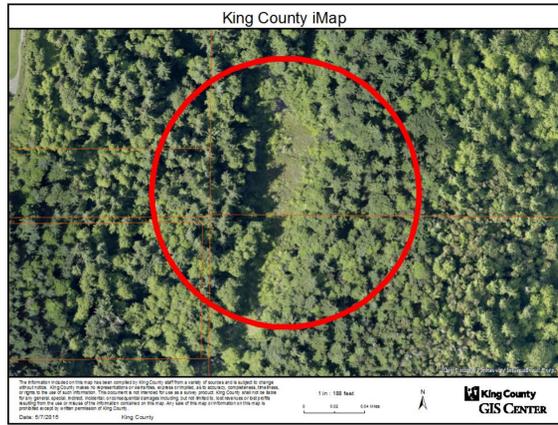
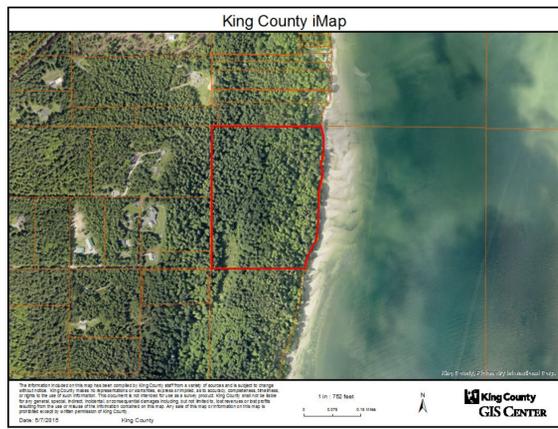


# Physical Description and Attributes of Lost Lake Wetland

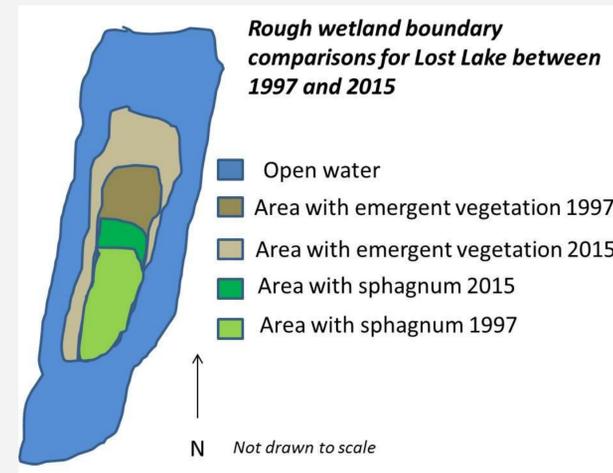
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**Introduction-** Lost Lake is a class 2 wetland -- a 38.0 acre marine, freshwater, and terrestrial conservancy. Many, many years ago a massive landslide formed a rift along the west shore of Quartermaster Harbor. Over time, water trapped inside became what we know as Lost Lake. Lost Lake is an important and sensitive area that is not easily replaced. The property conserves a sizable wetland or marsh and surrounding woodlands habitat with a wide variety of species ranging in uniqueness. Lost Lake is also one of the only few bog-like habitats left in lower elevations of Puget Sound. For this reason we are interested in knowing how big this wetland is, if the sphagnum mat still exists, and how it might be changing physically over time.



**Methods-** Our group hiked down into the bog area, collecting and finding samples of the temperature, electrical conductivity, and Ph levels of the water. Some of us were able to access the sphagnum (moss) mats to study the top growth and nature. We compared these findings to that of a study done in 1997 to analyze the growth and changes of the bog and its environment.



	<u>1997</u>	<u>2015</u>
Depth of sphagnum	3 feet	Not tested
Size of wetland	5 acres	Not tested; seems similar
Size of sphagnum	1-2 acres	1.5-2.5
Open water	2 acres	Not tested; seems to be less
Vegetated wetlands	3 acres	3.75-4
PH levels (acidity)	open water: 5.6, on sphagnum:4	open water: 6, on sphagnum: 4
Electric conductivity	Not tested	11
Temperature	Not tested	11.5° C

**Conclusion-** Based on our findings, the physical attributes of the *Lost Lake* bog have changed. It appears that the sphagnum mat may be more continuous than it was in 1997 (reported as discontinuous). We noticed the cattails are starting to encroach on the wetlands and the mat. We are unable to clearly state the conditions of the sphagnum in relation to its size; further studies are needed. However, the overall size of the sphagnum and vegetated wetlands do seem a little bit larger. The most surprising change that we saw was that of the acidity. The acidity in 1997 was 5.6 and most recently it was 6. However this is not very drastic, we do have some concerns about runoff water from the surrounding area, and if it is or could damage the fragile ecosystem, its formation, and its retention. A good sign in spite of this information, was that the PH level stayed the same on the sphagnum mat, so if there is a difference with the sphagnum it is most likely not from the acidity. Further PH testing is required to determine if indeed the acidity of the water is dropping.



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