LTER All Scientists Meeting, Estes Park, September 2015

Tuesday, September 1, 2015- Working Group Session 4

An Exploration into LTER Large Data: Challenges and Solutions Related to Storing, Managing and Delivering High Resolution Data

Roughly 22 work group attendees discussed issues they faced when working with large high-resolution data. Right from the start of the session, the group realized that ‘large’ data was a relative concept based on information management experiences and had different meanings in terms of its definition and size.

As a result of our discussion, it was evident that the LTER sites have a very difficult task of estimating future storage needs and procuring funds to store and delivering these large data files to their researchers and the broader ecological community. LTER information management teams are faced with expanding storage as needed (sometimes the ‘need’ isn’t evident until a large data file is submitted to a system) with very limited, fixed budgets. They then must figure out how to sustain those data archives and their integrity into the future, well beyond the initial project funding. From a network level perspective, it is important to realize that these files will change in size and complexity with time as we merge, process and analyze for network synthesis projects and archiving and delivering these ‘larger and more complex’ files will present a very real challenge beyond the scope of challenges faced at the individual LTER site.

The consensus of this working group was that the future ‘Data Center’ should provide storage, backups, delivery (both digital downloads & clip and ship), and map and image services for not only processed large data but also those large ‘raw’ data files, such as LiDAR, that may need to be shared among collaborators. Hopefully, these proposed services will alleviate some of the budgetary strains put on the LTER sites.