Aquatic Sub-team Breakout Session – Meeting Notes
Conn River Conservation Design Project
Hadley, Mass.
30 May 29, 2014 – afternoon

Summary notes of meeting.

LOTIC SYSTEMS DEFINITIONS: These macro-groups are being defined using the final TNC set of aquatic classes, not collapsing any of the temperature categories. This results in the following 23 groups covering the entire Northeast 13 states so only 15 of these groups will be found in the Connecticut River watershed, and a of them exist only marginally.

Macrogroup Habitat Type:
Headwaters and Creeks Low Gradient, Cold, Headwaters and Creeks
Headwaters and Creeks Low Gradient, Cool, Headwaters and Creeks
Headwaters and Creeks Low Gradient, Warm, Headwaters and Creeks
Headwaters and Creeks Moderate Gradient, Cold, Headwaters and Creeks
Headwaters and Creeks Moderate Gradient, Cool, Headwaters and Creeks
Headwaters and Creeks Moderate Gradient, Warm, Headwaters and Creeks
Headwaters and Creeks High Gradient, Cold, Headwaters and Creeks
Headwaters and Creeks High Gradient, Cool, Headwaters and Creeks
Headwaters and Creeks High Gradient, Warm, Headwaters and Creeks
Small River Low Gradient, Cold, Small River
Small River Low Gradient, Cool, Small River
Small River Low Gradient, Warm, Small River
Small River Moderate Gradient, Cold, Small River
Small River Moderate Gradient, Cool, Small River
Small River Moderate Gradient, Warm, Small River
Medium River Cold, Medium River
Medium River Cool, Medium River
Medium River Warm, Medium River
Large River Cool, Large River
Large River Warm, Large River
Tidal Headwaters and Creeks
Tidal Small and Medium River
Tidal Large River

LENTIC SYSTEMS DEFINITIONS: While there are possible upgrades to be made to the current lake and pond macro-groups in the current UMass models from some anticipated TNC work, the products are not

yet completed and are not anticipated until later this summer. While these materials may possibly be incorporated in a later phase of the landscape models, we don't have the flexibility to wait and incorporate new lentic classification in this phase of the CTR pilot. We would like to move ahead with the current UMass basic classes of pond / lake, as defined by a size break of roughly 8ha, that was derived from some western Massachusetts data and a modeling effort that expand the labeling to the entire Northeast.

WEIGHTING MACRO GROUPS: Summary statistics and maps for the lentic and lotic aquatic classes within the Connecticut River watershed will be shared with the aquatic group members. Using these materials for perspective, the group is being asked to assign a weight to these classes to be used when developing the scores for the Index of Ecological Integrity (IEI). The IEI value of the landscape 30 meter grid cells will be a significant product used to identify the priority areas for conservation action in the watershed conservation design.

WEIGHTING IEI METRICS: Similarly, the aquatics sub-group needs to review the existing metrics (reflecting intactness and resiliency) and associated weightings that contribute to the IEI values. Each metric is represented by a unique mechanism of impairment function, and a specific layer of GIS data. Default scores were already developed for use within, not among, each macro-group with the help of experts meeting specifically to review these metrics. Our group only needs to check to make certain there are no problems generated from these weighting in our specific pilot area of the Connecticut River watershed.

TO KEVIN – 1) can you provide a source description for each of the unique metric impairment functions, with the idea that the team members may better weight them knowing the purpose for which they were developed? In particular I believe there may be less concern that coincident multi-variate overlap or double counting is taking place when scoring in the aquatic macro-groups.
2) Are we providing the aquatic team with an updated IEI metrics table, similar to the Macro-groups data?
3) I believe there is interest by some team members in understanding the impervious surface / urban areas materials and weightings. I seem to recall that Ken S suggested that impervious impacts were considered different depending on the aquatic macro-group in question. So I think the members will see more value in the IEI metric data set and weighting arguments if we can share this information.