

Lopas, Sarah

From: Becker, James M [james.becker@pnnl.gov]
Sent: Thursday, June 23, 2011 3:46 PM
To: Krieg, Rebekah; Lopas, Sarah
Subject: FW: Lee Nuclear Request of 05-25-11
Attachments: Perkins_15_mile_summary.xls; Perkins_6_mile_summary.xls; nheo.pdf

Becky/Sarah,

Attached is the response from NC DENR, which parallels what SCDNR sent us. Looks like he forgot to copy both of you. Per John's verbal approval, it can be docketed.

Jim

From: Finnegan, John [mailto:john.finnegan@ncdenr.gov]
Sent: Thursday, June 23, 2011 12:36 PM
To: Becker, James M
Subject: RE: Lee Nuclear Request of 05-25-11

Jim,

Attached are the summaries you requested. Also attached is a document which describes the attributes.

John

From: Becker, James M [mailto:james.becker@pnnl.gov]
Sent: Thursday, June 23, 2011 12:08 PM
To: Finnegan, John
Cc: Krieg, Rebekah; Lopas, Sarah
Subject: FW: Lee Nuclear Request of 05-25-11

John,

Attached is Julie Holling's excel file that you can use as an example. Thank you for processing this information for us. When you send the file to me, would you please also copy the two persons copied on this email to you.

Thank you again,

Jim

From: Julie Holling [mailto:Holling@dnr.sc.gov]
Sent: Wednesday, June 08, 2011 12:16 PM
To: Becker, James M
Subject: Lee Nuclear Request of 05-25-11

Jim,

Attached is an Excel file of the data you requested in your letter dated May 25, 2011. The data for each area you are interested in is located on a separate tab. My apologies for the delay in getting this to you.

Please let me know if you have questions.

Julie

Julie Holling - Data Manager
SC Dept. of Natural Resources

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North Carolina Natural Heritage Program
Element Occurrences
May 2011

The Natural Heritage Element Occurrences (or NHEO) shapefile identifies occurrences of rare plants and animals, exemplary or unique natural communities, and important animal assemblages (e.g., heronries and colonial waterbird nesting sites). Collectively, these plants, animals, natural communities, and animal assemblages are referred to as "elements of natural diversity" or simply as "elements". Specific occurrences of these elements are referred to as "element occurrences" or simply "EOs".

The NHEO shapefile is created by merging the point, line, and polygon source feature shapefiles (NHEO_PT, NHEO_LN, and NHEO_PY, respectively), with additional buffering and grouping. The buffer of a source feature represents any locational uncertainty in the original observation. (Uncertainty is a result of doubt about the exact location of an observation, and can be affected by survey techniques, equipment, and the nature of information we receive from observers.) After the source features of a given EO are buffered for uncertainty, they are grouped into a single polygon. This grouping is meant to represent the entire extent of the element occurrence. Ideally, for species, an EO would represent a population, but often it is simply a collection of adjacent observations. Be aware that an EO may contain multiple source features (points, lines, and polygons); for complete information use either the NHEO coverage or all of the source feature shapefiles (and keeping in mind that the source features alone may not represent the full uncertainty in the location of the EO).

Because these data can quickly become outdated, the North Carolina Natural Heritage Program (Division of Natural Resources Planning and Conservation, Department of Environment and Natural Resources, MSC 1601, Raleigh, NC 27699-1601) should be contacted before use of the data set to ensure data currency. Acknowledgment of products derived from this data set should cite the North Carolina Natural Heritage Program. While efforts have been made to ensure that these data are accurate and reliable, the North Carolina Natural Heritage Program cannot assume liability for any damages or misrepresentation caused by any inaccuracies in the data.

Projection: North Carolina State Plane, **datum:** NAD83, **units:** meters

Attributes

EO_ID

Element Occurrence Identifier. A number that uniquely identifies the element occurrence.

SRC_FEA_ID

Source Feature Identifier. A number that uniquely identifies the source feature. Source feature shapefiles only.

SCI_NAME

Scientific Name. Names for natural communities are from “Classification of the Natural Communities of North Carolina (Third Approximation)” by Michael P. Schafale and Alan S. Weakley, 1990.

EO_NUM

Element Occurrence Number. A sequential number that uniquely identifies a specific occurrence of an element. Occurrences for a given element are numbered sequentially as they are entered in our database, but due to deletions and record merges, there may be gaps in the sequence.

COM_NAME

Common Name. The common name of the element.

LAST_OBS

Last Observed Date. The date element occurrence was last observed. Format of the dates is: yyyy-mm-dd. When the date is not precisely known, examples of possible values are:

2001-08	During August 2003
1953	During 1953
1871-Pre	Before 1871
1995-Post	After 1995
1975-Spr	In the spring of 1968
1992-Sum	In the summer of 1992
1975-Fall	In the fall of 2001
1960-1961-Wi	In the winter of 1960-61
1955-Circa	Sometime around 1955
1990s	Sometime during the 1990's
2002-2005	Between 2002 and 2005
1998?	Possibly 1998

EO_RANK

Element Occurrence Rank. Indicates the estimated viability of the element occurrence.

Rank	Definition
A	The EO has excellent estimated viability/ecological integrity.
B	The EO has good estimated viability/ecological integrity.
C	The EO has fair estimated viability/ecological integrity.
D	The EO has poor estimated viability/ecological integrity.
E	The EO has recently been verified to still exist, but there is insufficient information to estimate its viability/ecological integrity.
F	Recent surveys failed to relocate an EO previously reported, but there is no

evidence the EO has been destroyed.

- H The EO is old, and if surveyed recently, surveys failed to find it, but there is no evidence it is destroyed.
- NR The EO has not yet been assigned a rank.
- U The EO cannot be assigned a rank because of insufficient information.
- X The EO is known to be destroyed
- ? There is uncertainty about the rank (used as a qualifier of the above ranks)

NOTE: For occurrences with a mixed rank (e.g., “AC”), the actual rank is uncertain and lies between the range specified.

STATE_STAT

State Protection Status. Definitions of the state protection statuses of plants and animals differ. Below are summaries of the statuses for each group.

Animal statuses are designated by the Wildlife Resources Commission and the Natural Heritage Program (NC Department of Environment and Natural Resources). Endangered, Threatened, and Special Concern species of mammals, birds, reptiles, amphibians, freshwater fishes, and freshwater and terrestrial mollusks have legal protection status in North Carolina (Wildlife Resources Commission). The Significantly Rare designation indicates rarity and the need for population monitoring and conservation action.

Code	Status	Definition
E	Endangered	Any native or once native species of wild animal whose continued existence as a viable component of the State’s fauna is determined by the Wildlife Resources Commission to be in jeopardy or any species of wild animal determined to be an ‘endangered species’ pursuant to the Endangered Species Act. (Article 25 of Chapter 113 of the General Statutes; 1987).
T	Threatened	Any native or once native species of wild animal which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, or one that is designated as a threatened species pursuant to the Endangered Species Act. (Article 25 of Chapter 113 of the General Statutes; 1987).
SC	Special Concern	Any species of wild animal native or once native to North Carolina that has been determined by the Wildlife Resources Commission to require monitoring but which may be taken under regulations adopted under the provisions of this Article. (Article 25 of Chapter 113 of the General Statutes; 1987).
SR	Significantly Rare	Any species which has not been listed by the N.C. Wildlife Resources Commission as an Endangered, Threatened, or Special Concern species, but which exists in the state in small numbers and has been determined by the N.C. Natural Heritage Program to need monitoring. (This is a

Code	Status	Definition
		N.C. Natural Heritage Program designation.) Significantly Rare species include peripheral species, whereby North Carolina lies at the periphery of the species' range (such as Hermit Thrush). The designation also includes marine and estuarine fishes identified as "Vulnerable" by the N.C. State Museum of Biological Sciences (Ross et al., 1988, <u>Endangered, Threatened, and Rare Fauna of North Carolina. Part II. A Reevaluation of the Marine and Estuarine Fishes</u>).

Plant statuses are determined by the Plant Conservation Program (NC Department of Agriculture) and the Natural Heritage Program (NC Department of Environment and Natural Resources). Endangered, Threatened, and Special Concern species are protected by state law (Plant Protection and Conservation Act, 1979). Significantly Rare designations indicate rarity and the need for population monitoring and conservation action.

Code	Status	Definition
E	Endangered	"Any species or higher taxon of plant whose continued existence as a viable component of the State's flora is determined to be in jeopardy" (GS 19B 106: 202.12). Endangered species may not be removed from the wild except when a permit is obtained for research, propagation, or rescue which will enhance the survival of the species.
T	Threatened	"Any resident species of plant which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (GS 19B 106:202.12). Regulations are the same as for Endangered species.
SC	Special Concern	Any species of plant in North Carolina which requires monitoring but which may be collected and sold under regulations adopted under the provisions of [the Plant Protection and Conservation Act]" (GS 19B 106:202.12).
SC-V	Special Concern - Vulnerable	Any species or higher taxon of plant which is likely to become a threatened species within the foreseeable future (02 NCAC 48F .0401).
SC-H	Special Concern - Historical	Any species or higher taxon of plant that occurred in North Carolina at one time, but for which all known populations are currently considered to be either historical or extirpated (02 NCAC 48F .0401).
SR	Significantly Rare	Species which are rare in North Carolina, generally with 1-100 populations in the state, frequently substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease).
SR-L	Limited	The range of the species is limited to North Carolina and adjacent states (endemic or near endemic). These are species which may have 20-50 populations in North Carolina, but fewer than 100 populations rangewide. The preponderance of their distribution is in North Carolina and their fate depends largely on conservation here.

Code	Status	Definition
SR-T	Throughout	These species are rare throughout their ranges (fewer than 100 populations total).
SR-D	Disjunct	The species is disjunct to North Carolina from a main range in a different part of the country or world.
SR-P	Peripheral	The species is at the periphery of its range in North Carolina. These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats which are unusual in North Carolina.
SR-O	Other	The range of the species is sporadic or cannot be described by the other Significantly Rare categories.

FED_STAT

Federal Protection Status. This status is designated by the U.S. Fish and Wildlife Service (U.S. FWS) and the U.S. National Marine Fisheries Service in accordance with the U.S. Endangered Species Act of 1973, as amended (U.S. ESA). Plants and plant varieties, (including fungi and lichens), animal species and subspecies, and vertebrate populations are considered for Endangered or Threatened status according to the criteria established under the U.S. ESA. Proposals and determinations to add taxa or populations to the Lists of Endangered and Threatened Wildlife and Plants are published in the Federal Register. Additionally, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service periodically publish a Notice of Review or Notice of Reclassification in the Federal Register that present an updated list of plant and animal taxa which are regarded as candidates or proposed for possible addition to the Lists of Endangered and Threatened Wildlife and Plants. Consult the Asheville or Raleigh Ecological Services Field Offices for more information.

Code	Status	Definition
E	Endangered	A taxon “which is in danger of extinction throughout all or a significant portion of its range” (Endangered Species Act, Section 3).
T	Threatened	A taxon “which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range” (Endangered Species Act, Section 3).
T(S/A)	Threatened due to Similarity of Appearance	“Section 4 (e) of the [Endangered Species] Act authorizes the treatment of a species (subspecies or population segment) as endangered or threatened even though it is not otherwise listed as endangered or threatened if -- (a) the species so closely resembles in appearance an endangered or threatened species that enforcement personnel would have substantial difficulty in differentiating between the listed and unlisted species; (b) the effect of this substantial difficulty is an additional threat to an endangered or threatened species; and (c) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of the Act.” (Federal Register, November 4, 1997). [The American Alligator is listed as T (S/A) due to Similarity of Appearance with other rare crocodylians, and the southern

Code	Status	Definition
		population of the Bog Turtle is listed as T(S/A) due to Similarity of Appearance with the northern population of the Bog Turtle (which is federally listed as Threatened and which does not occur in North Carolina).]
C	Candidate	"Taxa for which the [Fish and Wildlife] Service has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened. Proposed rules have not yet been issued because this action is precluded at present by other listing activity. Development and publication of proposed rules on these taxa are anticipated. The Service encourages State and other Federal agencies as well as other affected parties to give consideration to these taxa in environmental planning." (Federal Register, February 28, 1996). Taxa formerly considered as 'Category 1' are now considered as 'Candidate'.
FSC	Federal Species of Concern (also known as "Species at Risk")	Formerly defined as a taxon under consideration for which there is insufficient information to support listing. "... the [Fish and Wildlife] Service is discontinuing the designation of Category 2 species as candidates in this notice. The Service remains concerned about these species but further biological research and field study are needed to resolve the conservation status of these taxa. Many species of concern will be found not to warrant listing, either because they are not threatened or endangered or because they do not qualify as species under the definition in the [Endangered Species] Act. Others may be found to be in greater danger of extinction than some present candidate taxa. The Service is working with the States and other private and public interests to assess their need for protection under the Act. Such species are the pool from which future candidates for listing will be drawn." (Federal Register, February 28, 1996).
E, XN	Nonessential Experimental Population	The Endangered Species Act permits the reintroduction of endangered animals as "nonessential experimental" populations. Such populations, considered nonessential to the survival of the species, are managed with fewer restrictions than populations listed as endangered. "Section 10 (j) of the Endangered Species Act of 1973, as amended, provides for the designation of introduced populations of federally listed species as nonessential experimental. This designation allows for greater flexibility in the management of these populations by local, state, and Federal agencies. Specifically, the requirement for Federal agencies to avoid jeopardizing these populations by their actions is eliminated and allowances for taking the species are broadened." (U.S. Fish and Wildlife Service, 1995).

S_RANK

State Conservation Status Rank. Natural Heritage Programs and NatureServe have developed a

consistent method for evaluating the relative imperilment of both species and ecological communities. These assessments lead to the designation of a conservation status rank. For plant and animal species these ranks provide an estimate of extinction risk. This information has been developed over the past thirty years by the NC Natural Heritage Program, NatureServe, and a large number of collaborators in government agencies, universities, natural history museums and botanical gardens, and other conservation organizations. This information has been developed primarily to help in guiding conservation and informing environmental planning and management. Conservation status ranks are based on a one to five scale, ranging from critically imperiled (S1) to demonstrably secure (S5). These status assessments are based on the best available information, considering a variety of factors such as abundance, distribution, population trends, and threats. Values are:

Code	Rank	Description
S1	Critically imperiled	Critically imperiled in North Carolina due to extreme rarity or some factor(s) making it especially vulnerable to extirpation (local extinction) from the state. Typically 5 or fewer occurrences or very few remaining individuals (<1,000).
S2	Imperiled	Imperiled in North Carolina due to rarity or some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000).
S3	Vulnerable	Vulnerable to extinction in North Carolina either because rare or uncommon, or found only in a restricted range (even if abundant at some locations), or due to other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.
S4	Apparently Secure	Apparently secure and widespread in North Carolina, usually with more than 100 occurrences and more than 10,000 individuals.
S5	Secure	Common, widespread, and abundant in North Carolina. Essentially ineradicable under present conditions. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
S#S#	Range Rank	A numeric range rank (e.g., S2S3) is used to indicate uncertainty about the exact status of the element.
SH	Historical	Occurred in North Carolina historically, with some expectation that it may be rediscovered. Its presence may not have been verified in the past 20 years. Upon verification of an extant occurrence, SH-ranked elements would typically receive an S1 rank.
SX	Presumed Extirpated	Believed to be extirpated in North Carolina and has not been located despite intensive searches of historical sites and other appropriate habitat.

Code	Rank	Description
SU	Unrankable	Currently unrankable in North Carolina due to lack of information or substantially conflicting information about status or trends. Need more information.
SNR	Not Ranked	Rank in North Carolina not yet assessed.
SNA	Not Applicable	A conservation status rank is not applicable because the element is not a suitable target for conservation because it is (1) an interspecific hybrid without conservation value, (2) not native to North Carolina, (3) outside its usual range and not regularly found in North Carolina, (4) never confidently documented as present in North Carolina, or (5) a taxon not confidently documented as present in North Carolina.
B	Breeding	Rank of breeding population in North Carolina. Used for migratory species only. (Used as qualifier of above ranks, e.g., S5B.)
N	Nonbreeding	Rank of non-breeding population in North Carolina. Used for migratory species only. (Used as qualifier of above ranks, e.g., S3N.)
?	Uncertain	Indicates an inexact or uncertain numeric rank. (Used as qualifier of above ranks, e.g., "S2?".)

G_RANK

Global Conservation Status Rank. Similar to the North Carolina conservation status ranks, global conservation status ranks are assigned by a consensus of scientific experts, Natural Heritage Programs, CDCs, NatureServe, and TNC. They apply to the status of a species throughout its range. This system is widely used by other agencies and organizations, as the best available scientific and objective assessment of a species' rarity throughout its range. Values are:

Code	Rank	Description
G1	Critically imperiled	Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction. Typically five or fewer occurrences or very few remaining individuals (<1,000), acres (<2,000), or linear miles (<10).
G2	Imperiled	Imperiled globally because of rarity or because of some factor(s) making it very vulnerable to extinction. Typically 6 to 20 occurrences, or few remaining individuals (1,000 to 3,000), acres (2,000 to 10,000), or linear miles (10 to 50).

Code	Rank	Description
G3	Vulnerable	Vulnerable globally either because very rare throughout its range found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extinction. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.
G4	Apparently Secure	Uncommon but not rare (although it may be rare in parts of its range, particularly on the periphery) and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern. Typically more than 100 occurrences and more than 10,000 individuals.
G5	Secure	Common, widespread, and abundant (although it may be rare in parts of its range, particularly on the periphery). Not vulnerable in most of its range. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
G#G#	Range Rank	A rank involving two numbers indicates uncertainty of rank. For example, a G2G3 rank indicates that the species may be a G2 or a G3, but that existing data do not allow that determination to be made.
GH	Historical	Known from only historical occurrences, but with some expectation that it may be rediscovered. May still be extant; further searching is needed.
GX	Presumed Extinct	Believed to be extinct throughout its range with virtually no likelihood that it will be rediscovered. Not located despite intensive searches of historical sites and other appropriate habitat.
GU	Uncertain	Currently unrankable due to lack of information or due to substantially conflicting information about status or trends; need more information.
GNR	Not Ranked	Global rank not yet assessed.
GNA	Not Applicable	A conservation status rank is not applicable because the Element is not a suitable target of conservation activities. A rank is not assigned either because it is (1) an interspecific hybrid without conservation value; or (2) the element is a product of domestication or cultivation.

Code	Rank	Description
T#	Intraspecific Taxon	The rank of a subspecies or variety. As an example, G4T1 would apply to a subspecies of a species with an overall rank of G4, but the subspecies warranting a rank of G1.
?	Inexact or Uncertain	Denotes inexact or uncertain numeric rank. Used as qualifier of above ranks.
Q	Questionable taxonomy	Questionable taxonomy that may reduce conservation priority. Distinctiveness of this entity as a taxon at the current level is questionable. Resolution of this uncertainty may result in change from a species to a subspecies or inclusion of this taxon in another taxon, with the resulting species having a lower-priority conservation status rank. Used as qualifier of above ranks.

UNCRT_DIST

Uncertainty distance in meters. The digitized location of an element occurrence may differ from its actual location due to many factors, including the level of expertise of the data collector, differences in survey techniques and equipment used, and the quality of information collected. The uncertainty distance represents the locational uncertainty associated with the digitized feature. Source Feature shapefiles only.

ACCURACY

Estimated Representational Accuracy. The estimated representational accuracy is an estimate of how much of the element occurrence, as mapped, is believed to be actually occupied by the element. NHEO shapefile only. Values are:

Accuracy	Description
Very High	Greater than 95% of the polygon is occupied by the element.
High	Between 80% and 95% of the polygon is occupied by the element.
Medium	Between 20% and 80% of the polygon is occupied by the element.
Low	Between 5% and 20% of the polygon is occupied by the element.
Very Low	Less than 5% of the polygon is occupied by the element.
Unknown	The percentage of the polygon is occupied by the element is unknown.
blank	An Estimated Representational Accuracy has not been assigned.

EO_STATUS

Element Occurrence Status. A summary of the Element Occurrence Rank (see above).

Status	Description
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Status	Description
Extant	The occurrence was observed recently.
Historical	The occurrence is old or recent surveys failed to find it, but there is no evidence it is destroyed.
Destroyed	The occurrence is known to be destroyed.
Unranked	The status of the occurrence is uncertain.

TYPE

Characterizes the type of habitat of preferred by the element.

Type	Description
Terrestrial	Either the element is a species primarily found in terrestrial habitats, or it is a terrestrial community.
Wetland	Either the element is a species primarily found in wetland habitats, or it is a wetland community.
Aquatic	The element is an aquatic species.

NAME_CATGY

Name Category. The name category is the broad biological group into which the element falls.

Name Category	Description
Vertebrate animal	Includes mammals, birds, reptiles, amphibians, and fishes.
Invertebrate animal	Includes mollusks, arachnids, crustaceans, and insects.
Vascular plant	Includes dicots, monocots, gymnosperms, ferns, and fern allies.
Nonvascular plant	Includes mosses, liverworts, hornworts, and lichens.
Natural community	A distinct and reoccurring assemblage of populations of plants, animals, bacteria, and fungi naturally associated with each other and their physical environment.
Animal Assemblage	A concentration of animal species using the same site for a phase of their life cycle (feeding, reproduction, migration, hibernating, etc.), e.g. bird colonies, bat or reptile hibernacula, concentrations of migrating shorebirds, multispecific spawning grounds, or multispecific mussel habitats.

DATA_SENS

Data Sensitive Element. Element is potentially subject to poaching or harassment.

Y	Yes, information on element is sensitive.
N	No, information is not sensitive

Please do not make the location of sensitive species known! For example, when making large-scale maps using these data, either do not label sensitive species or obscure their location.

HQR

North Carolina Department of Transportation (NCDOT) High-quality Resource.

High-quality resources include:

- Fish with a global rank of G1, G2 or G3 and a state rank of S1 or S2,
- State or Federally Endangered or Threatened mussels, and
- Aquatic and wetland vascular plants with a global rank of G1 or G2 and a State Rank of S1 or S2.

Excluded are:

- Destroyed or historic occurrences, and
- Occurrences with poorly know locations.

Values are:

- | | |
|---|--|
| Y | The element occurrence is considered a High-quality Resource by NCDOT. |
| N | The element occurrence is not considered a High-quality Resource. |

ELCODE

Element Code. An alphanumeric code which uniquely identifies the element. Useful for taxonomic sorting or filtering.

PRIN_EO_ID

Principal EO Identifier. If the occurrence is a sub-EO, then this is the EO_ID of the parent EO. Zero otherwise.

NB_SUB_EOS

Number of sub-EOs. If the record is a parent EO, then this is the number of sub-EOs it has. Zero otherwise.

ACRES

Acreage of the Element Occurrence. NHEO shapefile only.

MIN_ELEV

Minimum elevation at which the occurrence was observed (in feet). Records without an elevation have a value of 0. NHEO shapefile only.

MAX_ELEV

Maximum elevation at which the occurrence was observed (in feet).). Records without an elevation have a value of 0. NHEO shapefile only.

DIRECTIONS

Description of location of occurrence. NHEO shapefile only. (Note: string is truncated to 255 characters.)

EO_DATA

Element Occurrence Data. A summary of the data collected on the occurrence. NHEO shapefile only. (Note: string is truncated to 255 characters.)

SURVEYORS

Name(s) of the person(s) who collected field survey information on the occurrence. NHEO shapefile only. (Note: string is truncated to 255 characters.)

GEN_DESC

General Description. General description of the area where the occurrence is, including a list of adjacent communities. NHEO shapefile only. (Note: string is truncated to 255 characters.)

PROT_COM

Protection Comments. Comments on any legal protection needed to ensure continued existence of the occurrence, and the chances and means of fulfilling those needs. NHEO shapefile only. (Note: string is truncated to 255 characters.)

MGMT_COM

Management Comments. Comments on any management needed to ensure continued existence of the occurrence, as well as the chances and means of fulfilling those needs. NHEO shapefile only. (Note: string is truncated to 255 characters.)

REFERENCE

Information on reference(s) associated with the occurrence. NHEO shapefile only. (Note: string is truncated to 255 characters.)

DESCRIPTOR

Source Feature Descriptor. A label describing a Source Feature used to differentiate between different observations. Source feature shapefiles only.

LOCATOR

Source Feature Locator. A description of the location of a Source Feature, which may be helpful in differentiating between the various Source Features. Source feature shapefiles only.

PERKINS 6-MILE SUMMARY

Scientific name	# of Records	Common Name	State Status	Federal Status	State Rank	Global Rank
Basic mesic forest (piedmont subtype)	1				S2	G5T3
Corallorhiza wisteriana	1	Spring Coral-root	SR-O		S1S2	G5
Dry-mesic oak--hickory forest	4				S5	G5
Floodplain pool	1				S2S3	G3?
Hexalectris spicata	2	Crested Coralroot	SR-P		S2	G5
Low elevation seep	1				S3	G4?
Mesic mixed hardwood forest (piedmont subtype)	7				S4	G5T5
Myotis leibii	1	Eastern Small-footed Myotis	SC	FSC	S3	G3
Piedmont/low mountain alluvial forest	3				S5	G5
Piedmont/mountain bottomland forest	1				S3?	G5
Piedmont/mountain levee forest	1				S3?	G5
Tortula papillosa	1	Papillose Tortula	SR-P		S1	G5

PERKINS 15-MILE SUMMARY

Scientific Name	# of Records	Common Name	State Status	Federal Status	State Rank	Global Rank
<i>Acmispon helleri</i>	1	Carolina Birdfoot-trefoil	SC-V	FSC	S3	G3
<i>Ambystoma talpoideum</i>	1	Mole Salamander	SC		S2	G5
<i>Amorpha schwerinii</i>	1	Piedmont Indigo-bush	SR-T		S3	G3G4
Basic mesic forest (piedmont subtype)	7				S2	G5T3
Basic oak--hickory forest	5				S3	G4
<i>Brachythecium rotaeantum</i>	1	Rota's Feather Moss	SR-D		S1	G3G4
<i>Cambarus catagius</i>	1	Greensboro Burrowing Crayfish	SC		S2	G3
<i>Carpoides cyprinus</i>	1	Quillback	SR		S2?	G5
<i>Cirsium carolinianum</i>	1	Carolina Thistle	E		S2	G5
Colonial Wading Bird Colony	4				S3	G5
<i>Corallorhiza wisteriana</i>	1	Spring Coral-root	SR-O		S1S2	G5
<i>Dibusa angata</i>	1	a caddisfly	SR		S2	G5
<i>Dichantherium annulum</i>	2	Ringed Witch Grass	SR-P		S1	GNR
Dry oak--hickory forest	3				S4	G5
Dry-mesic oak--hickory forest	7				S5	G5
Floodplain pool	3				S2S3	G3?
<i>Glyptemys muhlenbergii</i>	2	Bog Turtle	T	T(S/A)	S2	G3
<i>Haliaeetus leucocephalus</i>	2	Bald Eagle	T		S3B,S3N	G5
<i>Helianthus schweinitzii</i>	1	Schweinitz's Sunflower	E	E	S3	G3
<i>Hexalectris spicata</i>	2	Crested Coralroot	SR-P		S2	G5
<i>Homoeoneuria cahabensis</i>	1	Cahaba Sand-filtering Mayfly	SR		S2	G2G3
<i>Isoetes piedmontana</i>	2	Piedmont Quillwort	E		S2	G3
<i>Isoetes virginica</i>	1	Virginia Quillwort	SR-L	FSC	S1	G1
<i>Lampsilis cariosa</i>	1	Yellow Lampmussel	E	FSC	S1	G3G4
<i>Lampsilis radiata</i>	1	Eastern Lampmussel	T		S1S2	G5
<i>Lanius ludovicianus</i>	2	Loggerhead Shrike	SC		S3B,S3N	G4
Low elevation seep	2				S3	G4?
<i>Macdunnoa brunnea</i>	1	a mayfly	SR		S2	G3G4
<i>Matelea decipiens</i>	1	Glade Milkvine	SR-P		S3	G5
Mesic mixed hardwood forest (piedmont subtype)	13				S4	G5T5

Minuartia uniflora	1 Single-flowered Sandwort	E		S1	G4
Myotis leibii	1 Eastern Small-footed Myotis	SC	FSC	S3	G3
Piedmont monadnock forest	2			S4	G5
Piedmont/coastal plain heath bluff	1			S3	G4?
Piedmont/low mountain alluvial forest	3			S5	G5
Piedmont/mountain bottomland forest	3			S3?	G5
Piedmont/mountain levee forest	4			S3?	G5
Piedmont/mountain semipermanent impoundment	1			S4	G5
Piedmont/mountain swamp forest	2			S1S2	G2
Portulaca smallii	1 Small's Portulaca	T		S2	G3
Pseudognaphalium helleri	1 Heller's Rabbit-Tobacco	SR-P		S3	G3G4
Rhus michauxii	1 Michaux's Sumac	E	E	S2	G2G3
Ruellia purshiana	2 Pursh's Wild-petunia	SC-V		S2	G3
Silphium terebinthinaceum	1 Prairie Dock	SR-P		S2	G4G5
Symphyotrichum georgianum	1 Georgia Aster	T	C	S3	G3
Symphyotrichum laeve var. concinnum	1 Narrow-leaf Aster	T		S2	G5T4
Tortula papillosa	1 Papillose Tortula	SR-P		S1	G5
Upland depression swamp forest	3			S3	G3
Xeric hardpan forest	1			S3	G3G4