain and suffering a lost or injured person has to endure waiting for a rescue or potentially saving someone’s life.

The Air Force Rescue Coordination Center, that serves as the round the clock coordination epicenter for U.S. military and civilian aviation SAR needs in Alaska, and North Slope Borough Search and Rescue, have similar loaner programs. Instead of the commercial SPOT locators, military members in Alaska can sign out one of the 20 government-style 406 personal locator beacons available through the RCC before they embark on an Alaskan adventure. Likewise, the North Slope loaner program, which has been around since 1994, has 300 of these 406 type beacons distributed in eight communities in the northern most part of Alaska. These beacons are named for the frequency the signal is transmitted on. The RCC at Joint Base Elmendorf-Richardson monitors the 406 megahertz search and rescue communications system at all hours, waiting for beacon alert message in the Alaska SAR region, potentially cutting down on response time. The 406 type beacons are single purpose and activated when a person feels they need help. The North Slope uses the ACRresQlink and ACRresQfix model that like other 406 type beacons can relay GPS coordinates that are within 100 meters of the target in a matter of 20 minutes.



“The 406 program was designed for the soul purpose of saving lives,” said Senior MSgt. Rob Carte, superintendent of the Alaska RCC. “We have people sitting here around the clock waiting to rescue people. What we do is we wait for people to get into trouble so we can help them out.”

Meanwhile, signals from the commercial locators such as the SPOT are routed first to a commercial coordination center in the Lower 48 that will in turn notify Alaska State Troopers of the beacon activation. The commercial beacons locator uses a higher frequency and transmits at a weaker power while the 406 locator has a stronger five-watt signal. The SPOT also needs a line of sight to both the sky position with GPS and to send a message to satellites. Sending messages in a heavily forested area or a deep canyon can be difficult, however, Kiffer said the SPOT beacons have proven to be the most reliable in the densely forested area around Ketchikan. With a paid subscription, some commercial beacons have the capability to send non-emergency messages to friends and family as a way to check in, whereas the 406 beacon is for emergency activation only and is not subject to additional fees after purchase. It also doesn't have the tracking option which is popular with the commercial beacons. All

of these beacons require registration in order to get valuable information to rescuers in a timely manner. In the case of the loaner beacons, they're registered to KQRS. All the user needs to do is fill out a trip plan.

“We love them all because they all give us priceless information,” Tech. Sgt. Sean Mitchell, a SAR controller Alaska RCC, said when asked to recommend a commercial beacon during a recent presentation in Anchorage. “It's taking the search out of search and rescues.”

However, he admits that all beacons have weaknesses whether they're not turned on, have low or dead batteries or are in a location that hinders its capability to communicate with satellites.

“So always leave a trip plan with someone who cares,” Mitchell said. “Don't let the beacon lead to a false sense of security.”

Before KQRS started the program about six years ago, they put much research and thought into what kind of beacon would work best. The SPOT brand locator was selected because it allows for a real-time tracking feature versus activation-only feature in other beacons.

“The program has been geared toward the tourist industry. We turn it

WHEN SHOULD YOU PRESS THAT BUTTON?

- ~If you were at home considering calling 911
- ~If you're on your way to the above
- ~If you're stranded and have no other safe options
- ~Any significant increase in the amount of risk that you would normally assume or legitimate threat to your health and welfare is good enough reason to push the button.

YOU SHOULDN'T HIT THE BUTTON ...

- ~If the bugs are bad
- ~If you're just tired and don't feel like hiking anymore
- ~If you're going to be late for work.
- ~If you're mad at the world and want to mess with someone, don't push the button because it's a felony



on, put it on track mode and say, ‘Go out and have a good time,’” Kiffer said. But because of the success of the program, Kiffer said KVRS plans on adding 12 beacons and make them available year-round, which was the long-term goal when the program was started.

The beacons are loaned out through the visitor’s center, library, KVRS office and Alaska State Trooper post in Ketchikan. In exchange for the beacon, the adventurer fills out a trip plan that will be filed and logged into a spreadsheet under the beacon number that will allow volunteers to easily track when the beacon, albeit traveler, is scheduled to return from his or her

adventure. When time allows, members of KVRS track the adventurer’s travels using the SPOT website. If there hasn’t been any movement for a while, such as a pilot who hasn’t moved from the side of a mountain for several hours, it warrants further scrutiny by either KVRS or Alaska State Troopers. There are times where a KVRS pilot will fly out to the stagnant beacon’s location to check to see if everything is fine. The loaner program gets a lot of use from visitors out for a day hike up Deer Mountain. Sometimes volunteers will track the hiker straying from the main trail.

The whole system is tracked multiple times a day in the summer just for the chance that there’s an indication that something is wrong before someone hits the SOS button. Kiffer admits this consumes a lot of volunteer time.

In addition, the beacons allow real tracking of searchers in the field. KVRS has a van that operates as a command post on some search and rescue operations, giving volunteers capability to track the searchers in

real time and steer them to the adventurer’s GPS coordinates.

Kiffer said so far six beacon activations since the program started have been for true emergencies, not frivolous reasons that have plagued some programs in the Lower 48. Kiffer said that is a worry that hasn’t come to fruition yet. Also, since the beacons are registered to the loaning agency, if someone decides to steal one, it’s rendered useless for personal use. Kiffer said KVRS has only lost two beacons during the six years – one because the strap attached to a backpack broke. There are times where someone will forget to return the beacon and keep it in their luggage, but somehow the beacon is eventually returned. North Slope Borough SAR officials said they’ve had some beacons that aren’t returned.

While so far none of the KVRS loaned beacon have been directly attributed to saving someone’s life, Kiffer said, it has been used to help people out of a bind or even track a tourist down when the cruise ship needed to notify them of a family emergency.

People in the community have also participated in the program. A young man took one for his bicycle trip across Europe, another locator climbed Denali, one went on a walkabout in Australia and some accompany private pilots on a trip to the Lower 48. Kiffer said prior to the out of state trips, KVRS does some extensive research to identify proper search and rescue entities. That way, KVRS can avoid wasting valuable time tracking down the authorities when an emergency arises while the trip is underway. He found European authorities helpful, but Australians tend to leave people to their own devices.

“If you get lost in Australia they say ‘It’s your own bloody fault,’” Kiffer said. 🗺️

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