

# 2015 CHaMP Camp Workshop

## Lidar Data Integration

June 4, 2015

8:45 a.m. – 9:15 a.m.

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**Objectives:** To introduce CHaMP Camp workshop participants with the NREI model that is presently being used to estimate reach-level juvenile carrying capacity

**Software needs:** N/A

**Additional Resources:** N/A

### **Abstract:**

Wondering if there is a way to enhance the spatial coverage of CHaMP surveys?

Publicly available airborne Lidar data can provide a meaningful addition to CHaMP topographic survey data. In this presentation we will explore where to find Lidar data, how to spatially orient the CHaMP surveys to mesh with the Lidar data which requires control surveying over long distances. A few issues with coordinate systems compatibility will be identified. We will look at different options for rotation and translation of data and examine the benefits and drawbacks to the GIS tools vs. Survey software alternatives. The importance of reviewing errors in control surveys, problems with multiple visit rotations and translations where benchmark retirement complicates data adjustment, and the benefits of ground truthing will be reviewed. We will also take a look at the ArcMap process to combine the Lidar digital elevation models (DEMs) with CHaMP DEMs, and identify the tools necessary and the environments to control during the processing.