

Christina Bonsell

GISWR 2013

Project update

Spatial variation of multidecadal growth of an Arctic kelp in the Alaskan Beaufort Sea

Goal: My aim is to map long term data (1980s-2013) on the growth of the kelp *Laminaria solidungula* from a location near Prudhoe Bay in the Beaufort Sea, AK. Coastal development in the mid 1980s and continuous climate changes may have altered the spatial growth pattern of this kelp. The final product will be a time series animation of kelp growth over time and space.

I am using an Alaska Coast shapefile from the Alaska Department of Natural Resources, which uses NAD83 Alaska Albers map projection. This is overlaying the National Geographic Basemap.

I tried imputing the site locations as points from a table containing coordinates in decimal degrees (add xy data after table data is added), but the points are not in the correct location. This is confusing because when I manually enter the coordinates into 'Go To XY', it goes to the correct location.

I am also working on reformatting the time series data for kelp growth so that it can be added to the map. I hope to add this data to the map, interpolate the data between the points, and eventually animate the changes over time. I also want to confine the interpolated growth data to the locations where kelp actually grows in this location.

Shapefile source: http://dnr.alaska.gov/mdfiles/alaska_63360.faq.html#what.3



Figure 1. Map showing location of study site