**Setting Conservation Targets/Population-Based Objectives for Representative Species**

**North Atlantic Landscape Conservation Cooperative**

**April 18, 2012**

Recommendation:

Request participation of States, U.S. Fish & Wildlife Service and partners on a new subcommittee to agree on a process and start compiling population-based objectives for the subsets of representative species being used to develop landscape habitat designs initially in the 3 pilot areas of the “Designing Sustainable Landscapes” project and subsequently for the Northeast Region. Where no population objectives exist, the committee will work with the States and Service to develop a process for setting population-based objectives for those species for use in these pilot areas and for the Northeast Region.

**I. Introduction**

The purpose of this paper is to provide the North Atlantic Landscape Conservation Cooperative community with a suggested initial approach for compiling and scaling existing population objectives for representative species and developing objectives where they do not exist. The paper explores the concept of conservation targets, their importance to a conservation management framework (such as adaptive management), and the relevancy of establishing conservation targets in a changing ecological environment.

**II. What is meant by the term “conservation target” in the context of conservation management approaches?**

The concept of “conservation target” means different things to different people and organizations. For some, the term equates with a goal or desired condition. For others, the term is an objective for conservation actions. Organizations define conservation targets in terms appropriate to their mission.

The Nature Conservancy, for example, defines Focal Conservation Targets as “A limited suite of species, communities and ecological systems that are chosen to represent and encompass the full array of biodiversity found in a project area. They are the basis for setting goals, carrying out conservation actions, and measuring conservation effectiveness. In theory, conservation of the focal targets will ensure the conservation of all native biodiversity within functional landscapes.”

The U.S. Fish & Wildlife Service uses their Strategic Habitat Conservation (SHC) framework for resource conservation. A key to SHC is the setting of conservation objectives (conservation targets), which are characterized as a “measurable expression of a desired outcome” (National Ecological Assessment Team Final Report 2006). SHC requires biological goals (conservation targets) to ultimately guide conservation actions that contribute and allow progress towards the goals.

These approaches share two key characteristics: that a target is a “desired outcome” or a desired future condition of a management area or feature, and that a target is an explicit “measurable entity.” Desired outcomes might be based on a variety of factors, from legal or regulatory mandates (e.g., endangered species recovery) to social mandates (e.g., maintaining huntable populations of wildlife; maintaining biological diversity). In the context of this document, we consider conservation target to be a measurable expression of a desired outcome.

**III. Why is it important to set conservation targets?**

**We cannot define landscapes necessary to sustain fish and wildlife populations that we are responsible for – to define how much, what kind of habitats, and where they need to be without population-based objectives.**

The answer to this question is at the core of using adaptive management for conservation. Natural resource challenges today are as difficult as any ever faced by our nation, the time we have to solve them is shorter than ever and the resources ever-diminishing. We need to be efficient with our time and resources, and to do that requires that we have a solid strong understanding of our targets and how to achieve them. Setting conservation targets facilitates strategic conservation investments. Just as management actions require plans, plans require a focal point for which the plan is developed. Conservation targets are the foundation for the types and scope of actions developed in plans.

We also need to be able to periodically measure progress towards those targets and readjust if our conservation actions are not producing the anticipated results or if we learn that these targets are not realistic. The conservation target provides context for assessment and monitoring and facilitates learning. The exercise of defining conservation targets reveals what is known and unknown about a system and helps identify strategic information needs.

By setting targets we convey to our partners, our constituents, and our funders what we plan to accomplish and what resources are needed.

**IV. What are the characteristics of good conservation targets?**

Population-based objectives should be science-based, in that they should reflect the ability of the current or future habitat base to provide support to a species where habitat is the limiting factor. They should also reflect the public’s desire to support the conservation efforts needed to achieve these objectives and to enjoy the benefits derived from achieving these objectives. All public conservation agencies have a responsibility to ensure the future of fish and wildlife populations; but beyond the assurance of minimally viable populations (i.e., recovered threatened and endangered species), it is a social as well as a biological decision to support the conservation needed to support a population at a specific level.

We will be most effective if our population objectives and methods can link across species’ distributional ranges and across agencies and administrative boundaries so that these objectives can be “rolled up” or scaled down to guide common desired conservation outcomes. It is important to note that any population objectives for the individual species that will serve as measures of landscape sustainability should consider how the objectives are scaled-up or scaled-down relative to the scale at which objectives were originally established. That is, population objectives at the scale of an LCC should consider scaling objectives relative to the scale at which they were originally developed (e.g., range-wide objectives of a selected migratory bird species).

Population-based objectives can rarely be expressed as absolute numbers; however, they are used to relate our conservation actions to measureable population parameters or goals. Population objectives describe the desired state of a population and are:

* Expressed as abundance, trend, vital rates, or other **measurable** indices of population status, based on the best biological information;
* Used to compare the current state of the population against future conditions;
* A metric to assess and re-assess the performance of our management actions;
* Any indices that can relate back to an estimate of current population versus habitat base and estimates of habitat needed to support future desired abundance;
* Scale-dependent (i.e., a trend index may be sufficient to measure progress across a species’ range, but may not be appropriate at the smaller spatial scales).

**Within their State boundaries, State Fish and Wildlife agencies have a primary role in fish and wildlife conservation, including determining the appropriate population levels of fish and wildlife species within their borders. The LCC partnership can help to compile individual state species population objectives into LCC/regional goals.**

Another approach for setting conservation targets is to use recognized regional, national, or continental conservation targets, and determine the contribution that the North Atlantic LCC (or Northeast Region) can make in achieving those targets. This approach has been used quite effectively by joint ventures for many of the continental-scale bird conservation plans (North American Waterfowl Management Plan, Partners in Flight North American Landbird Conservation Plan, etc.).

The conservation aims of federal and state entities will benefit from working collaboratively to identify biological objectives. The following plans serve as examples of possible sources for existing population and habitat objectives. They may be useful in establishing population objectives for representative species **if** they also meet the criteria listed above.

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| **Conservation Target/Species Groups** | **Existing Guidance with Goals and Objectives** |
| Migratory Birds | Goals and objectives from continental plans for waterfowl, land birds, waterbirds and shorebirds; Joint Venture or Bird Conservation Region implementation plans |
| Species of Greatest Conservation Need | State Wildlife Action Plans |
|  |  |
| Fish and aquatic resources | Management plans by stocks or sites; National Fish Habitat Action Plan |
| Threatened and Endangered Species | Recovery plans, Spotlight Species Action Plans, 5-Year Reviews |
| Game Species | State management plans |

If there are no existing sources of population objectives for the selected species, modeling may indicate the population that could be supported based on the amount of habitat available and the availability of sufficient demographic information. Where sufficient information is available, the LCC partnership can develop conservation targets and objectives specific to the LCC geographic area (or Northeast Region) if none exist to meet the goals of the LCC.