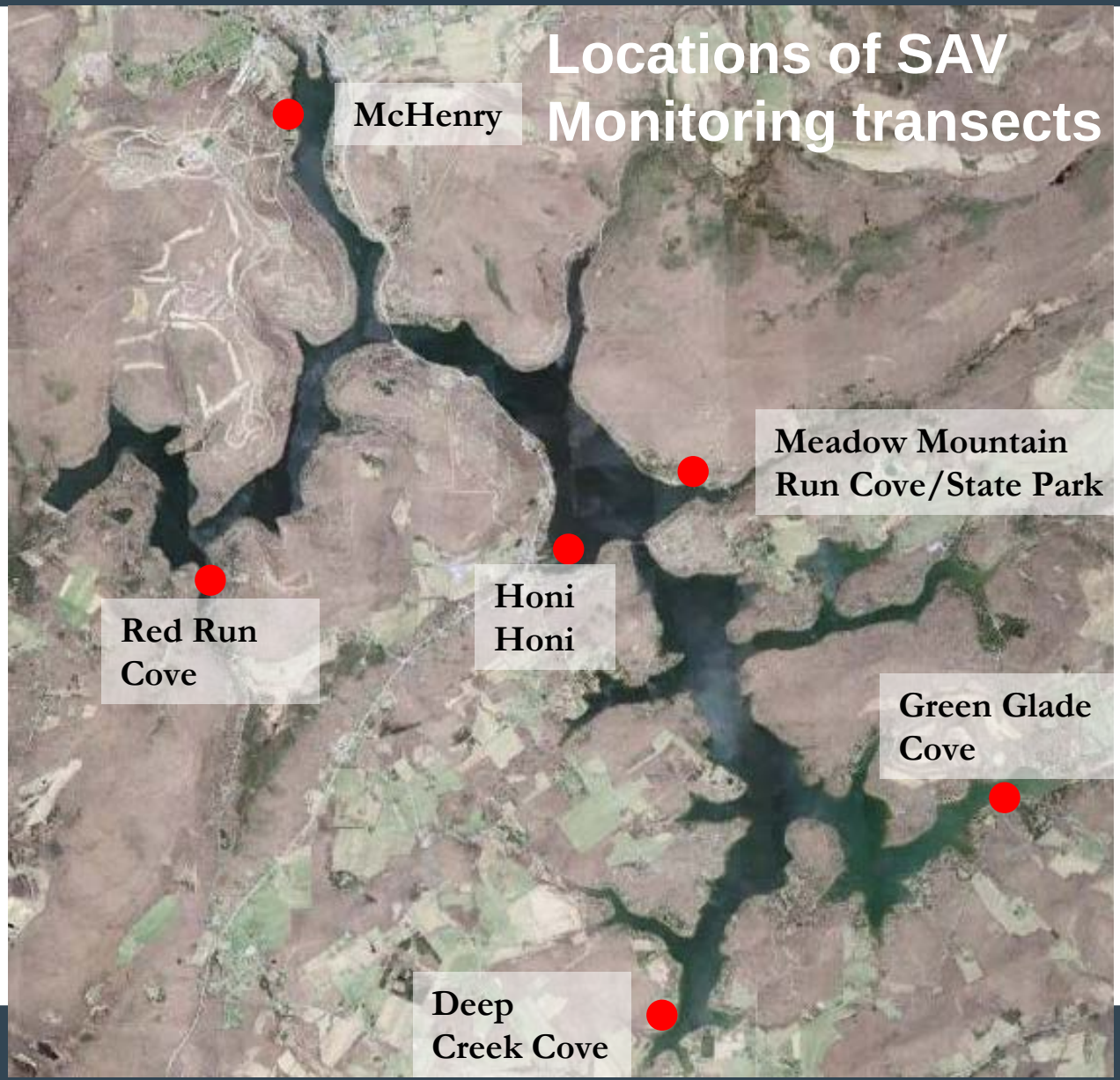
Deep Creek Lake Submerged Aquatic Vegetation (SAV) Survey:

Progress Report

DCL Policy Review Board Meeting

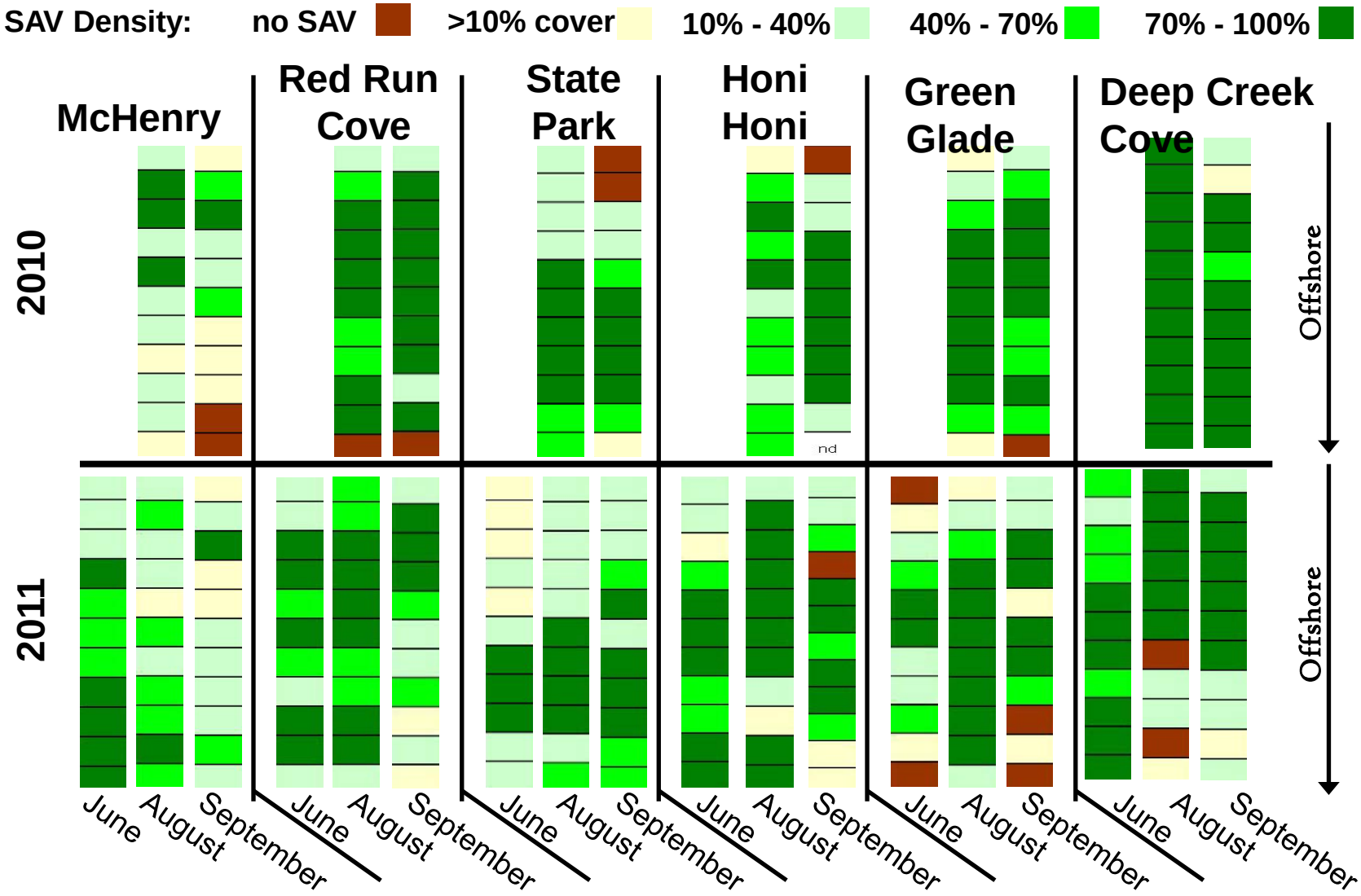
7/23/12


Locations of SAV Monitoring transects
McHenry
Meadow Mountain Run Cove/State Park
Honi Honi
Red Run Cove
Green Glade Cove
Deep Creek Cove

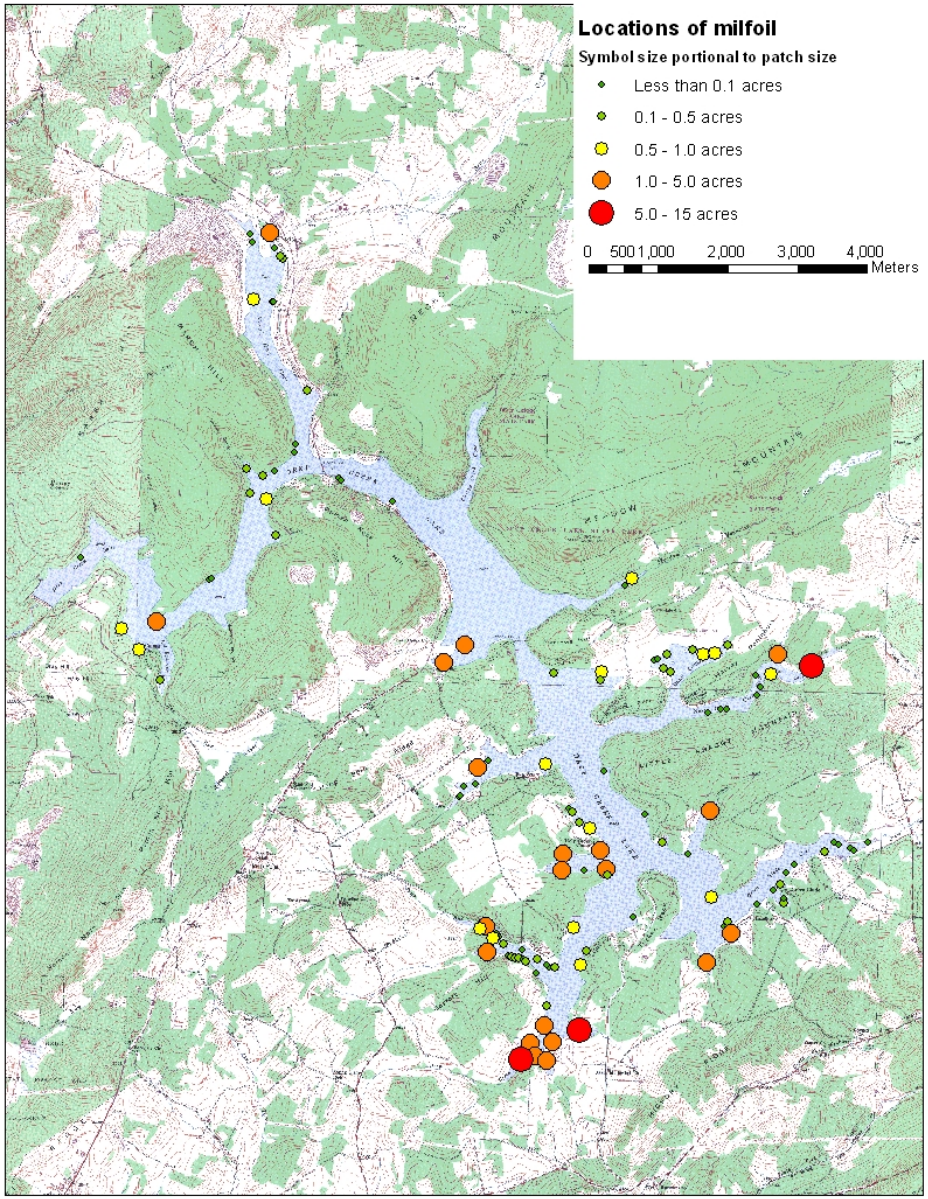
- Sampled DCL in August and September, 2010 (June 2010 was a pilot), June, August and September 2011, and June 2012
- Statistical analyses were used to analyze transect data for differences among sites and changes over time regarding:
  - Site-specific characteristics (transect length, maximum water depth and slope)
  - Species diversity, total mean SAV percent cover, individual species mean percent cover and species frequency of occurrence

RESULTS for 2010 and 2011

- There is a diverse SAV community in Deep Creek Lake
  - 16 species of vascular plants, 2 macroalgae
- The majority of observed species showed no significant change in density or distribution from 2010 to 2011
  - The distribution and abundance of these species differ primarily by site, with annual changes occurring rarely
- Species zonation is apparent at every site
  - *Sagittaria cristata* dominates the shallows
  - *Potamogeton* spp., *Vallisneria americana*, and *Ceratophyllum demersum* dominate the mid depths
  - *Elodea canadensis*, *Myriophyllum* spp., and macroalgae most commonly observed at greater depths.
- Myriophyllum spp. (Water milfoil) *density* **decreased** at Honi Honi site, 2010 to 2011
- Myriophyllum spp. *frequency of occurrence* i**ncreased** in Red Run Cove from 2010 to 2011, density did not change over time
- There is no evidence that Myriophyllum spp. has increased from 2010 to 2011 based on the six study areas under this assessment


SAV Density:
no SAV
>10% cover
10% - 40%
40% - 70%
70% - 100%
McHenry
Red Run Cove
State Park
Honi Honi
Green Glade
Deep Creek Cove
2010
2011
Offshore
Offshore
nd
June
August
September

- 86 acres of Eurasian water milfoil EWM were mapped in a shoreline survey, July 9 and 10, 2012
  - This is 2.3% of the lake surface
  - 5.8% of shallow (less than 6m deep) water
  - Co-occurred with other species
- Other, native, species of submerged grasses are far more common, specifically Potamogetons and Vallisneria, occupying virtually all of the shallows



Going forward;

- Continue the transect surveys at 6 locations in the lake
  - two more events in 2012 – weeks of August 21 and September 18
  - continue surveys in 2013 and beyond
- Monitor/data analysis and assess Eurasian water milfoil
- Continue to research management options for SAV, work with lake management and stakeholders to implement any control actions if necessary