

## **4.0 Species Analyzed in the MSHCP**

### **4.1 Introduction**

This MSHCP analyzed 43 species, consisting of 41 federally listed species and two candidate species (*see Table 4-1* below). As an outcome of the analysis performed on each species, three discrete groups of species emerged: 1) those species (10) for which NiSource would request incidental take authorization from the Service; 2) those species (nine) for which NiSource would avoid take by implementing appropriate avoidance measures; and 3) those species (24) for which the Service determined that NiSource activities would have “no effect” on these species within the covered lands. For the purpose of this MSHCP, we refer to the 10 species for which take coverage is requested as “take species.” We refer to all species analyzed in the MSHCP as “MSHCP species.”

Altogether, the 43 MSHCP species represent those species in which NiSource would no longer need to consult with the Service prior to undertaking covered activities within the covered lands, subject to the conditions of the ITP or BO, or the reinitiation or programmatic tiering of that document.

### **4.2 Process for Species Inclusion in the MSHCP**

NiSource sought Service guidance in the initial development of the plan. In that process, a group of federally listed, state-listed, candidate species, and species of concern to be considered for inclusion in the MSHCP were identified. This MSHCP directly addresses federally listed and two candidate species. However, other species of concern will likely benefit from the measures provided by this MSHCP.

#### **4.2.1 Federally Listed Species**

In March, 2005 NiSource began collaborating with the Service to develop a MSHCP. The main goal of the effort was to develop a MSHCP that would provide significant conservation benefits to the covered species. A comprehensive MSHCP would also allow both the Service and NiSource to use resources more efficiently without sacrificing the protection of threatened and endangered species. These efforts would contribute significantly to NiSource’s goal of applying sustainable conservation measures during its operation, maintenance and construction activities. A MSHCP also would provide a unique opportunity for NiSource and the Service to develop an innovative approach to achieve regulatory compliance, while accomplishing broader conservation and recovery goals of the ESA.

The MSHCP, as originally conceived, would have analyzed the five species that are routinely the subject of ESA Section 7 consultation on NiSource projects: the Indiana Bat, the Virginia Big-Eared Bat, the Gray Bat, the Bog Turtle, and the American Burying Beetle. In addition to their presence along the NiSource pipeline system, NiSource recognized that these species face increasing pressure from encroaching commercial, industrial, residential, and infrastructure growth and development. Although other listed species exist in the area of the NiSource system, the initial set of species represented those most commonly encountered by NiSource

and with respect to which conservation opportunities were most likely to be served by inclusion in an MSHCP.

Subsequent discussions on the scope and coverage of the ITP and MSHCP suggested that NiSource should increase the number of covered species. While many of the species that had not initially been included were rarely the subject of Section 7 consultations related to NiSource projects, or likely to be impacted to the level of take as a result of NiSource project activities, it was determined that including additional species would further streamline the project approval process and would enhance the conservation opportunities presented by the conceptual MSHCP. Subsequently, NiSource and the Service discussed the development of an MSHCP that potentially could be applicable to all federally listed and candidate species within the covered lands, and could also consider any species that might be in the listing process. To further develop the MSHCP concept, NiSource and the Service identified a list of some 90 species believed by the Service to be potentially present within any county intersected by the proposed NiSource covered lands footprint (Chapter 2). This work occurred during 2006 and 2007. The purpose of this aggressive effort was to:

1. identify all listed and candidate species within the general area of the NiSource system;
2. allow identification of the species most likely to be affected by NiSource activities;
3. identify the species for which ESA compliance and conservation efforts could be most effectively accomplished pursuant to the MSHCP;
4. identify species for which ESA compliance and conservation could be accomplished more effectively through other mechanisms; and
5. identify those species that were highly unlikely to be affected by NiSource activities.

Ultimately, NiSource decided to analyze 43 species in its permit application and MSHCP. The 43 species include all five of the species that NiSource initially deemed the most critical for inclusion, along with 38 others. The 43 species were selected based upon the frequency with which NiSource encounters species in pursuing the covered activities, and the ability to develop adequate measures which would completely avoid or minimize effects on the species. NiSource recognizes that the Service will evaluate effects of the MSHCP on all species that occur within the covered lands footprint (action area), regardless of whether they are included in the MSHCP. Non-MSHCP species will be included in the Services' Biological Opinion written for the requested ITP and MSHCP. NiSource will continue to evaluate listed species not included in this MSHCP to determine if appropriate information and materials can be developed to include them in an amended MSHCP or a separate HCP. Additionally, NiSource will utilize the Information, Planning, and Consultation System (IPaC) to ensure that potential impacts of NiSource activities to listed species, which are not covered under the MSHCP, are identified and appropriate ESA compliance and conservation actions are performed. *See Appendix O* for additional details.

The process of developing the MSHCP species list began with an inventory of all federally listed species recorded in counties crossed by the covered lands. NiSource subsequently narrowed this inventory to include 41 federally listed species and two candidates present in the counties crossed by the MSHCP covered lands. Species included in the MSHCP were selected based on availability of information about the species, prevalence within the covered lands, anticipated effects from covered activities, and business concerns.

The prohibitions in Section 9 of the ESA are more limited for federally listed plants than for federally listed fish and wildlife, and a Section 10 ITP is not available for listed plants. However, NiSource chose to analyze the effects of its activities on three federally listed plant species in the MSHCP's evaluation process because Section 7(a)(2)'s jeopardy prohibition applies to both wildlife and plants. Thus, the MSHCP also includes an analysis of three federally listed plant species (**Table 4-1**).

#### **4.2.2 Candidate Species**

Candidate species are those species being considered by the Service for listing as an endangered or a threatened species, but are not yet the subject of a proposed rule. Typically, the Service has sufficient information to propose candidate species for listing under the ESA, but development of a proposed listing regulation is precluded by other higher priority listing activities. NiSource evaluated all candidate species located in the counties crossed by the covered lands for inclusion in the MSHCP, and decided to include two (sheepnose mussel and Cumberland snubnose darter) of these candidate species in the MSHCP. The Cumberland snubnose darter does not occur within the covered lands; thus, no effect on this species resulting from NiSource activities is expected. NiSource activities are expected to take the sheepnose mussel; thus, if and when this species is listed, NiSource requests take coverage.

#### **4.2.3 State-Listed Species**

State-listed species that are not also federally listed or candidate species are not covered by nor analyzed in the MSHCP. State-listed species may be analyzed on a parallel track; i.e., NiSource may prepare analyses under state laws that are similar to the MSHCP to address these species. The decision to exclude state-listed species was based on the exceedingly large number of such species recommended for inclusion, which would have overwhelmed and significantly reduced the effectiveness of the MSHCP.

### **4.3 Species Analyzed in the MSHCP**

Forty-three species from nine taxonomic groups were analyzed in the MSHCP. They include six mammals, one bird, two reptiles, two amphibians, six fish, two crustaceans, 17 freshwater mussels, four insects, and three plants.

**Table 4-1 MSHCP Species List**

Common Name	Scientific Name	Federal Status	Take Determination
<b>Mammals</b>			
Delmarva Peninsula fox squirrel**	<i>Sciurus niger cinereus</i>	E	No Take
Gray bat*	<i>Myotis grisescens</i>	E	No Take
<b>Indiana bat</b>	<i>Myotis sodalis</i>	E	Take
Louisiana black bear*	<i>Ursus americanus luteolus</i>	T	No Take
Virginia big-eared bat*	<i>Plecotus townsendii virginianus</i>	E	No Take
West Indian manatee**	<i>Trichechus manatus</i>	E	No Take
<b>Birds</b>			
Interior least tern*	<i>Sterna antillarum</i>	E	No Take
<b>Reptiles</b>			
<b>Bog turtle</b>	<i>Glyptemys muhlenbergii</i>	T	Take
Lake Erie water snake**	<i>Nerodia spiedon insularum</i>	T	No Take
<b>Amphibians</b>			
Shenandoah salamander**	<i>Plethodon Shenandoah</i>	T	No Take
Cheat Mountain salamander*	<i>Plethodon nettingi</i>	T	No Take
<b>Fish</b>			
Blackside dace**	<i>Phoxinus cumberlandensis</i>	T	No Take
Cumberland snubnose darter**	<i>Etheostoma susanae</i>	C	No Take
Gulf sturgeon**	<i>Acipenser oxyrinchus desotoi</i>	T	No Take
Maryland darter**	<i>Etheostoma sellare</i>	E	No Take
Scioto madtom**	<i>Noturus trautmani</i>	E	No Take
Slackwater darter**	<i>Etheostoma boschungii</i>	T	No Take
<b>Crustaceans</b>			
<b>Madison Cave isopod</b>	<i>Antrolana lira</i>	T	Take
<b>Nashville crayfish</b>	<i>Orconectes shoupi</i>	E	Take
<b>Mollusks</b>			
Birdwing pearl mussel*	<i>Lemiox rimosus</i>	E	No Take
<b>Clubshell</b>	<i>Pleurobema clava</i>	E	Take
Cracking pearl mussel*	<i>Hemistena lata</i>	E	No Take
Cumberland bean pearl mussel**	<i>Villosa trabalis</i>	E, XN	No Take
Cumberland monkeyface pearl mussel*	<i>Quadrula rafinesque</i>	E	No Take
Dromedary pearl mussel**	<i>Dromus dromas</i>	E, XN	No Take
<b>Fanshell</b>	<i>Cyprogenia stegaria</i>	E	Take

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>Take Determination</b>
<b>James spinymussel</b>	<i>Pleurobema collina</i>	E	Take
Louisiana pearlshell**	<i>Margaritifera hembeli</i>	E	No Take
<b>Northern riffleshell</b>	<i>Epioblasma torulosa rangiana</i>	E	Take
Oyster mussel*	<i>Epioblasma capsaeformis</i>	E	No Take
Pale Lilliput pearlymussel**	<i>Toxolasma cylindrellus</i>	E	No Take
Purple cat's paw pearlymussel**	<i>Epioblasma obliquata</i>	E	No Take
Sheepnose	<i>Plethobasus cyphyus</i>	C	Take
Tan riffleshell**	<i>Epioblasma florentina walkeri</i>	E	No Take
White cat's paw pearlymussel**	<i>Epioblasma obliquata perobliqua</i>	E	No Take
White wartyback pearlymussel**	<i>Plethobasus cicatriocosus</i>	E	No Take
<b>Insects</b>			
<b>American burying beetle</b>	<i>Nicrophorus americanus</i>	E	Take
Karner blue butterfly**	<i>Lycaeides Melissa Samuelis</i>	E	No Take
Mitchell's satyr butterfly**	<i>Neonympha mitchellii mitchellii</i>	E	No Take
Puritan tiger beetle**	<i>Cicindela puritana</i>	T	No Take
<b>Plants</b>			
Braun's rock cress**	<i>Arabis perstellata</i>	E	No Take
Pitcher's (sand dune) thistle**	<i>Cirsium pitcheri</i>	T	No Take
Mead's milkweed**	<i>Asclepias meadii</i>	T	No Take

**Notes:**

E=Endangered

T=Threatened

C=Candidate

XN=Experimental, Non-essential

Species in **bold** represent those species to be included in the ITP. Sheepnose would be automatically added to the ITP should it become listed in the future.

Species marked with a single asterisk (\*) are those where take will be avoided through implementation of appropriate measures.

Species marked with a double asterisk (\*\*) are those where no effect is anticipated and thus no avoidance or minimization measures are necessary.