<u>Potential Criteria for Prioritizing Wildlife Species in Conservation Design</u>

Background and Purpose

The Connecticut River Watershed Pilot is developing a Landscape Conservation Design that entails a spatial plan for conservation action. As currently conceived, the spatial plan will categorize or rank locations in the watershed to indicate the collective priorities of partners in sustaining a diverse suite of ecosystems and populations of fish and wildlife. A number of factors and tools can be applied in determining which locations are considered to be of highest priority. One important tool is a set of species-habitat models for representative species of wildlife.[1] As part of the design process, the species-habitat results will be combined, through an optimization approach, to rank the relative importance of habitat for the collective species set. Furthermore, partners have the option of designating particular species as being of inherently higher priority for conservation within the Connecticut River Watershed. Habitat for such species would have a greater likelihood of being selected in the highest tier of prioritization (i.e., a "core area").

Preliminary Criteria for Species

As a <u>starting point</u> for discussions, and drawing from a parallel process to weight ecosystem types, potential criteria for assigning higher priority to species include the following:

- <u>Degree of current threat</u> – Species that have experienced significant population losses (e.g., in the past 50 years) or are otherwise facing significant threats. It could make sense to focus on species with population declines known or believed to be due to habitat loss in the Northeast region or Conn. River watershed.
- <u>Regional responsibility</u> – Species for which the Connecticut River watershed is particularly important within the Northeast region (or at even larger scales, including global), suggesting a high responsibility for conservation action within the watershed.
- <u>Regional rarity</u> – Species that are relatively rare at a regional (or larger) scale, particularly if they occupy relatively uncommon ecosystem or habitat types.
- <u>Climate vulnerability</u>
  - Vulnerability compared to <u>other species</u>: higher priority for species that are most vulnerable. (Alternatives are possible, including higher priority for species that are least vulnerable.)
  - Vulnerability <u>within</u> a species: higher priority for habitat where it is projected to be more resilient to climate change
- <u>Vulnerability to development / urban growth</u> [*model results not yet available*]
  - Vulnerability compared to <u>other species</u>: higher priority for species that are most vulnerable.
  - Vulnerability <u>within</u> a species: higher priority for habitat where it is projected to be lost due to development. (Alternatives are possible, including "triage" that puts lower priority on habitat likely to be lost.)

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[1] A *representative species* is one that, because of its habitat use, ecosystem function, or management response, typifies lifecycle or habitat requirements for a larger group of species.