RI Environmental Monitoring Collaborative
LiDAR Data Update Meeting
Hazard Conference Room, URI Bay Campus
Meeting Minutes
27 March 2009

9:05 Convene Meeting

1. Welcome, P. August
2. Introductions
3. Chuck LaBash reviews status of existing LiDAR data. See attached handouts.
    a. Nate Vinhateiro paper URL (http://www.ci.uri.edu/ciip/WhitePaper/2008/Vinhateiro.pdf)
    b. LiDAR status map
4. Mike Bradley, Tracy Daley, and Janet Freedman review coverage, metadata and technical aspects of processing existing LiDAR data
    a. Used 3rd party s'ware to work with RI ANG data
        i. VLS Lidar Analyst , ArcMap Extension, $1k educational single seat annual (~$11k street), to read LAS files and extract GIS-ready features such as trees, bldgs, veg. Was of limited value in feature extraction. Works best with data point spaced at 1m (ANG data was 3m point spacing). Could generate grids, compare 1st/last returns
        ii. ~690 Mb of raw data for each first and last return. Bare earth grid 400 MB, all together a few Gb's
        iii. Developed bare earth grids
    b. What derivative products do people want?
        i. Bare earth model as grid or terrain
        ii. Contours?
        iii. Raw point cloud data are not readily usable
    c. Need to form a subgroup to define RI specs for LiDAR products
        i. Pete August, Chuck LaBash, Janet Freedman, Paul Jordan, Kevin Ruddock, Mike Bradley, Shane White will take this on and send a draft standard to rest of group to consider. Objective is to carefully define LiDAR data products that represent our community's needs.
    d. Missing dataset ACOE dataset (since found and will be added to the status map)
        i. 2007 south shore up to narrow river, all sandy beaches, includes up to 45 feet deep into the water, 1 km offshore
5. NE States LiDAR proposal
    a. Chuck overviews
        i. Need to integrate into 1/9 arc second (3 m) NED at minimum. Can be more resolute if state pays for buy-in costs
        ii. All of RI covered
        iii. Spacing is 1-2 m, would include 2 foot contours line data

iv. Need 250K match from states, entire project stimulus funding to be obligated by 30 Sept 2010
v. Take 4-6 years to complete mission
vi. Total cost is approx $6M
vii. Independent QA might be necessary, would increase costs 5-18%
viii. Contours adds 20-25%, development of breaklines is a tedious process
ix. Unclear if USGS would do the work or contract it out
x. Not clear if state match in staff time can be used
xi. Need to sort out whether Federal pass through funds can be used as match, clarifymatch requirement on the base proposal vs. buy-ups,

b. Paul Jordan overviews from NOAA Coastal Geospatial Services contract
   i. State writes specs and NOAA manages the project, handle money, pick firm
   ii. Covers all aspects of spatial mapping applications
   iii. Contract management status available on a web site
   iv. Do not need money in hand to create an MOU with CSC to develop a project management relationship
   v. Not clear if USGS New England LiDAR mapping project would be run through this.
   vi. NOAA CSC service contract can be applied used by NGO's
c. All agencies present at meeting support participating in New England LiDAR mapping project
   i. RI agencies present feel they can look for match from their programs -- DOT, TNC, NBNERR, DOH, CI, NRCS, STB, Statewide Planning, ACOE
   ii. Match needed for base proposal
   iii. New funding needed for specific buy-ups (see handout from Janet Freedman)
   iv. Should Long Island shoreline be included?? (As of 3/30/09 it now is included)
   v. Have USFWS or USFS been approached for participation/match?

6. New LiDAR mapping projects
   a. John King reviewed interest by CRMC/GSO into side-looking LiDAR technology (1km range), resolution a few cm horiz, 3 cm vertical, $850K in-hand, includes bathy
   b. NOAA NBNERR developing a habitat mapping and change plan, might include elevation data, must be < 14 cm horiz/vertical accuracy
   c. EPA (contact Daryll Keith AED for more info) MOA with NASA to fly hyperspectral imagery; might include LiDAR sensors.
   d. Statewide Planning Trans section is preparing tech paper on impacts of sea level rise on transportation assets
   e. DOT interested in building internal capacity for engineering, might be interested in seeking Federal Highway funding for buy-ups.

f. Be careful about using congressional folks on this; can't make look like an earmark. Do not contact them and ask for heavy pressure.
g. Can we get backing from state CIO? Shane White might be best person to take this forward according to Steve Kut. If a couple of state department directors could provide a draft letter for the RI CIO to sign, he would probably do so.
h. Jim Boyd reviewed photos of December 1008 flooding in Waterplace Park

Adjourned at 11:00 AM