**Reference Information and Tables from the Lexicon**

**Element 1 (Species) Northeast Lexicon provides**

* **Links to taxonomic standards**
* a menu of established conservation assessments used by states when selecting their Species of Greatest Conservation Need (page 19 (Table 1))
  + Federal Legal Listing (<http://www.fws.gov/endangered/>)
  + Regional SGCN
  + State Legal Listing
  + State Natural Heritage Program and NatureServe Rankings
  + Regional or Species Group Conservation Prioritization
  + IUCN Red List (<http://www.iucnredlist.org/>)
* a list of foundational criteria used to explain the addition or exclusion of species from the Species of Greatest Conservation Need list (page 19 (Table 2))
  + Species Abundance and Trend
  + Threat
  + State Responsibility
  + Habitat Trend
  + Information Deficient

**Table 3**: Information about each species that could be included in State Wildlife Action Plans and the regional database.

|  |  |  |
| --- | --- | --- |
| **Data Name** | **Data Description** | **Data Format and example** |
| Scientific Name | Naming conventions should follow taxonomic standards recommended by the Best Practices Report (p. 10). | Genus and species  i.e. *Glaucomys sabrinus* |
| Common Name | Naming should follow standards when available (e.g., American Ornithologists’ Union checklist for birds). | i.e. Northern Flying Squirrel |
| Detailed Scientific Name | If used as a conservation target, subspecies or population segment may be provided. | i.e. *Glaucomys sabrinus macrotis* |
| Associated Habitat Type | Species should be linked to habitat types using the Northeast Terrestrial Wildlife Habitat Classification System or the Northeast Aquatic Habitat Classification System (see Element 2). Multiple habitats may be selected considering core, supporting, breeding, migratory, wintering or other special habitat use. | NETWHCS or NEAHCS (dropdown menus)  (see Element 2) |
| Associated Habitat Features | If the species is associated with particular sites within the habitat classification systems, these site conditions should be identified. (e.g. Boulder fields, springs, seeps, vernal pools, rocky outcrops, caves, manmade structures, cliffs, talus slopes, flat rocks in stream beds) | i.e. Old-growth |
| Habitat Preferences | This is a narrative field to explain, in more detail, the habitat requirements or preferences of the species. | i.e. Northern flying squirrels prefer old-growth boreal forests that contain a heavy coniferous component, moist soils, and lots of downed woody debris. |
| Federal Listing | This documents the federal listing of species. | Endangered, Threatened, Candidate, Petitioned with 30-day finding, no status  i.e. no status |
| State Listing | This documents the state listing of species. | State listing classes  i.e. Endangered |
| G-rank | Global ranks can be downloaded from NatureServe for all species in a state. | G1, G2, G3, G4, G5, G1G2, G2G3, G3G4, G1G3, G2G4, G3G5, GU, GX, GH, GNR, GNA |
| S-rank | The most up-to-date state ranks should be sourced from State Natural Heritage Programs or other in-state source. | S1, S2, S3, S4, S5, S1S2, S2S3, S3S4, S4S5, S1S3, S2S4, S3S5, SU, SX, SH, SNR, SNA |
| Distribution within the state | Species distributions may be defined in terms of mapped units such as watersheds, habitat classification systems, geopolitical boundaries, models or other useful spatial units. | i.e. Sites are located in the following counties: Wayne, Pike, Monroe, Carbon, Luzerne, Warren and Potter |
| Threats impacting the species | Threats should be listed and anticipated interactions between these threats should also be noted. | IUCN Threats, as amended  i.e. 5.3.4 Biological Resource Use/ Logging and Wood Harvesting / unintentional effects large scale |
| Population Trend | Quantitative assessments or qualitative assessments such as increasing, decreasing, stable, or unknown (used by the IUCN RedList) may be suitable. |  |
| Data Confidence | Quality of available data, considering completeness, age, and other factors, should be assessed.  Excellent – very useful for management decisions, recent, complete, accurate.  Poor – data are unreliable for management decisions because it is historical, sparse, and/or has questionable accuracy and cannot be verified. | Excellent, Good, Fair, Poor, Data Deficient |
| Data Age | This field could recognize data as historical vs current, or it could provide a date range |  |
| Data Completion | This field assesses the consistency of data over time or space. |  |
| Climate Vulnerability Assessment Tool | This field could describe the methods of an original climate vulnerability assessment or simply refer to an existing tool | Name of Tool |
| Climate Vulnerability Score | This field contains the results of the assessment. | Numeric score or code |
| Climate Vulnerability Factors | This field contains notes about the factors that most contributed to the species’ vulnerability | Name of factor |

**Element 2 (Habitats) Northeast Lexicon provides**

* a recommendation to use the Northeastern Terrestrial Wildlife Habitat Classification System and the Northeast Aquatic Habitat Classification System to classify and name habitat types (pages 24-26 (Tables 5, 6))
* terminology to consistently describe habitat characteristics (page 27)
  + Habitat extent
  + Habitat condition
  + Threats to Habitat

**Element 3 (Threats) Northeast Lexicon provides**

* a recommendation to use the IUCN hierarchical threat classification system (Salafsky et al. 2008) and a table that displays the system along with a crosswalk to Wildlife TRACS threats (page 29)

**Table 7 (pg. 30)**. Threat characteristics and categorical ratings.

|  |  |  |  |
| --- | --- | --- | --- |
| **Threat Characteristic** | ***Low Impact*** | ***Moderate Impact*** | ***High Impact*** |
| **Severity** | **Slight Severity:** Degree of ecological change is minor | **Moderate Severity:** Degree of ecological change is substantial | **Severe:** Degree of ecological change is major |
| **Reversibility** (Consider the likelihood of reversing the impacts within 10 years) | **Reversible:** Effects of the threat can be reversed by proven actions | **Reversible with difficulty:** Effects of the threat may be reversed but costs or logistics make action impractical | **Irreversible:** Effects of the threat are irreversible |
| **Immediacy** (This characteristic assesses the time scale over which impacts of the threat will be observable.) | **Long-term:** Effects of the threat are expected in 10-100 years given known ecosystem interactions or compounding threats | **Near-term:**Effects of the threat are expected within the next 1 - 10 years | **Immediate:** Effects of the threat are immediately observable (current or existing) |
| **Spatial Extent** (Consider impact of threat within 10 years) | **Localized**: (<10%) A small portion of the habitat or population is negatively impacted by the threat. | **Dispersed or Patchy:** (10-50%) | **Pervasive:** (>50%) A large portion of the habitat or population is negatively impacted by the threat. |
| **Certainty** | **Low Certainty:** threat is poorly understood, data are insufficient, or the response to threat is poorly understood | **Moderate Certainty:** some information describing the threat and ecological responses to it is available, but many questions remain | **High Certainty:** Sufficient information about the threat and ecological responses to it is available |
| **Likelihood** (Consider impact of the threat within 10 years) (This characteristic is used to assess the certainty surrounding the threat and its impacts.) | **Unlikely:** Effects of the threat are unlikely to occur (less than 30% chance) | **Likely:** Effects of threat are likely to occur (30-99% chance) | **Occurring:** Effects of the threat are already observable (100% chance) |

**Element 4 (Actions) Northeast Lexicon provides**

* a recommendation to use the Wildlife TRACS hierarchical action classification system and a table displaying the system along with a crosswalk to IUCN actions (page 31)

**Table 8 (pg. 34-36)**. Action descriptors

|  |  |  |
| --- | --- | --- |
| **Lexicon Terminology** | **Content** | **Explanation** |
| **Name** | The Action name is selected from Wildlife TRACS classification system (amended) | The lexicon described here uses the Wildlife TRACS classification system with hierarchical codes developed. This system includes amendments to incorporate a few actions from the IUCN system (above). Every action should be classified according to the amended Wildlife TRACS system at as detailed a level as possible. |
| **Objective** | A concise statement of the objective of the action | An objective is “a specific, measurable, achievable, relevant, and time-limited statement that describes the desired short, medium, or long-term outcomes of a conservation action.” |
| **General Strategy** | A concise description of the nature of the strategy for achieving the objective | The strategy to address the objective should be described generally. (More detailed explanation can be provided in the answer to the question “How?”) |
| **Purpose** | A statement explaining the species or habitats that will benefit from the action and the threats that will be mitigated | Linking an action to a threat (Element 3) or action driver (Table 9) and to the resource that will benefit such as target species (Element 1) or habitats (Element 2) provides a clear explanation of the motivation for the action and begins to reveal the results chain linking the strategy to the threat and the expected ecosystem response to mitigating the threat. |
| **Benefits** | Depending on the action benefits may refer to habitat improvements, species’ responses, reductions in threat risk, or public or stakeholder benefits. | These answers will likely be suggested by defining what the action is and why it is being taken. However, efforts to prioritize actions will probably require specific benefits to be considered. Answering this question clearly may also help define the measures of project success. |
| **Estimated Costs** | Several resources are now available to assist in estimating project costs. (One example is Naidoo et al. 2006.) States may, alternatively, use very coarse/relative estimates. | If action descriptions are intended to be used for action prioritization, cost estimates, even very rough ones, may be helpful. This should include total future costs in current dollar values, but not include any past expenses for infrastructure that will be used by proposed action.  States may choose to simply categorize costs as High, Moderate, or Low. Estimates are available from business plans, Joint Ventures, and Partners in Flight.  For prioritization purposes, states may choose to calculate cost/acre treated or cost/species to compensate for the fact that multi-species projects may be more expensive than single species projects. A very detailed process for action prioritization is described and evaluated in “Optimal Allocation of Resources among Threatened Species: a Project Prioritization Protocol” (Joseph et al. 2009). |
| **Urgency** | A relative estimate of the urgency of the action given the severity of the threats and the priority of the species or habitat | The urgency of the action should be addressed by estimating the ideal timeframe for completing the action. |
| **Likelihood of Success** | * Has the action been implemented in other settings and with what results? * Is there uncertainty in the results chain? * Is there uncertainty in the cost? * Are there any risks or potential unintended consequences? * Are there constraints (e.g. political, land use)? | In general, this action description is meant to assess “feasibility” for the purposes of prioritization.  This might identify areas where more information is needed to be sure that the action will work. It can also identify whether doing the action is a proven winner in other settings but might be applied here. |
| **Implementing Organization** | Organizations or individuals responsible for implementing the action or partners who can assist. | If possible, an individual or agency responsible for managing the action could be identified. Partners that should be consulted or engaged could also be identified as could stakeholders. |
| **Affected parties** | Some actions will have impacts on stakeholders |  |
| **Action Location** | The location of the action may be described in terms of habitat types, conservation opportunity areas, geopolitical boundaries, watersheds, or more precise locations within these areas. | Aside from the habitat type, descriptions of where actions take place may include specific locations around the state, specific sites within a smaller locale, or any other geographical designation appropriate to the action. If the action requires monitoring, this description may complement the use of a standard protocol by defining the sampling strategy in a spatial context. |
| **Detailed Strategy** | A detailed description of the action, how it will result in the desired effects, how project success will be measured and assessed, and plans for adaptive management | Actions that are ready for implementation may have very developed ideas for accomplishing the objective of the action. Compared to the strategy described above, this is a much more detailed explanation of how the action will be implemented. In cases where actions are not so well developed, this element may include a couple alternatives for implementation.  The hypothesis explaining how the proposed action will impact the target by mitigating the threat would ideally be presented in the form of a results chain (See Background and Rationale, below) or theory of change.  Wildlife Action Plans are called upon to identify how action results will be monitored so indicators of the impact on the target should be identified along with adaptive management strategies which might be used to improve the results of the action. Monitoring protocols may be identified by reference to standard protocols or development of specific monitoring plans. (Both of these address Element 5). |

**Element 5 (Monitoring) Northeast Lexicon provides**

* a recommendation to use the Association of Fish and Wildlife Agencies recommendations from “Measuring the Effectiveness of State Wildlife Grants” to assess action results (page 41) (<http://www.fishwildlife.org/files/Effectiveness-Measures-Report_2011.pdf>)
* a recommendation to use standard protocols or well-described protocols for species monitoring (page 41)
* a recommendation to use standard protocols or well-described protocols for habitat quality monitoring (page 42)

**Element 6 (Plan Review) Northeast Lexicon provides**

* a summary table of guidance provided by the national Best Practices Report explaining the differing requirements for Comprehensive Review, Major Revision, and Minor Revision related to the following (page 44)
  + Date of review
  + Summary of changes
  + Explanation of no change
  + Web access to the plan
  + Public review
  + Documentation of public review
  + Taxa experts

**Elements 7 and 8 (Public Engagement) Northeast Lexicon provides**

* Definitions for *public, stakeholders,* and *partners* (page 46)
* An explanation of the differences in communication strategies for each group (page 46)