

poster

Helping  
Emergency Services  
Locate  
Points  
!

The Kenai Peninsula is an amazing place that attracts tourists from all over the world. In particular, the waterways draw visitors and residents alike with the promise of a good time and possibly dinner! Unfortunately, when people spend time on the water accidents are inevitable. When accidents happen emergency responders are called to the scene. When water is involved in emergency accidents, time is of the essence.

"Cold" water to the average person is about 70 degrees Fahrenheit. The average water temperature on an Alaska summer is 58-69degrees or colder. When a person's body is subjected to cold water, the expected survival time is 2-40 hours. If you take into consideration the water speed and turbulence, it's closer to the two hour side, also exhaustion or unconsciousness sets in within 2-7 hours or sooner. According to United States Search and Rescue Task Force, "Cold water robs the body's heat 32 times faster than cold air. If you should fall in the water, all efforts should be given to getting out of the water by all means possible."

Central Emergency Services (CES) responds to over 2,000 calls a year. Of these calls, about 1.5% are water rescue related (approximately 30). According to Gordon Orth, Operations Chief at CES, these types of calls are considered "low frequency - high risk". In order to respond to all 911 calls in the most efficient way possible, Borough Geographical Information Services (GIS) have engineered an intricate map book of CES's response area. However, very few water access points are identified in the mapping. For example, imagine CES gets a 911 call for someone in the water at Sports Lake. No water access points are identified in the map book. Therefore, the quickest response route is unknown and emergency personnel spend precious time determining the most advantageous way to access the victim.

The map book used by CES is under constant review and updating. Through GIS technology, different layers of information are added or updated. If the Borough were to add a waterway access layer, emergency personnel could easily identify the nearest response point for waterway emergencies. Shaving minutes off response time can mean the difference between life and death for accident victims.

People in our area die from accidents that possibly could have been stopped if only CES could get to the water faster. Do you know someone who has been in a water related accident on the Kenai Peninsula? I know I do, and it was very devastating to the community.

After this new waterway access GIS layer is developed, it will receive continuous review and updating for the map book. All private and public access points to lakes, rivers, and the Cook Inlet should be considered for review and inclusion in the GIS layer.

As response times are shortened due to credible waterway response points, rescue calls with fatalities, or serious trauma should decrease, thereby saving families and residents costly medical services. In addition, in case of a natural disaster, such as a flash flooding event, emergency services response time would be significantly decreased to save lives and injuries.

The Borough GIS is already working on improving and updating the map book. Adding a new GIS layer identifying waterways is not a significant cost to the department. The Borough already works in partnership with organizations like the Kenai Watershed Forum and the Kenai River Center to identify fish passageways. Working with these organizations and other agencies to adapt the data they currently have is achievable in a cost effective way.

The new waterway GIS layer could be part of the next updated release of the map book, making saving lives a little bit easier for the emergency personnel that serve our community every single day.

Bibliography:

[http://www.ussartf.org/cold\\_water\\_survival.htm](http://www.ussartf.org/cold_water_survival.htm)

<http://or.water.usgs.gov/pubdir/WRIROI-4109/wrir014109.pdf>

<http://tahoefire.com/tdfd2.jpg>

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