

APPENDIX 1: BREEDING BIRD ATLAS

**Table 1. Breeding Bird List - HNWA (of 12 blocks)
1980 – 1985 Data**

Common Name	Scientific Name	Federal Classification	NYS Classification
Alder Flycatcher	<i>Empidonax alnorum</i>	MBTA	Protected
American Black Duck	<i>Anas rubripes</i>	MBTA	Game Species
American Crow	<i>Corvus brachyrhynchos</i>	MBTA	Game Species
American Goldfinch	<i>Carduelis tristis</i>	MBTA	Protected
American Kestrel	<i>Falco sparverius</i>	MBTA	Protected
American Redstart	<i>Setophaga ruticilla</i>	MBTA	Protected
American Robin	<i>Turdus migratorius</i>	MBTA	Protected
American Woodcock	<i>Scolopax minor</i>	MBTA	Game Species
Baltimore Oriole	<i>Icterus galbula</i>	MBTA	Protected
Bank Swallow	<i>Riparia riparia</i>	MBTA	Protected
Barn Swallow	<i>Hirundo rustica</i>	MBTA	Protected
Barred Owl	<i>Strix varia</i>	MBTA	Protected
Belted Kingfisher	<i>Ceryle alcyon</i>	MBTA	Protected
Black-and-white Warbler	<i>Mniotilta varia</i>	MBTA	Protected
Black-backed Woodpecker	<i>Picoides arcticus</i>	MBTA	Protected
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	MBTA	Protected
Blackburnian Warbler	<i>Dendroica fusca</i>	MBTA	Protected
Black-capped Chickadee	<i>Poecile atricapillus</i>	MBTA	Protected
Blackpoll Warbler	<i>Dendroica striata</i>	MBTA	Protected
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	MBTA	Protected
Black-throated Green Warbler	<i>Dendroica virens</i>	MBTA	Protected
Blue Jay	<i>Cyanocitta cristata</i>	MBTA	Protected
Blue-headed Vireo	<i>Vireo solitarius</i>	MBTA	Protected
Bobolink	<i>Dolichonyx oryzivorus</i>	MBTA	Protected
Boreal Chickadee	<i>Poecile hudsonicus</i>	MBTA	Protected
Broad-winged Hawk	<i>Buteo platypterus</i>	MBTA	Protected
Brown Creeper	<i>Certhia americana</i>	MBTA	Protected
Brown Thrasher	<i>Toxostoma rufum</i>	MBTA	Protected
Brown-headed Cowbird	<i>Molothrus ater</i>	MBTA	Protected
Canada Warbler	<i>Wilsonia canadensis</i>	MBTA	Protected
Cedar Waxwing	<i>Bombycilla cedrorum</i>	MBTA	Protected
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	MBTA	Protected
Chimney Swift	<i>Chaetura pelagica</i>	MBTA	Protected
Chipping Sparrow	<i>Spizella passerina</i>	MBTA	Protected
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	MBTA	Protected
Common Grackle	<i>Quiscalus quiscula</i>	MBTA	Protected

Appendix 1: Breeding Bird Atlas

Common Name	Scientific Name	Federal Classification	NYS Classification
Common Loon	<i>Gavia immer</i>	MBTA	Protected-Special Concern
Common Merganser	<i>Mergus merganser</i>	MBTA	Game Species
Common Nighthawk	<i>Chordeiles minor</i>	MBTA	Protected-Special Concern
Common Raven	<i>Corvus corax</i>	MBTA	Protected
Common Yellowthroat	<i>Geothlypis trichas</i>	MBTA	Protected
Cooper's Hawk	<i>Accipiter cooperii</i>	MBTA	Protected-Special Concern
Dark-eyed Junco	<i>Junco hyemalis</i>	MBTA	Protected
Downy Woodpecker	<i>Picoides pubescens</i>	MBTA	Protected
Eastern Bluebird	<i>Sialia sialis</i>	MBTA	Protected
Eastern Kingbird	<i>Tyrannus tyrannus</i>	MBTA	Protected
Eastern Phoebe	<i>Sayornis phoebe</i>	MBTA	Protected
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	MBTA	Protected
Eastern Wood-Pewee	<i>Contopus virens</i>	MBTA	Protected
European Starling	<i>Sturnus vulgaris</i>	Unprotected	Unprotected
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	MBTA	Protected
Field Sparrow	<i>Spizella pusilla</i>	MBTA	Protected
Golden-crowned Kinglet	<i>Regulus satrapa</i>	MBTA	Protected
Gray Catbird	<i>Dumetella carolinensis</i>	MBTA	Protected
Great Blue Heron	<i>Ardea herodias</i>	MBTA	Protected
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	MBTA	Protected
Great Horned Owl	<i>Bubo virginianus</i>	MBTA	Protected
Green Heron	<i>Butorides virescens</i>	MBTA	Protected
Hairy Woodpecker	<i>Picoides villosus</i>	MBTA	Protected
Hermit Thrush	<i>Catharus guttatus</i>	MBTA	Protected
Herring Gull	<i>Larus argentatus</i>	MBTA	Protected
Hooded Merganser	<i>Lophodytes cucullatus</i>	MBTA	Game Species
House Finch	<i>Carpodacus mexicanus</i>	MBTA	Protected
House Sparrow	<i>Passer domesticus</i>	Unprotected	Unprotected
House Wren	<i>Troglodytes aedon</i>	MBTA	Protected
Indigo Bunting	<i>Passerina cyanea</i>	MBTA	Protected
Killdeer	<i>Charadrius vociferus</i>	MBTA	Protected
Lawrence's Warbler	<i>Vermivora chrysoptera x V. pinus</i>	MBTA	Protected
Least Flycatcher	<i>Empidonax minimus</i>	MBTA	Protected
Lincoln's Sparrow	<i>Melospiza lincolni</i>	MBTA	Protected
Magnolia Warbler	<i>Dendroica magnolia</i>	MBTA	Protected
Mallard	<i>Anas platyrhynchos</i>	MBTA	Game Species
Mourning Dove	<i>Zenaida macroura</i>	MBTA	Protected

Common Name	Scientific Name	Federal Classification	NYS Classification
Mourning Warbler	<i>Oporornis philadelphia</i>	MBTA	Protected
Nashville Warbler	<i>Vermivora ruficapilla</i>	MBTA	Protected
Northern Cardinal	<i>Cardinalis cardinalis</i>	MBTA	Protected
Northern Flicker	<i>Colaptes auratus</i>	MBTA	Protected
Northern Harrier	<i>Circus cyaneus</i>	MBTA	Threatened
Northern Mockingbird	<i>Mimus polyglottos</i>	MBTA	Protected
Northern Parula	<i>Parula americana</i>	MBTA	Protected
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	MBTA	Protected
Northern Waterthrush	<i>Seiurus noveboracensis</i>	MBTA	Protected
Olive-sided Flycatcher	<i>Contopus cooperi</i>	MBTA	Protected
Osprey	<i>Pandion haliaetus</i>	MBTA	Protected-Special Concern
Ovenbird	<i>Seiurus aurocapillus</i>	MBTA	Protected
Pileated Woodpecker	<i>Dryocopus pileatus</i>	MBTA	Protected
Pine Siskin	<i>Carduelis pinus</i>	MBTA	Protected
Pine Warbler	<i>Dendroica pinus</i>	MBTA	Protected
Purple Finch	<i>Carpodacus purpureus</i>	MBTA	Protected
Red Crossbill	<i>Loxia curvirostra</i>	MBTA	Protected
Red-breasted Nuthatch	<i>Sitta canadensis</i>	MBTA	Protected
Red-eyed Vireo	<i>Vireo olivaceus</i>	MBTA	Protected
Red-shouldered Hawk	<i>Buteo lineatus</i>	MBTA	Protected-Special Concern
Red-tailed Hawk	<i>Buteo jamaicensis</i>	MBTA	Protected
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	MBTA	Protected
Rock Dove	<i>Columba livia</i>	Unprotected	Unprotected
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	MBTA	Protected
Ruby-crowned Kinglet	<i>Regulus calendula</i>	MBTA	Protected
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	MBTA	Protected
Ruffed Grouse	<i>Bonasa umbellus</i>	Unprotected	Game Species
Rusty Blackbird	<i>Euphagus carolinus</i>	MBTA	Protected
Savannah Sparrow	<i>Passerculus sandwichensis</i>	MBTA	Protected
Scarlet Tanager	<i>Piranga olivacea</i>	MBTA	Protected
Sharp-shinned Hawk	<i>Accipiter striatus</i>	MBTA	Protected-Special Concern
Song Sparrow	<i>Melospiza melodia</i>	MBTA	Protected
Spotted Sandpiper	<i>Actitis macularia</i>	MBTA	Protected
Spruce Grouse	<i>Falcapennis canadensis</i>	Unprotected	Endangered
Swainson's Thrush	<i>Catharus ustulatus</i>	MBTA	Protected
Swamp Sparrow	<i>Melospiza georgiana</i>	MBTA	Protected
Tree Swallow	<i>Tachycineta bicolor</i>	MBTA	Protected

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Common Name	Scientific Name	Federal Classification	NYS Classification
Turkey Vulture	<i>Cathartes aura</i>	MBTA	Protected
Veery	<i>Catharus fuscescens</i>	MBTA	Protected
Warbling Vireo	<i>Vireo gilvus</i>	MBTA	Protected
Whip-poor-will	<i>Caprimulgus vociferus</i>	MBTA	Protected-Special Concern
White-breasted Nuthatch	<i>Sitta carolinensis</i>	MBTA	Protected
White-throated Sparrow	<i>Zonotrichia albicollis</i>	MBTA	Protected
White-winged Crossbill	<i>Loxia leucoptera</i>	MBTA	Protected
Winter Wren	<i>Troglodytes troglodytes</i>	MBTA	Protected
Wood Duck	<i>Aix sponsa</i>	MBTA	Game Species
Wood Thrush	<i>Hylocichla mustelina</i>	MBTA	Protected
Yellow Warbler	<i>Dendroica petechia</i>	MBTA	Protected
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	MBTA	Protected
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	MBTA	Protected
Yellow-rumped Warbler	<i>Dendroica coronata</i>	MBTA	Protected

2000 – 2005 Data

Common Name	Scientific Name	Federal Classification	NYS Classification
Alder Flycatcher	<i>Empidonax alnorum</i>	MBTA	Protected
American Bittern	<i>Botaurus lentiginosus</i>	MBTA	Protected-Special Concern
American Goldfinch	<i>Carduelis tristis</i>	MBTA	Protected
American Kestrel	<i>Falco sparverius</i>	MBTA	Protected
American Redstart	<i>Setophaga ruticilla</i>	MBTA	Protected
American Robin	<i>Turdus migratorius</i>	MBTA	Protected
Bald Eagle	<i>Haliaeetus leucocephalus</i>	MBTA- Endangered	Threatened
Barred Owl	<i>Strix varia</i>	MBTA	Protected
Bay-breasted Warbler	<i>Dendroica castanea</i>	MBTA	Protected
Belted Kingfisher	<i>Ceryle alcyon</i>	MBTA	Protected
Black-capped Chickadee	<i>Poecile atricapillus</i>	MBTA	Protected
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	MBTA	Protected
Blue Jay	<i>Cyanocitta cristata</i>	MBTA	Protected
Bobolink	<i>Dolichonyx oryzivorus</i>	MBTA	Protected
Boreal Chickadee	<i>Poecile hudsonicus</i>	MBTA	Protected
Broad-winged Hawk	<i>Buteo platypterus</i>	MBTA	Protected
Brown Creeper	<i>Certhia americana</i>	MBTA	Protected
Brown Thrasher	<i>Toxostoma rufum</i>	MBTA	Protected
Canada Goose	<i>Branta canadensis</i>	MBTA	Game Species
Canada Warbler	<i>Wilsonia canadensis</i>	MBTA	Protected

Common Name	Scientific Name	Federal Classification	NYS Classification
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	MBTA	Protected
Chimney Swift	<i>Chaetura pelagica</i>	MBTA	Protected
Chipping Sparrow	<i>Spizella passerina</i>	MBTA	Protected
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	MBTA	Protected
Common Grackle	<i>Quiscalus quiscula</i>	MBTA	Protected
Common Loon	<i>Gavia immer</i>	MBTA	Protected-Special Concern
Common Merganser	<i>Mergus merganser</i>	MBTA	Game Species
Common Nighthawk	<i>Chordeiles minor</i>	MBTA	Protected-Special Concern
Common Raven	<i>Corvus corax</i>	MBTA	Protected
Common Yellowthroat	<i>Geothlypis trichas</i>	MBTA	Protected
Cooper's Hawk	<i>Accipiter cooperii</i>	MBTA	Protected-Special Concern
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	MBTA	Protected
Downy Woodpecker	<i>Picoides pubescens</i>	MBTA	Protected
Eastern Bluebird	<i>Sialia sialis</i>	MBTA	Protected
Eastern Kingbird	<i>Tyrannus tyrannus</i>	MBTA	Protected
Eastern Phoebe	<i>Sayornis phoebe</i>	MBTA	Protected
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	MBTA	Protected
Fish Crow	<i>Corvus ossifragus</i>	MBTA	Protected
Golden-crowned Kinglet	<i>Regulus satrapa</i>	MBTA	Protected
Gray Catbird	<i>Dumetella carolinensis</i>	MBTA	Protected
Great Blue Heron	<i>Ardea herodias</i>	MBTA	Protected
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	MBTA	Protected
Great Horned Owl	<i>Bubo virginianus</i>	MBTA	Protected
Green Heron	<i>Butorides virescens</i>	MBTA	Protected
Hairy Woodpecker	<i>Picoides villosus</i>	MBTA	Protected
Hermit Thrush	<i>Catharus guttatus</i>	MBTA	Protected
Hooded Merganser	<i>Lophodytes cucullatus</i>	MBTA	Game Species
House Finch	<i>Carpodacus mexicanus</i>	MBTA	Protected
House Sparrow	<i>Passer domesticus</i>	Unprotected	Unprotected
House Wren	<i>Troglodytes aedon</i>	MBTA	Protected
Indigo Bunting	<i>Passerina cyanea</i>	MBTA	Protected
Killdeer	<i>Charadrius vociferus</i>	MBTA	Protected
Least Flycatcher	<i>Empidonax minimus</i>	MBTA	Protected
Lincoln's Sparrow	<i>Melospiza lincolni</i>	MBTA	Protected
Magnolia Warbler	<i>Dendroica magnolia</i>	MBTA	Protected
Mallard	<i>Anas platyrhynchos</i>	MBTA	Game Species
Mourning Dove	<i>Zenaida macroura</i>	MBTA	Protected
Mourning Warbler	<i>Oporornis philadelphia</i>	MBTA	Protected
Nashville Warbler	<i>Vermivora ruficapilla</i>	MBTA	Protected

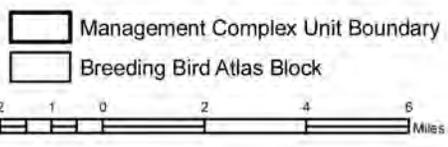
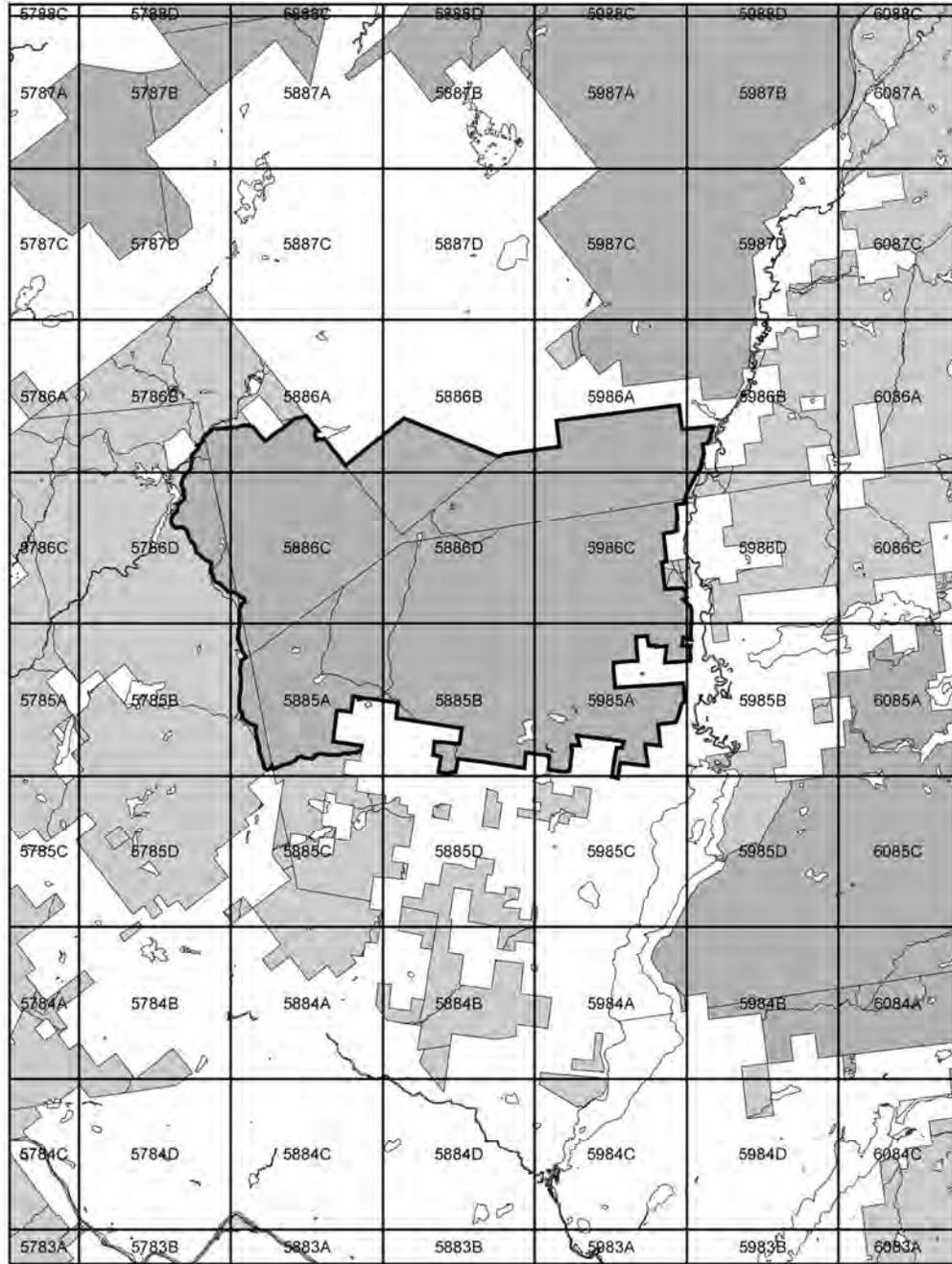
Appendix 1: Breeding Bird Atlas

Common Name	Scientific Name	Federal Classification	NYS Classification
Northern Parula	<i>Parula americana</i>	MBTA	Protected
Northern Waterthrush	<i>Seiurus noveboracensis</i>	MBTA	Protected
Olive-sided Flycatcher	<i>Contopus cooperi</i>	MBTA	Protected
Osprey	<i>Pandion haliaetus</i>	MBTA	Protected-Special Concern
Ovenbird	<i>Seiurus aurocapillus</i>	MBTA	Protected
Pileated Woodpecker	<i>Dryocopus pileatus</i>	MBTA	Protected
Pine Siskin	<i>Carduelis pinus</i>	MBTA	Protected
Pine Warbler	<i>Dendroica pinus</i>	MBTA	Protected
Purple Finch	<i>Carpodacus purpureus</i>	MBTA	Protected
Red Crossbill	<i>Loxia curvirostra</i>	MBTA	Protected
Red-breasted Nuthatch	<i>Sitta canadensis</i>	MBTA	Protected
Red-eyed Vireo	<i>Vireo olivaceus</i>	MBTA	Protected
Red-shouldered Hawk	<i>Buteo lineatus</i>	MBTA	Protected-Special Concern
Red-tailed Hawk	<i>Buteo jamaicensis</i>	MBTA	Protected
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	MBTA	Protected
Ring-necked Duck	<i>Aythya collaris</i>	MBTA	Game Species
Rock Dove	<i>Columba livia</i>	Unprotected	Unprotected
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	MBTA	Protected
Ruby-crowned Kinglet	<i>Regulus calendula</i>	MBTA	Protected
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	MBTA	Protected
Ruffed Grouse	<i>Bonasa umbellus</i>	Unprotected	Game Species
Rusty Blackbird	<i>Euphagus carolinus</i>	MBTA	Protected
Scarlet Tanager	<i>Piranga olivacea</i>	MBTA	Protected
Sharp-shinned Hawk	<i>Accipiter striatus</i>	MBTA	Protected-Special Concern
Song Sparrow	<i>Melospiza melodia</i>	MBTA	Protected
Spotted Sandpiper	<i>Actitis macularia</i>	MBTA	Protected
Swainson's Thrush	<i>Catharus ustulatus</i>	MBTA	Protected
Swamp Sparrow	<i>Melospiza georgiana</i>	MBTA	Protected
Turkey Vulture	<i>Cathartes aura</i>	MBTA	Protected
Veery	<i>Catharus fuscescens</i>	MBTA	Protected
Warbling Vireo	<i>Vireo gilvus</i>	MBTA	Protected
White-breasted Nuthatch	<i>Sitta carolinensis</i>	MBTA	Protected
White-throated Sparrow	<i>Zonotrichia albicollis</i>	MBTA	Protected
White-winged Crossbill	<i>Loxia leucoptera</i>	MBTA	Protected
Willow Flycatcher	<i>Empidonax traillii</i>	MBTA	Protected
Winter Wren	<i>Troglodytes troglodytes</i>	MBTA	Protected
Wood Thrush	<i>Hylocichla mustelina</i>	MBTA	Protected
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	MBTA	Protected
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	MBTA	Protected

FEDERAL PROTECTED STATUS

MBTA = Migratory Bird Treaty Act

HOFFMAN NOTCH WILDERNESS BREEDING BIRD ATLAS



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APPENDIX 2: ARCHEOLOGICAL SITES

<u>QUAD</u>	<u>SHPO/NYSM</u>	<u>Site Name</u>	<u>Description</u>
Schroon Lake Ele. 980 ft.	A03112.000001	Schroon River (Roth's) Forge, HAA 113-1	Built in 1857 by Jacob Parmeter, operated by E.B. Walker & Co. and by Phelps, Walker and Parmeter. In 1858 indicated as on the north bank of the West Branch of the Schroon River on Lot 25. Spotted as "Branch Iron Works" and "Walker & Co.". In 1861 became property of John Roth. Forge lost by Roth in 1881. then owned by P. Smith and later Clark & True. Destroyed by fire in 1883. Reported by Hartgen Archeological Associates.
Schroon Lake Ele. 850-1112 ft.	NYSM 3292	ACP ESEX5	Prehistoric site. Mound? Camp? 'Mound ... may be natural but arrowheads found'... camp symbol on Parker map. Reported by Marsh and Parker.
Schroon Lake Pharaoh Mt. Ele. 943 ft.	NYSM 7520	No info.	Prehistoric sites reported by C. Gillette. No other info.
Schroon Lake Ele. 885-923 ft.	NYSM 7745	ACP ESEX (no number)	Prehistoric site reported by AC Parker as traces of occupation.
Schroon Lake Ele. 899 ft.	NYSM 7546	ACP ESEX (no number)	Traces of occupation. Reported by Arthur C. Parker

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APPENDIX 3: POND MANAGEMENT CLASSIFICATIONS

Adirondack Brook Trout Ponds – Adirondack Zone ponds which support and are managed for populations of brook trout, sometimes in company with other salmonid fish species. These waters generally lack warmwater fishes but frequently support bullheads. Management may include stocking.

Coldwater Ponds and Lakes – Lakes and ponds which support and are managed for populations of several salmonids. These waters generally lack warmwater fishes but frequently support bullheads. Management may include stocking.

Other Ponds and Lakes – Fishless waters and waters containing fish communities consisting of native and nonnative fishes which will be managed for their intrinsic ecological value.

Two-Story Ponds and Lakes – Waters which simultaneously support and are managed for populations of coldwater and warmwater game fishes. The bulk of the lake trout and rainbow trout resource fall within this class of waters. Management may include stocking.

Unknown Ponds and Lakes – Waters which could not be assigned to the subprogram categories specifically addressed in this document due to a lack of or paucity of survey information.

Warmwater Ponds and Lakes – Waters which support and are managed for populations of warmwater game fishes and lack significant populations of salmonid fishes. Management may include stocking

This list of ponded waters in the Hoffman Notch Wilderness Area was obtained from the NYS Biological Survey. Some ponds listed in the Biological Survey were created by beaver dams and are now drained. In the following discussion and in Tables 1 and 2, the drained ponds continue to be listed for consistency with the Biological Survey, but the acreages have been reduced to reflect conditions as observed in the field. Also, the number of ponds may vary depending on whether referencing ponds as listed in the Biological Survey, or ponds existing in the unit.

Bailey Pond (UH-P397)

Bailey Pond (sometimes spelled Baily Pond) is an 18 acre brook trout pond. Bailey Pond is accessible via a foot trail from the parking area at Warrens Pond. Based on a 2002 survey, the fish community consists of stocked brook trout, pumpkinseed, northern redbelly dace, brown bullhead, white sucker, creek chub, and golden shiner. A 1932 survey determined that Bailey Pond supported brook trout, golden shiner and white sucker. Brook trout have been stocked since 1941. A 1949 survey collected brown bullhead, brook trout and white sucker. In 1978 a survey collected brook trout, golden shiner, white sucker, brown bullhead, pumpkinseed, northern redbelly dace, and creek chub. With the exception of golden shiner, these are all native or native but widely introduced species. A recent pre-reclamation survey in 2002 revealed that this pond does not have a suitable fish migration barrier site, and therefore this pond is not a candidate for reclamation.

Due to the lack of a suitable fish migration barrier site, this pond will be managed as Coldwater Pond to preserve its native fishes in the presence of non-native species.

Management Class: Coldwater

Big Marsh (UH-P396)

Big Marsh is the headwaters of the North Branch of Trout Brook. This pond is 13.1 acres in size and surrounded by extensive wetlands. A trail runs along the west side of the lake. Although this pond has not been surveyed, it probably contains native and non-native fish communities. Due to the large wetland area, this pond is not a candidate for reclamation. This pond will be managed to protect the fish species present for their intrinsic value.

Management Class: Unknown

Big Pond (UH-P406)

Big Pond is a 63 acre warmwater fishery dominated by nonnative northern pike. The pond is accessible via foot trail from the parking area on CR 24. A survey conducted in 2002 found northern pike and nonnative golden shiner, native but widely introduced creek chub and brown bullhead and native redbreast sunfish and white sucker. Nonnative smallmouth bass were reported in 1932 and 1955 in addition to the other species found in 2002. Smallmouth bass were not detected in our recent survey. Summer-time temperature and dissolved oxygen profiles reveal the pond is too warm to support native brook trout.

Big Pond will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

Management Class: Warmwater

Marion Pond (UH-P398)

Marion Pond is a 10 acre brook trout pond. Nonnative golden shiner were present when the pond was surveyed in 1949, 1963, 1978, 1987 and 2008. The pond is air-stocked in the fall with fingerling brook trout. The pond is accessible via trail from Bailey Pond and the Warrens Pond parking lot. This pond has been assessed as a reclamation candidate, and an effective natural fish barrier on its outlet and lack of problematic wetlands indicate it is an excellent candidate. Marion Pond will be reclaimed, and will be stocked with an Adirondack Heritage Strain of brook trout. Until the reclamation, Marion Pond will be managed as an Adirondack brook trout pond to preserve its native fishes in the presence of a nonnative species.

Management Class: Adirondack brook trout

North Pond (UH-P405)

North Pond is a 25 acre warmwater pond accessible by foot trail from CR 24. The pond is not visible from the trail and a 750 foot bushwack was necessary when the pond was last surveyed in 2002. Nonnative northern pike, smallmouth bass, and golden shiner dominate the community. Native but widely introduced brown bullhead and creek chub and native redbreast sunfish and longnose dace were present in 1955. In the 2002 survey, golden shiner had replaced creek chub. Summer-time temperature and dissolved oxygen profiles reveal the pond is suitable for native brook trout. However, the pond has not been assessed as a potential reclamation candidate. Until an assessment of the pond for its potential for native species restoration work, North Pond will be managed as a warmwater fishery to preserve its native fishes in the presence of nonnative species. If a reclamation is determined to be necessary and feasible, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey information.

Management Class: Warmwater

Sand Pond (UH-P457)

Sand Pond is a 64 acre coldwater pond on the edge of the Hoffman Notch Unit. Land ownership of the edge of the pond is a mix of public and private. Access is via road and trail on both the north and south sides of the pond from CR 2. As a border water, Sand Pond will not be managed as a Wilderness water. ALSC survey in 1987 found native common shiner, and northern redbelly dace, and native but widely introduced brook trout, lake trout, pumpkinseed, and nonnative rainbow smelt, golden shiner and bluntnose minnow. A 1932 survey reported brook trout and lake trout. In 1946, only lake trout were reported. In a 1959 survey, brook trout and lake trout were both present, along with pumpkinseed, creek chub and white sucker. From 1941 to 1957 the pond was intermittently stocked with brook trout and lake trout. Sand Pond will be managed as a coldwater fishery to preserve its native fishes in the presence of nonnative species.

Management Class: Coldwater

Unnamed Ponds (UH-P392, P453D, P455c, P5427, P5428)

Five unnamed ponds have been identified within the Hoffman Notch Unit. These ponds range in size from 1 to 6 acres. Although these ponds have never been surveyed, they probably contain native and nonnative fish communities. P392 is the largest and is surrounded by wetland, however an experimental stocking of brook trout was conducted in 1979. P392 is a headwater of Minerva Stream and about 3/4 of a mile from the nearest marked trail. P453D is the smallest, has no trail access and drains to the Schroon River. P455C is a headwater of Hoffman Notch Brook with no marked trail access. P5428 and P5427 are located near North Pond on tributaries to Rogers Brook. These unnamed ponds will be managed to protect the fish species present for their intrinsic value.

Management Class: Unknown

Table X.

CLASSIFICATION OF COMMON ADIRONDACK UPLAND FISH FAUNA INTO
NATIVE, NONNATIVE, AND NATIVE BUT WIDELY INTRODUCED
Adapted from George, 1980

NATIVE TO ADIRONDACK UPLAND

Blacknose dace	Redbreast sunfish	Common shiner
White sucker	Finescale dace	Lake chub
Longnose sucker	Creek chubsucker	Slimy sculpin
Northern redbelly dace	Longnose dace	Round whitefish

NATIVE SPECIES WIDELY INTRODUCED WITHIN THE ADIRONDACK UPLAND¹

Brook trout	Cisco	Brown bullhead
Lake trout	Pumpkinseed	Creek chub

NONNATIVE TO ADIRONDACK UPLAND

Golden shiner	Northern pike	Chain pickerel	Rock bass
Bluntnose minnow ⁵	Smallmouth bass	Largemouth bass	Yellow perch
Johnny darter	Fathead minnow ²	Brown trout	Rainbowtrout
Splake	Atlantic salmon	Lake Whitefish	Bandedkillifish ³
Rainbow smelt	Fallfish ⁴	Bluegill	Walleye
Pearl dace	Central mudminnow	Redhorse suckers (spp.)	Black crappie

¹ These native fishes are known to have been widely distributed throughout Adirondack uplands by DEC, bait bucket introduction, and unauthorized stocking. This means that their presence does not necessarily indicate endemism. Other native species listed above also may have been moved from water to water in the Adirondack Upland, but the historical record is less distinct.

² Not mentioned by Mather (1884) from Adirondack collections, minor element southern Adirondack Uplands (Greeley 1930-1935).

³ Early collections strongly suggest dispersal as a bait form.

⁴ Adventive through stocking.

⁵ Not mentioned by Mather (1884) from Adirondack collections, widely used as bait.

Table X. Hoffman Notch Unit Management Plan Poned Water Inventory Data

Name	P#	W' shed	File #	County	USGS Quad (7.5")	Management Class	Biological Survey Area (acres)	Maximum Depth (meters)	Planimetered Mean Depth (meters)
Bailey Pond	397	UH	714	Essex	Schroon Lake	Coldwater	19.0		
Big Marsh	396	UH		Essex	Blue Ridge	Unknown	13.1		
Big Pond	406	UH	725	Essex	Schroon Lake	Warmwater	62.5	5.5	2.3
Marion Pond	398	UH	715	Essex	Cheney Pond	Adirondack brook trout	9.9	7.9	3.3
North Pond	405	UH	724	Essex	Schroon Lake	Warmwater	25.0		
Sand Pond	457	UH	794	Essex	Blue Ridge	Coldwater	63.8	12.2	5.0
Unnamed Pond	392	UH		Essex	Blue Ridge	Unknown	5.9		
Unnamed Pond	453D	UH		Essex	Blue Ridge	Unknown	1		
Unnamed Pond	455C	UH		Essex	Blue Ridge	Unknown	3.7		
Unnamed Pond	5427	UH		Essex	Schroon Lake	Unknown	3.0		
Unnamed Pond	5428	UH		Essex	Schroon Lake	Unknown	3.2		

Appendix 3: Pond Management Classifications

Table X. Hoffman Notch Unit Management Plan Ponded Water Survey Data

Name	W' shed	P#	Most Recent Chemical Survey					Most Recent Biological Survey		
			Year	Source	ANC (ueq/l)		Conductivity (ppm)	Year	Source	Fish Species Present and Number Caught*
Bailey Pond	UH	397	2002	DEC	114.7	6.7	24	2002	DEC	ST (11), PkS (22), NRD (2), BB (2), WS (66), CC (11), GS (19)
Big Marsh	UH	396								Unknown
Big Pond	UH	406	2002	DEC	166.1	7.0	32	2002	DEC	NP (8), CC (1), RbS (92), GS (31), WS (8), BB (56)
Marion Pond	UH	398	1987	ALSC	11.1	5.7 8	16.3	2008	DEC	ST (12), GS (400)
North Pond	UH	405	2002	DEC	206.4	7.4	36	2002	DEC	NP (4), BB (21), SmB (9), GS (39), RbS (6)
Sand Pond	UH	457	1987	ALSC	212.6	7.3 2	43.4	1987	ALSC	NRD (6), BnM (9), CC (16), PkS (3), ST (10), RSM (8), GS (50), CS (58), WS (55), BK (1), LT (1), FF (1), BB (6)
Unnamed Pond	UH	392								Unknown
Unnamed Pond	UH	453D								Unknown
Unnamed Pond	UH	455C								Unknown
Unnamed Pond	UH	5427								Unknown
Unnamed Pond	UH	5428								Unknown

* Fish species caught by various gear.

ST	Brook trout	PKS	Pumpkinseed	NRD	Northern redbelly dace	BB	Brown bullhead
WS	White sucker	CC	Creek chub	GS	Golden shine	NP	Northernpike
RbS	Redbreast sunfish	SmB	Smallmouth bass	BnM	Bluntnose minnow	RSM	Rainbow smelt
CS	Common shiner	LT	Lake trout	FF	Fallfish	Unknown - No biological survey	

Table 4.
Hoffman Notch Wilderness - Fish Community Ecological Analysis
Known Fish Distributions from Early Surveys vs. Present

Lake/Pond Category	Prior to 1980	%	Post-1980	%	Net Change in # Lakes	% Net Change by Species
Total # Lakes	11	-	11	-	-	-
# Ponds Surveyed	5	-	5	-	-	-
# Un-surveyed	6	-	6	-	-	-
# Historically Fishless Ponds	0	-	0	-	-	-
# Historically Supporting Fish Life	6	-	6	-		-
# Ponds Formerly Supporting Fish but now Fishless	0	-	0	-	-	-
SPECIES CATEGORIES						
Native but Widely Introduced						
Brook Trout	3	50%	3	50%	0	0%
Lake Trout	1	17%	1	17%	0	0%
Brown Bullhead	3	50%	3	50%	0	0%
Pumpkinseed	2	33%	2	33%	0	0%
Creek Chub	4	67%	2	33%	-2	-33%
Native Species						
White Sucker	3	50%	2	33%	-1	-17%
Northern Redbelly Dace	1	17%	2	33%	1	17%
Longnose Dace	1	17%	1	17%	0	0%
Redbreast Sunfish	2	33%	2	33%	0	0%
Common Shiner		0%	1	17%	1	17%
Non-Native Species						
Golden Shiner	4	66%	5	83%	1	17%
Rainbow Smelt		0%	1	17%	1	17%
Northern Pike	2	33%	2	33%	0	0%
Bluntnose Minnow		0%	1	17%	1	17%
Smallmouth Bass	2	33%	1	17%	-1	-17%

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APPENDIX 4: TRAIL CLASSIFICATION SYSTEM

TRAIL CLASSIFICATION SYSTEM –HOFFMAN NOTCH WILDERNESS AREA						
TITLE	EXAMPLE	MARKING	TREAD	BARRIERS	USE LEVEL	ACCEPTABLE MAINTENANCE
I Unmarked Route	Historic USGS map roads / trails, historic logging trails, Old snowmobile trails	None	Intermittently apparent, relatively undisturbed organic soil horizon	Natural obstructions present, logs and water courses	Occasional	None
II Unmarked Path	Trail from Bailey Pond to Marion Pond Trail to North Pond	None	Intermittently apparent, compaction of duff, mineral soils occasionally exposed	Same as unmarked route	Low, varies by location	Occasional barrier removal only to define appropriate route.
III Primitive	Big Pond Trail Hoffman Notch Trail	Trail markers, sign at junction with secondary or other upper level trail	Apparent, soil compaction evident	Limited natural obstructions (logs and river fords)	Low	Drainage (native materials) where necessary to minimize erosion, blowdown removed 2-3 years, brushing as necessary to define trail (every 5-10 years). Bridges only to protect resource (max - 2 log width). Ladders only to protect exceptionally steep sections, Tread 14"-18", clear: 3' wide, 3' high.
IV Secondary	Mt Severance Trail	Markers, signs with basic information	Likely worn and possibly quite eroded. Rocks exposed, little or no duff remaining	Up to one year's accumulated blowdown, small streams.	Moderate	Drainage where needed to halt erosion and limit potential erosion (using native materials), tread hardening with native materials where drainage proves to be insufficient to control erosion. Remove blowdown annually. Brush to maintain trail corridor. Higher use may warrant greater use of bridges (2–3 logs wide) for resource protection. Ladders on exceptionally steep rock faces. Tread 18"-24". Clear 4' wide, 3' High.

Appendix 4: Trail Classification System

TRAIL CLASSIFICATION SYSTEM –HOFFMAN NOTCH WILDERNESS AREA						
TITLE	EXAMPLE	MARKING	TREAD	BARRIERS	USE LEVEL	ACCEPTABLE MAINTENANCE
V Trunk or Primary Trail	None in the HNWA	Markers, signed with more information and warnings.	Wider tread, worn and very evident. Rock exposed, possibly very eroded.	Obstructions only rarely, small streams	High	Same as above; Plus: regular blowdown removal on designated ski trails, non-native materials as last resort, Extensive tread hardening when needed, bridge streams (2–4 logs wide) difficult to cross during high water, priority given to stream crossings below concentrations of designated camping. Tread 18"-26", clear 6' wide, 8' high, actual turn piking limited to 2% of trail length.
VI Front Country	None in HNWA	Heavily marked, detailed interpretive signing	Groomed	None	Very High	Extensive grooming, some paving, bark chips, accessible. This is to be implemented within 500' of wilderness boundary.
VII Horse Trail	None in the HNWA	Marked as Trunk or Secondary	Wide tread, must be rather smooth.	Same as Trunk Trail.	Moderate to High	Same as trunk trail, except use techniques appropriate for horses. Bridges: 6' minimum width with kick rails, nonnative dimensional materials preferred. Tread: 2'-4' wide, clear 8' wide, 10' high.
VIII Ski Trail	Hoffman Notch Trail, Big Pond Trail	Marked High. Special markers, sign at all junctions with hiking trails.	Duff remains. Discourage summer use	Practically none due to hazards.	High	Focus on removal of obstructions, maintenance should be low profile, tread determined by clearing 6' (Should be slightly wider at turns and steep sections. Provide drainage using native materials to protect resource.

APPENDIX 5: CAMPSITE MONITORING FORM

1) Old Site Number: _____ 1a) New Site Number _____

2) Inventoried By: _____ 3) Date: ____/____/____

INVENTORY PARAMETERS

- 4) Substrate of site area: (B=bedrock C=cobble S=sand O=soil) _____
- 5) Number of Other Recreational Sites Visible: _____
- 6) Fire Ring Present: (y or n) _____
 Construction:(stone or metal) _____
 Condition: (1=good, 2=poor, 3=replace) _____
- 7) Privy Present:(y or n) _____
 Condition: (1= good, 2=poor, 3=replace) _____
- 8) Picnic Table Present: (y or n) _____
 Condition: (1=good, 2=poor, 3=replace) _____
- 9) Tree Canopy Cover:(1=0-25%,2=26-50%,3=51-75%,4=76-100%) _____

IMPACT PARAMETERS (Begin with Site Boundary Determination)

- 10) Condition Class: (3,4 or 5) _____
- 11) Vegetative Ground Cover Onsite:(Use categories below) _____
 (1=0-5%, 2=6-25%, 4=51-75% 5=76-95%, 6=96-100%)
- 12) Vegetative Ground Cover Offsite:(Use categories above) _____
- 13) Soil exposure: (use categories above) _____
- 14) Tree Damage: None/Slight_____, Moderate_____, Severe_____
- 15) Root Exposure: None/Slight_____, Moderate_____, Severe_____
- 16) Number of Tree Stumps: _____
- 17) Number of Trails: _____
- 18) Number of Fire Sites: _____
- 19) Litter/Trash: (N=None, S=Some, M=Much) _____
- 20) Human Waste: (N=none, S=Some, M=Much) _____
- 21) Comments/Recommendations: _____

22) Take Center point and Site Photographs:

Site Center point References

- 1)
- 2)
- 3)
- 4)

Satellite Site Dimensions

Appendix 5: Campsite Monitoring Form

Island Site Dimensions

Site area from Program: _____
+Satellite Area _____
-Island Area _____ =
Total Site Area _____ (sq ft)

Transect Data
AzimuthDistance (ft)

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)
- 8)
- 9)
- 10)
- 11)
- 12)
- 13)
- 14)
- 15)
- 16)
- 17)
- 18)
- 19)
- 20)
- 21)
- 22)
- 23)
- 24)
- 25)

MONITORING FORM B

1)Old Site Number: _____ 1a) New Site Number: _____
2)Fire Ring Present: _____ Condition: _____
3) Privy Present: _____ Condition: _____

4) Picnic Table Present: _____ Condition: _____

5) Condition Class (1 or 2) _____ Site Size: _____ (ft²)

DESIGNATED CAMPSITE MONITORING MANUAL

DESCRIPTION OF PROCEDURES

For the purpose of this manual, designated campsites are defined as those areas either designated by the Department with a yellow DEC designated campsite marker, or shown on an area brochure. In areas with multiple sites there may not always be undisturbed areas separating sites, and an arbitrary decision may be necessary to define separate sites. For each site, monitoring begins with an assessment of Condition Class:

CONDITION CLASS DEFINITIONS

Class 1: Recreation site barely distinguishable; slight loss of vegetation cover and/ or minimal disturbance of organic litter.

Class 2: Recreation site obvious; vegetation cover lost and/ or organic litter pulverized in primary use area.

Class 3: Vegetation cover lost and/ or organic litter pulverized on much of the site, some bare soil exposed in primary use areas.

Class 4: Nearly complete or total loss of vegetation cover and organic litter, bare soil widespread.

Class 5: Soil erosion obvious, as indicated by exposed tree roots and rocks and/or gullying.

For sites rated Condition Class 1 or 2, complete Form B; for sites rated Class 3, 4 or 5, complete Form A. Form B is an abbreviated version of Form A and greatly reduces the amount of field time. The rationale for this approach is that detailed information on lightly impacted sites is not as critical to management.

During subsequent surveys an attempt should be made to relocate and reassess all sites from the preceding survey. Former designated sites that have been closed, and are still being used, should be noted as illegal sites. Always note information regarding the history of site use under the comment parameter.

Materials: Compass, peephole or mirror type (not corrected for declination)
 GPS data recorder (GPS point will be taken at each sites center point)
 Tape measure, 100-foot (marked in tenths)
 Flagged wire pins (25 min), one large steel center point stake.
 Digital camera
 Clipboard, pencil, field forms, field procedures
 Steel nails (5 inch)

Form A Procedures

Inventory Parameters

1. Site Number: All sites will be assigned an old site number as well as a new site number. Old site numbers will use the existing site numbering system, while new site numbers will be assigned

- following completion of the mapping of all sites.
2. Inventoried By: List the names of field personnel involved in data collection.
 3. Date: Month, day and year the site was evaluated (e.g., June 12, 1999 = 06/12/99)
 4. Substrate of site area: Record the predominant substrate for the area of human disturbance for each site using the coded categories below.
 - B=bedrock - shelf bedrock
 - C=cobble - includes gravel size stone and up
 - S=sand - includes sandy soils that do not form a surface crust in trampled areas
 - O=soil - includes clays to loamy sands
 5. Number of other sites visible: Record the number of other campsites, which if occupied, would be visible from this site.
 6. Fire ring : if present or not (y or n)
 - a. Construction: stone/masonry or metal
 - b. Condition: good=intact, functional for cookingPoor= missing stones, broken , not functional for cooking but will contain open fire.
 7. Privy: if present or not (y or n)
 - a. Condition: good= functional, has door, wood not deteriorated(would you use it?)Poor=nonfunctional, door missing, wood rotten,
 8. Picnic table: if present or not (y or n)
 - a. Condition: good= usable, no broken boards, table is solidPoor=not usable, broken/rotten boards, not sturdy
 9. Tree canopy cover: Estimate the percentage of tree canopy cover directly over the campsite.
1=0-25%, 2=26-50%, 3=51-75%, 4=76-100%

Impact Parameters

The first step is to establish the sites boundaries and measure its size. The following procedures describe use of the variable radial transect method for determining the sizes of recreational sites. This is accomplished by measuring the lengths of linear transects from a permanently defined center point to the recreation site boundary.

Step 1. Identify Recreation Site Boundaries and Flag Transect Endpoints. Walk the recreation site boundary and place flagged wire pins at locations which, when connected with straight lines, will define a polygon whose area approximates the recreation site area. Use as few pins as necessary, typical sites can be adequately flagged with 10-15 pins. Look both directions along site boundaries as you place the flags and try to balance areas of the site that fall outside the lines with offsite(undisturbed) areas that fall inside the lines. Pins do not have to be placed on the site boundaries, as demonstrated in the diagram following these procedures. Project site boundaries straight across areas where trails enter the site. Identify site boundaries by pronounced changes in vegetation cover, vegetation height/disturbance, vegetation composition, surface organic litter, and topography. Many sites with dense forest over stories will have very little vegetation and it will be necessary to identify boundaries by examining changes in organic litter, i.e. leaves that are untrampled and intact versus leaves that are pulverized or absent. In defining the site boundaries, be careful to include only those areas that appear to have been disturbed from human trampling. Natural factors such as dense shade and flooding can create areas lacking vegetative cover. Do

not include these areas if they appear “natural” to you. When in doubt, it may also be helpful to speculate on which areas typical visitors might use based on factors such as slope or rockiness.

Step 2. Select and Reference Site Center point. Select a site center point that is preferably a) visible from all site boundary pins, b) easily referenced by distinctive permanent features such as larger trees or boulders, and c) approximately 5 feet from a steel fire ring if present. Embed a 5 inch nail in the soil at the center point location so that the head is 3-4 inches below the surface. During future sight assessments a magnetic pin locator can be used to locate the center point. Next, insert a large steel stake at the center point and reference it to at least three features. Try to select reference features in three opposing directions, as this will enable future workers to triangulate the center point location. For each feature, take a compass azimuth reading and measure the distance (nearest 1/10 foot) from the center point to the center of trees or the highest point of boulders. Also measure the approximate diameter of reference trees at 4.5 feet above ground (dbh). Be extremely careful in taking these azimuths and measurements, as they are critical to relocating the center point in the future. Record this information on the back of the form.

Take a digital photograph that clearly shows the center point location in relation to nearby trees or other reference features, such as the fire ring, trees or boulders. Record a photo description, such as “center point location site 23 “, in the photo log.

Options: Some sites may lack the necessary permanent reference features enabling the center point to be accurately relocated. If only one or two permanent reference features are available, use these and take additional photographs from several angles. If permanent features are unavailable, simply proceed with the remaining steps without permanently referencing the center point. This option will introduce more error in comparisons with future measurements, particularly if the site boundaries are not pronounced. Note your actions regarding use of these options in the comment section.

Step 3. Record Transect Azimuths and Lengths. Standing directly over the center point, identify and record the compass bearing (azimuth) of each site boundary pin working in a clockwise direction, starting with the first pin clockwise of north. Be careful not to miss any pins hidden behind vegetation or trees. Be extremely careful in identifying the correct compass bearings to these pins as error in these bearings will bias current and future measurements of site size. Next, anchor the end of your tape to the center point stake, measure and record the length of each transect (nearest 1/10 foot), starting with the same boundary pin and in the same clockwise direction as before. Be absolutely certain that the appropriate pin distances are recorded adjacent to their respective compass bearing.

Step 4. Measure island and satellite areas. Identify any undisturbed islands of vegetation inside the site boundaries (often due to the clumping of trees and shrubs) and disturbed satellite use areas outside the site boundaries (often due to tent sites or cooking sites). Use site boundary definitions for determining the boundaries of these areas. Use the geographic figure method to determine the areas of these islands and satellites (refer to the diagrams following these procedures). This method involves superimposing one or more imaginary geometric figures (rectangles, circles or right triangles) on island or satellite boundaries and measuring appropriate dimensions to calculate their areas. Record the types of figures used and their dimensions on the back of the form; the size of these areas should be computed in the office using a calculator.

Site Remeasurement: During site remeasurement use the data from the last monitoring period to reestablish the center point and all site boundary pins. If steel nails were embedded in the ground, a magnetic pin locator can assist in this process. Place flagged wire pins at each transect boundary point. Boundary locations based on the following procedures:

Appendix 5: Campsite Monitoring Form

- II Keep the same transect length if that length still seems appropriate, i.e., there is no compelling reason to alter the initial boundary determination.

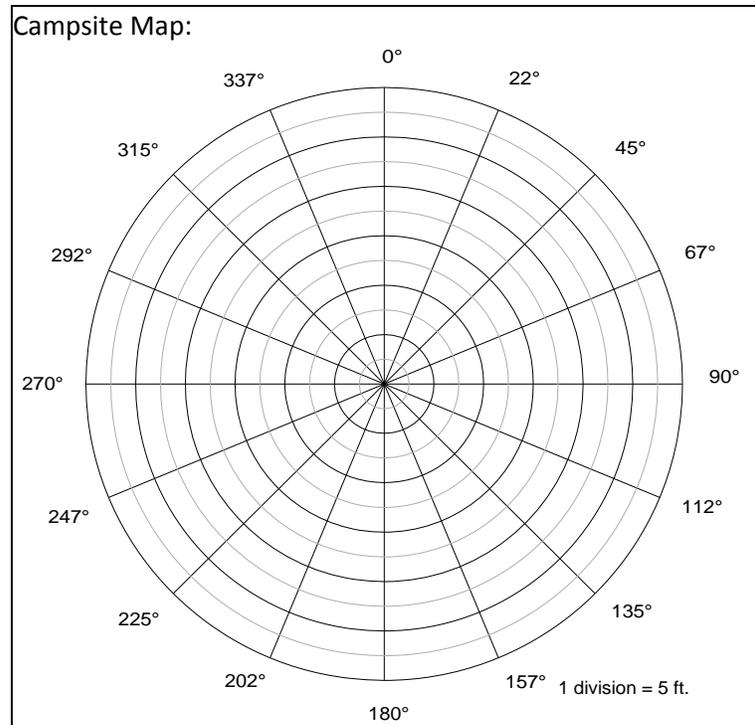
- II Record a new transect length if the prior length is inappropriate, i.e., there is compelling evidence that the present boundary does not coincide with the pin and the pin should be relocated either closer to or further away from the center point along the prescribed compass bearing. Use different colored flags to distinguish these current boundary points from the former boundaries.

- II Repeat steps 1 and 3 from above to establish additional transects where necessary to accommodate any changes in the shape of recreation site boundaries (diagram below). Also repeat step 4.

- II Leave all pins in place until all procedures are completed. Pins identifying the former site boundaries are necessary for tree damage and root exposure assessments.

These additional procedures are designed to eliminate much of the measurement error associated with different individuals making subjective judgements on those sites or portions of sites where boundaries are not pronounced. These procedures may only be used for sites whose center points can be relocated.

Site Number / Site Name													_____ / _____	
Compass Bearing:														
X														
O														



10. Condition class: Record the condition class you assessed for the site using the categories described earlier.

11. Vegetative ground cover on site: An estimate of the percentage of live non-woody vegetative ground cover (including herbs, grasses, and mosses and excluding tree seedlings, saplings, and shrubs) within the flagged campsite boundary using the coded categories listed next. Include any disturbed satellite use areas and exclude any undisturbed Island areas of vegetation. For this and the following two parameters, it is often helpful to narrow your decision to two categories and concentrate on the boundary that separates them. For example, if the vegetation cover is either category 2 (6-25%) or category 3 (26-50%), you can simplify your decision by focusing on whether vegetative cover is greater than 25%.

1=0-5%, 2=6-25%, 3=26-50%, 4=51-75%, 5=76-95%,6=96-100%

12. Vegetative ground cover offsite: An estimate of the percentage of vegetative ground cover in an adjacent but largely undisturbed “control” area. Use the codes and categories listed earlier. The control site should be similar to the campsite in slope, tree canopy cover (amount of sunlight penetrating to the forest floor), and other environmental conditions. The intent is to locate an area that would closely resemble the campsite area had the site never been used. In instances where you cannot decide between two categories, select the category with less vegetative cover. The rationale for this is simply that, all other factors being equal, the first campers would have selected a site with the least amount of vegetation cover.

13. Soil exposure: An estimate of the percentage of soil exposure, defined as ground with very little or no organic litter (partially decomposed leaf, needle, or twig litter) or vegetation cover, within the

campsite boundaries and satellite areas. Dark organic soil, which typically covers lighter colored mineral soil, should be assessed as bare soil. Assessments of soil exposure may be difficult when organic litter becomes highly decomposed and forms a patchwork with areas of bare soil. If patches of organic material are relatively thin and few in number, the entire area should be assessed as bare soil. Otherwise, the patches of organic litter should be mentally combined and excluded from assessments. Code as for vegetative cover.

14. Tree damage: Tally the number of live trees (> 1 in, diameter at 4.5 ft.) Within the campsite boundaries, including trees in undisturbed islands and excluding trees in satellite areas, into one of the rating classes described below. Assessments are restricted to trees within the flagged campsite boundaries in order to ensure consistency with future measurements. Multiple tree stems from the same species that are joined at or above ground level should be counted as one tree when assessing damage to any of its stems. Assess a cut stem on a multiple-stemmed tree as tree damage, not as a stump. Do not count tree stumps as tree damage. Take into account tree size. For example, damage for a small tree would be considerably less in size than damage for a large tree. Omit scars that are clearly not human-caused (e.g., lightning strikes). During site remeasurement, begin by assessing tree damage on all trees within the site boundaries identified in the last measurement period. Tally the number of trees in areas where the boundary has moved closer to the center point, i.e., former site areas that are not currently judged to be part of the site separately. Place a box around this number. Next, assess tree damage in areas where boundaries have moved further from the center point, i.e. expanded site areas that are newly impacted since the last measurement period. Circle these tallies. These additional procedures are necessary in order to accurately analyze changes

None/Slight- No or slight damage such as broken or cut smaller branches, one nail, or a few superficial trunk scars.

Moderate- Numerous small trunk scars and/or nails or one moderate-sized scar.

Severe- Trunk scars numerous with many that are large and have penetrated to the inner wood; any complete girdling of trees (cut through tree bark all the way around tree).

15. Root exposure: Tally the number of live trees (> 1 in, diameter at 4.5 ft.) Within the campsite boundaries, including trees in undisturbed islands and excluding trees in satellite areas, into one of the rating classes described below. Assessments are restricted to trees within the flagged campsite boundaries in order to ensure consistency with future measurements. Where obvious, omit exposed roots that are clearly not human-caused (e.g., stream/river flooding). During site remeasurement, begin by assessing root exposure on all trees within the site boundaries identified in the last measurement period. Tally the number of trees in areas where the boundary has moved closer to the center point, i.e., former site areas that are not currently judged to be part of the site separately. Place a box around this number. Next, assess root exposure in areas where boundaries have moved further from the center point, i.e. expanded site areas that are newly impacted since the last measurement period. Circle these tallies. These additional procedures are necessary in order to accurately analyze changes in root exposure over time.

None/Slight- No or slight root exposure such as is typical in adjacent offsite areas.

Moderate- Top half of many major roots exposed more than one foot from base of tree.

Severe- Three-quarters or more of major roots exposed more than one foot from base of tree; soil erosion obvious.

16. Number of tree stumps: A count of the number of tree stumps (> 1 in. Diameter) within the campsite boundaries. Include trees within undisturbed islands and exclude trees in disturbed satellite areas. Do not include cut stems from a multiple-stemmed tree. During site remeasurement, begin by assessing stumps on all trees within the site boundaries identified in the last measurement period. Tally the number of trees in areas where the boundary has moved closer to the center point, i.e., former site areas that are not currently judged to be part of the site separately. Place a box around this number. Next, assess stumps in areas where boundaries have moved further from the center point, i.e. expanded site areas that are newly impacted since the last measurement period. Circle these tallies. These additional procedures are necessary in order to accurately analyze changes in stumps over time.
17. Number of trails: A count of all trails leading away from the outer campsite boundaries. Do not count extremely faint trails that have untrampled tall herbs present in their tread or trails leading out to any satellite sites.
18. Number of fire sites: A count of each fire site within campsite boundaries, including satellite areas. Include old inactive fire sites as exhibited by blackened rocks, charcoal, or ashes. Do not include areas where ashes or charcoal have been dumped. However, if it is not clear whether or not a fire was built on the site, always count questionable sites that are within site boundaries and exclude those that are outside site boundaries.
19. Litter/trash: Evaluate the amount of litter/trash on the site: n=None or less than a handful, S=some-a handful up to enough to fill a 2-1/2-gallon bucket, M=Much- more than a 2-1/2-gallon bucket.
20. Human waste: Follow all trails connected to the site to conduct a quick search of likely "toilet" areas, typically areas just out of sight of the campsite. Count the number of individual human waste sites, defined as separate locations exhibiting toilet paper and/or human feces. The intent is to identify the extent to which improperly disposed human feces is a problem. Use the following code categories: N=None, S=Some-1-3 sites, M=Much-4 or more sites evident.
21. Comments/Recommendations: An informal list of comments concerning the site: note any assessments you felt were particularly difficult or subjective, problems with monitoring procedures or their application to this particular campsite, or any other comment.
22. Campsite photograph: Select a good vantage point for viewing the entire campsite, preferably one of the site boundary pins, and take a digital picture of the campsite. Note the azimuth and distance from the center point to the photo point and record on the form. The intent is to obtain a photograph that includes as much of the site as possible to provide a photographic record of site condition. The photo will also allow future workers to make a positive identification of the site. Label disks with date, and site number.
23. Total campsite area: Calculate the campsite area based on the recorded transect measurements. Add the area of any satellite sites and subtract the area of any undisturbed islands to obtain the Total Campsite Area. Record campsite area to nearest square foot (ft²).

Appendix 5: Campsite Monitoring Form

Form B Procedures

Refer to the procedures described earlier, all procedures are the same with the exception of campsite size. Measure campsite size using the geometric figure method. Typically, class 1 and 2 campsites are quite small in size and this method should be both efficient and accurate. Be sure to record on form B the types of figures used (rectangle, square, triangles...etc.) And all necessary dimensions. Record campsite area to nearest square foot (ft²).

APPENDIX 6: SEQR REQUIREMENTS

12-12-79 (3/99)-9c

SEQR

**State Environmental Quality Review
NEGATIVE DECLARATION
Notice of Determination of Non-Significance**

Identifying #

Date August 1, 2002

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The NYS Department of Environmental Conservation as lead agency, has determined that the proposed action described below will not have a significant environmental impact and a Draft Environmental Impact Statement will not be prepared.

Name of Action: Adoption and Implementation of the Hoffman Notch Unit Management Plan

SEQR Status: Type 1 X
Unlisted

Conditioned Negative Declaration: Yes
 X No

Description of Action:

Adopt a comprehensive unit management plan addressing the use of and preservation of public lands. Section 816 of the Adirondack Park Agency Act (Executive Law) requires the Department of Environmental Conservation to develop in consultation with the Adirondack Park Agency, individual unit management plans for each unit under its jurisdiction classified in the Adirondack Park State Land Master Plan.

Actions include boundary line marking, new trail construction, trail upgrades and relocations, parking lot improvements, improvement of facilities, search and rescue operations, maintenance of existing facilities, including blowdown removal, erosion control, litter removal, and sign replacement, public information and education and public use controls.

Location: Adirondack Forest Preserve, Towns of Schroon, North Hudson and Minerva, Essex County

Reasons Supporting This Determination:

(See 617.7(c) for requirements of this determination; see 617.7(d) for Conditioned Negative Declaration)

The entire purpose of this unit management plan for the Hoffman Notch Wilderness is to manage this resource as a Wilderness area, pursuant to the management guidelines for Wilderness areas in the Adirondack Park State Land Master Plan (APSLMP). The APSLMP defines a “Wilderness area” as “an area where the earth and its community of life are untrammled by man—where man himself is a visitor who does not remain...an area of state land or water having primeval character, without significant improvement or permanent human habitation, which is protected and managed so as to preserve, enhance and restore, where necessary, its natural conditions...”

This UMP sets forth management goals and objectives to protect, preserve and where necessary restore the Hoffman Notch Wilderness by monitoring and regulating human use of the areas so that user impacts are virtually nonexistent.

Specifically, this plan proposes to maintain, reconstruct and relocate trails to appropriate wilderness standards. These wilderness trail standards emphasize resource protection and visitor safety rather than user convenience or comfort. For example, such trail maintenance will include: drainage (using native materials) only where necessary to minimize erosion, bridges only where necessary to protect the resource. APA will be consulted in any management activities in wetlands and in adjacent to wetlands to determine if an APA wetlands permit is required. The APA wetlands permit process ensures that wetlands will not be negatively impacted as that process requires a site specific assessment of impacts.

All actions undertaken pursuant to the UMP will also incorporate the use of Best Management Practices (BMPs), which are intended to minimize soil erosion and stream siltation.

All tree cutting activities will be in compliance with the Commissioner’s Delegation Memorandum #84-06 on Tree Cutting in the Forest Preserve.

All management actions will comply with the Adirondack Park State Land Master Plan, Department policies, the Environmental Conservation Law, rules and regulations, and guidelines and will be consistent with Article XIV of the New York State Constitution.

Physical disturbances due to construction of trails and parking lots will be minor. Public safety will be enhanced by providing safe-off road parking facilities. It is not anticipated that this project will increase the use of the area measurably, but rather provide safer facilities for current users. Tree cutting will be in compliance with the Commissioner’s Delegation Memorandum on Tree Cutting in the Forest Preserve, #91-2. Trails may be closed during wet seasons if other action to minimize impacts cannot prevent damage.

Trail construction will incorporate the use of best management practices, including, but not limited to the following:

- Locating trails to minimize necessary cut and fill;
- Wherever possible, lay out trails on existing old roads or cleared or partially cleared areas;
- Locating trails away from streams, wetlands, and unstable slopes, wherever possible;
- Use of proper drainage devices such as water bars and broad-based dips, or crowning;
- Locating trails to minimize grade;

Using natural materials to blend the structure into the natural surroundings.

Minimize necessary cut and fill;
Avoid trees, streams, and wetlands.

Trail relocations and extensions will also avoid steep grades and poor soils to avoid erosion. As necessary, proper drainage devices such as water bars and broad-based dips will be employed to reduce potential for erosion. Designated trails will be maintained annually to protect resources and promote visitor safety.

Posting of Signs

The plan proposes posting of various informational signs. Sign posting will have no adverse impacts to the resource given the nonintrusive and minimal nature of this activity.

Location: (Include street address and the name of the municipality/county. A location map of appropriate scale is also recommended.) Forest Preserve, Towns of Schroon, Minerva and North Hudson in the County of Essex.

If Conditioned Negative Declaration, provide on attachment the specific mitigation measures imposed, and identify comment period (not less than 30 days from date of publication in the ENB)

For Further Information:

Contact Person: Ben Thomas
Address: NYSDEC
232 Golf Course Road
Warrensburg NY 12885

Telephone Number: 623-1268

For Type 1 Actions and Conditioned Negative Declarations, a Copy of this Notice is sent to:

Appropriate Regional Office of the Department of Environmental Conservation

Chief Executive Officer, Town/City/Village of Schroon Lake, Minerva and North Hudson

Other involved agencies (if any): Adirondack Park Agency

Applicant (if any)

Environmental Notice Bulletin - NYS DEC - 625 Broadway - Albany, NY 12233-1750 (Type One Actions Only)

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APPENDIX 7: ACRONYMS

ADA	Americans with Disabilities Act
ADAAG	American with Disabilities Act Accessibility Guideline
ALSC	Adirondack Lakes Survey Corporation
ANC	Acid Neutralizing Capacity
APA	Adirondack Park Agency(Agency)
APSLMP	Adirondack Park State Land Master Plan
ATV	All Terrain Vehicle
BP	Before Present
DEC	Department of Environmental Conservation(Department)
ECL	Environmental Conservation Law
EIS	Environmental Impact Statement
NCNST	North Country National Scenic Trail
NYNHP	New York Natural Heritage Program
NBWI	Native-But-Widely-Introduced
HNWA	Hoffman Notch Wilderness Area
HPWA	High Peaks Wilderness Area
HPWC	High Peaks Wilderness Complex
LAC	Limits of Acceptable Change
MSL	Mean Sea Level
OSP	Open Space Plan
ROW	Right Of Ways
SEQRA	State Environmental Quality Review Act
SH	State Highway
TNC	The Nature Conservancy
UMP	Unit Management Plan
VMWF	Vanderwhacker Mountain Wild Forest
WMU	Wildlife Management Unit

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APPENDIX 8: DEFINITIONS/GLOSSARY OF TERMS

Abandoned Town Road - road on which town maintenance has been permanently discontinued. For such roads, ownership of the right-of-way reverts to the surrounding landowners. In contrast, see “Qualified Abandoned Town Road”.

Adirondack Brook Trout Ponds - Adirondack Zone ponds which support and are managed for populations of brook trout, sometimes in company with other salmonid fish species. These waters generally lack warmwater fishes but frequently support bullheads.

Adirondack Forest Preserve - consists of land owned by the State within the 12 Adirondack counties. Essentially all of the 2 ½ million acres of State land within the Adirondack Park is Forest Preserve and is protected by Article 14 of the State Constitution.

Adirondack Park - consists of six million acres of public and private land within a boundary delineated in the Environmental Conservation Law. At the present time, State ownership accounts for some 40 percent of this area.

Adirondack Park State Land Master Plan-A document prepared by the Adirondack Park Agency in consultation with the Department of Environmental Conservation that is designed to guide the preservation, management, and use of all State lands within the Adirondack Park.

Administrative Barrier - A barrier that can be opened to allow travel over the road by State personnel for administrative or emergency purposes. An administrative barrier should consist of a swing barrier constructed of pipe.

Beaver Ponds - Impoundments created by dam building activities of beaver.

Campground - A concentrated, developed camping area with controlled access which is designed to accommodate a significant number of overnight visitors and may incorporate associated day use facilities such as picnicking.

Coldwater Ponds and Lakes - Lakes and ponds which support and are managed for populations of several salmonids. These waters generally lack warmwater fishes but frequently support bullheads.

Controlled Access Barrier - A barrier that can be opened to allow travel over the road by private individuals or organizations who have the legal right of such travel. A controlled access barrier should be of the same design and construction as an administrative barrier.

Cross-Country (Nordic) Ski Trail - A marked and maintained path or way for cross-country ski or snowshoe travel, which has the same dimensions and character and may also serve as a foot trail, designed to provide reasonable access in a manner causing the least effect on the surrounding environment and not constructed, maintained or groomed with the use of motor vehicles.

Endangered Species - Those species of fish, shellfish, crustacea and wildlife designated by the DEC, by order filed with the Secretary of State, as seriously threatened with extinction (Section 11- 0535 ECL).

Fee Acquisition - The Term "fee" applies to the purchase of all rights to property. This differs from

purchasing an easement in which only certain rights are purchased.

Fish Barrier Dam - A man-made device or structure used to prevent the upstream or downstream migration of fish for the purpose of protecting a high-value fishery or population of fish indigenous to the protected body of water.

Fishing and Waterway Access Site - A site for fishing or other water access which provides public access and parking for vehicles which does not contain a ramp for or otherwise permit the launching of trailered boats.

Forage Fishes - Small fishes which serve as food for larger, carnivorous fishes; e.g., rainbow smelt represents a traditional forage fish for landlocked salmon.

Foot Trail - A marked and maintained path or way for foot travel.

Lean-to - An open front shelter made of natural materials suitable for temporary or transient residence.

Motor Vehicle - A device for transporting personnel, supplies or material that uses a motor or an engine of any type for propulsion and has wheels, tracks, skids, skis, air cushion or other contrivance for traveling on, or adjacent to air, land and water or through water.

Multi-Species Waters - Waters which support more than one fish species. The great bulk of Adirondack Zone waters meets this definition.

Native Species Waters - Waters supporting native Adirondack Zone fish species. Example: brook trout, lake trout, round whitefish.

Natural Materials - Construction components drawn from the immediate project site or materials brought into the construction site that conform in size, shape and physical characteristics to those naturally present in the vicinity of the project site. Such materials include stone, logs and sawn and treated timber. Natural materials may be fastened or anchored by use of bolts, nails, spikes or similar means.

Natural Spawning Adequate (N.S.A.) Waters - Brook trout ponds and numerous small, headwater stream sections with mainly slow-growing or stunted brook trout populations which are self-maintained by natural reproduction. Also includes the great majority of warmwater and non-game fish species.

Nonnative Species Waters - Waters supporting introduced, nonnative fish species, such as yellow perch and black bass.

Other Ponds and Lakes - Fishless waters and waters containing fish communities consisting of native and nonnative fishes which will be managed for their intrinsic ecological value.

Permanent Barrier - A barrier that will close a road permanently to all future travel -- public or administrative -- on such road. A permanent barrier should consist of an earth, rock, or ditch (or any combination thereof) barricade of substantial proportions so as to be obvious and require little or non maintenance.

pH Value - Represents the effective concentration of hydrogen ion. The practical pH scale extends from 0

(very acid) to 14 (very alkaline). Waters with pH value below 7 are acid while those above this value are alkaline.

Primitive Tent Site - An undeveloped camping site providing space for not more than three tents, which may have an associated pit privy and fire ring, designed to accommodate a maximum of eight people.

Qualified Abandoned Town Road - The appellation describes roads for which a town decides to suspend maintenance, but does not relinquish ownership of the right-of-way to the surrounding landowners. According to Section 205 of the Highway Law, the town has the right to resume jurisdiction over such roads for any purpose, and the title to such roads remains with the town. In contrast, see "Abandoned Town Road".

Reclamation - A management technique involving the application of a fish toxicant such as "rotenone" to eliminate undesirable fish populations.

Road - An improved way designed for travel by motor vehicles and either, (a) maintained by a State agency or a local government and open to the general public; or (b) maintained by private persons or corporations primarily for private use but which may also be partly or completely open to the general public for all or a segment thereof; or © maintained by the Department of Environmental Conservation and open to the public on a discretionary basis; or (d) maintained by the Department of Environmental Conservation for its administrative use only.

Small Ponds - Ponds of less than one surface acre which are generally considered too small for management purposes or to provide significant angling opportunities.

Small Streams - Streams less than one mile long and less than 0.5 cfs summer flow. Too small to be considered for management purposes.

Special Angling Regulations - Departures from the statewide angling regulations. These are currently expressed as options in the fishing guide. May be more liberal or more restrictive than the statewide regulations.

State Environmental Quality Review - Is a process which requires all levels of State and local government to assess the environmental significance of actions which they have discretion to approve, fund or directly undertake.

Trailhead - A point of entrance to State land which may contain some or all of the following: vehicle parking, trail signs, and visitor registration structures.

Two-Story Ponds and Lakes - Waters which simultaneously support and are managed for populations of coldwater and warmwater game fishes. The bulk of the lake trout and rainbow trout resource fall within this class of waters.

Unit Management Plan - a document that identifies the natural resources, man-made facilities, public use, and past management within a described geographic unit of State land. The plan covers all aspects of the environment and is the basis for all future activities on State lands for a period of five years.

Unknown Ponds and Lakes - Waters which could not be assigned to the subprogram categories specifically

Appendix 8: Definitions/Glossary of Terms

addressed in this document due to a lack of or paucity of survey information. These waters usually contain native and nonnative non-game fishes which will be managed for their intrinsic ecological value without any new species introductions.

Warmwater Ponds and Lakes - Waters which support and are managed for populations of warmwater game fishes and lack significant populations of salmonid fishes.

APPENDIX 9: Interagency Guidelines for Implementing Best Management Practices for the Control of Terrestrial and Aquatic Invasive Species on Forest Preserve Lands in the Adirondack Park

2010

Prepared By
NYS Department of Environmental Conservation
and the
Adirondack Park Agency

I. Introduction

The negative impacts of invasive species on natural forest and aquatic communities are well documented (Appendix F). Colonization and unrestrained growth of invasive species cause the loss of biodiversity, interruption of normal hydrology, suppression of native vegetation, and significant aesthetic, human safety and economic impacts. Terrestrial and aquatic invasive species have been identified at increasing rates of colonization along roadsides in campgrounds, and in water bodies of the Forest Preserve within the past 10 years. Some of these species have the potential to colonize backcountry lands, lakes and ponds and degrade natural resources of the Forest Preserve.

These guidelines apply to Adirondack Forest Preserve lands, which are protected by Article XIV, Section 1 of the New York State Constitution. This Constitutional provision, which became effective on January 1, 1895 provides in relevant part:

“The lands of the state, now owned or hereafter acquired, constituting the Forest Preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, or shall the timber thereon be sold, removed or destroyed.”

The New York State Department of Environmental Conservation (DEC or Department) has jurisdiction over the Forest Preserve, and its management of these lands must be in keeping with this Constitutional provision.

Furthermore, DEC’s management of the Adirondack Forest Preserve is governed by the Adirondack Park State Land Master Plan (Master Plan), which was initially adopted in 1972 by the Adirondack Park Agency (Agency or APA), with advice from and in consultation with the Department, pursuant to Executive Law §807 (recodified as Executive Law §816). The Master Plan provides the overall general framework for the development and management of State lands in the Adirondack Park. The Master Plan sets forth the following classifications for State land within the Adirondack Park: Wilderness, Primitive, Canoe, Wild Forest, Intensive Use, Historic, State Administrative, Wild, Scenic and Recreational Rivers, and Travel Corridors, and sets forth management guidelines for each of these major land classifications.

Executive Law §816 requires the Department to develop, in consultation with the Agency, individual unit management plans (UMPs) for each unit of land under the Department's jurisdiction which is classified in one of the nine classifications set forth in the Master Plan. The UMPs must conform to the guidelines and criteria set forth in the Master Plan. Thus, UMPs implement and apply the Master Plan's general guidelines for particular classifications of State Land within the Adirondack Park.

Executive Law §816(1) provides in part that "(u)ntil amended, the master plan for management of state lands and the individual management plans shall guide the development and management of state lands in the Adirondack Park.

Article XIV, Section 1 of the New York State Constitution does not specifically address the issue of invasive species. However, since Article XIV directs that Forest Preserve lands be "forever kept as wild forest lands" and prohibits the removal or destruction of timber, care must be taken to ensure that decisions to eradicate invasive species do not result in a material cutting of Forest Preserve timber or adversely impact the wild forest character of Forest Preserve lands.

Although there are no explicit references to active invasive species management on Forest Preserve lands in the Master Plan, the Master Plan provisions are consistent with the concept of actively managing invasive species to protect the "wild forest" character of the Forest Preserve. For instance, page 1 of the Master Plan (2001 Update) states that, "If there is a unifying theme to the Master Plan, it is that the *protection and preservation* of the natural resources of the state lands within the Park must be paramount" (emphasis added). Surveys of Forest Preserve lands document the continued importation and expansion of invasive plants into and throughout the Adirondack Park (see Section II below). Given that models indicate that eradication of an invasive species becomes progressively more difficult, more expensive, and less effective the longer the species is allowed to grow without intervention (Chippendale 1991; Hobbs and Humphries 1995), it is critical for the Department and APA to address this problem in an expeditious manner.

The goal of these guidelines is to establish parameters known as best management practices (BMPs) for the control of terrestrial and aquatic invasive species while ensuring that such management activities do not alter the "forever wild" character of Forest Preserve lands. These guidelines are intended to harmonize the Constitution's "forever wild" provisions with the Master Plan's overriding directive to manage forest preserve lands for their protection and preservation. They have been developed pursuant to, and are consistent with, relevant provisions of the New York State Constitution, the Environmental Conservation Law (ECL), the Executive Law, the State Environmental Quality and Review Act (SEQRA), the Master Plan, and all other applicable rules and regulations, policies and procedures.

It is also important to determine if any regulatory jurisdictions or permits are triggered by a proposed management activity. For example, any management activities that may involve wetlands on private or public lands may require a permit from APA.

II. Present Extent of Terrestrial and Aquatic Invasive Species on Forest Preserve Lands

An inventory of invasive species that are present and a measure of the extent of the invasive species populations is essential to determining the correct course of action. The Department conducts ongoing regular, systematic surveys to identify and quantify the extent of terrestrial and aquatic invasive species on Forest Preserve units in the Adirondack Park. The results of this continued survey have been included in Appendix E of these Guidelines and documented in UMPs. Appendix E and UMPs should be updated at the

end of each calendar year to reflect the survey data from the previous growing season. DEC will present an annual report on the survey data from the previous growing season. The tabular information will include Forest Preserve land unit name, species name, total number of populations and area affected, and other pertinent information as identified by the Office of Invasive Species Coordination (OISC). Detailed location and population information shall be provided to the Regional Land Manager for each Region and be included in the iMap Invasive Species Database.

The Department shall seek to develop and foster a relationship with private landowners adjacent to or connecting Forest Preserve land units to share information regarding existing and potential invasive species populations or threats.

III. BMPs for the Control of Terrestrial and Aquatic Invasive Species and Procedure for Implementation

The general parameters or BMPs for the control of invasive species that apply regardless of the targeted species are set forth below. Specific control methods for select terrestrial and aquatic invasive species are attached as Appendix B. These BMPs will be implemented through site specific work plans with corresponding SEQRA compliance, which must be approved by the Department's Central Office Bureau of Forest Preserve. Adopt-A-Natural Resource (AANR) Agreements with outside parties to conduct invasive species management must incorporate site specific work plans with corresponding SEQRA compliance. It is anticipated that if the proposed activities conform to these guidelines, they will be consistent with constitutional directives and authorized pursuant to the APA/DEC MOU, and will not require approval through the UMP process. However, if the Department determines during its review of a proposed site specific work plan that proposed management activities may potentially have a material effect on the character or use of the land or the vegetation thereon, DEC and APA staff will then consult to determine if the activity should be reviewed and approved as part of an individual UMP or UMP Amendment. Furthermore, application of these guidelines to all such management activities on Forest Preserve lands throughout the Adirondack Park will ensure that cumulative impacts will be avoided due to the fact that the BMPs being implemented through these guidelines avoid and mitigate impacts to native ecological communities.

The following BMPs apply to the control and management of invasive species.

1. Prevent the introduction of invasive plants and animals to uninfested sites.

Invasive species can be introduced to a site by moving infested equipment, sand, gravel, borrow, fill and other off-site material. Monitoring disturbed areas and proper sanitation of equipment will help prevent new infestations. BMPs to prevent the introduction of invasive species include:

- Clean all clothing, boots, and equipment prior to visiting site.
- Begin activities in uninfested areas before operating in infested areas.
- Use native plants and weed-free seed and mulch (straw, wood fiber).
- Use fill that does not have invasive plant seeds or material.
- Keep equipment on site during the entire project.
- Incorporate invasive plant prevention into road work layout, design, and decisions. Use uninfested areas for staging, parking and cleaning equipment. Avoid or minimize all types of travel through infested areas, or restrict to those periods when spread of seed or propagules are least likely.
- When possible, to suppress growth of invasive plants and prevent their establishment, retain relatively closed canopies.

2. Contain and treat new invasive plants and animals or those not yet well established.

Controlling small infestations is more effective and economical than trying to control well-established, rapidly spreading infestations. Selected control measures need to be based on species biology and the individual characteristics of an infestation.

3. Minimize transport of invasive plants and animals from infested to uninfested areas.

Invasive species can be spread by moving infested materials and equipment. Cleaning vehicles and equipment (usually with steam or hot water) is the most effective method of preventing an introduction. BMPs involving the transport of off-site material and equipment include:

- Determine the need and identify sites where equipment can be cleaned. Seeds and plant parts need to be collected when practical and effectively disposed of (e.g., burned, dried, bagged and taken to landfill, etc.). Remove mud, dirt, and plant parts from project equipment before moving it into a project area and clean all equipment before leaving the project site, if operating in infested areas.
- Check, clean, and, when appropriate, dry all clothing, boots, and equipment (e.g., boats, trailers, nets, etc.) prior to visiting site.
- Don't move firewood. All cut tree material should be either chipped or dispersed onsite.
- Inspect material sources at site of origin to ensure that they are free of invasive plant material before use and transport. Treat infested sources for eradication, and strip and stockpile contaminated material before any use.
- Inspect and document the area where material from treated infested sources is used annually for at least three years after project completion to ensure that any invasive plants transported to the site are promptly detected and controlled.
- Minimize roadside sources of seed that could be transported to other areas.
- Periodically inspect roads and rights-of-way for invasion. Inventory and mark infestations and schedule them for treatment.
- Avoid working in infested areas if possible. Postpone such work until invasive plants have been eliminated from the site.
- Perform road maintenance such as road grading, brushing, and ditch cleaning from uninfested to infested areas to help prevent moving seeds and plant material from infested areas into adjacent uninfested areas.
- Clean road graders and other equipment immediately after operating in infested areas.
- Clean all dirt and plant parts from the top and underside of mower decks.

4. Minimize soil disturbance.

Invasive plants prefer and often thrive under disturbed conditions. Do not disturb the soil unless absolutely necessary. BMPs for activities involving soil disturbance include:

- Before starting ground-disturbing activities, inventory invasive plant infestations both on-site and in the adjacent area.
- Minimize soil disturbance and retain desirable vegetation in and around area to the maximum extent possible.
- Monitor infested areas for at least three growing seasons following completion of activities. Provide for follow-up treatments based on inspection results.
- Do not blade roads or pull ditches where new invaders are found, if possible.
- When it is necessary to conduct soil work in infested roadsides or ditches, schedule activity when seeds or propagules are least likely to be viable and to be spread.
- Do not move soil from infested area to prevent off-site spread.

5. **Maintain desirable species.**

Establishing and maintaining competitive, desirable plants along roadsides and disturbed areas prevents or slows establishment of invasive plants. BMPs for re-vegetating disturbed areas include:

- Re-vegetate all disturbed soil, except on surfaced roads, in a manner that optimizes plant establishment for that specific site, unless ongoing disturbance at the site will prevent establishment of invasive plants.
- Use native material where appropriate and available. Re-vegetation may include planting, seeding, fertilizing, and mulching.
- Monitor and evaluate success of re-vegetation in relation to project plan.
- When re-vegetating areas that were previously dominated by invasive plants, try to achieve at least 90% control of the invasive before attempting restoration.

IV. General Practices

1. **Minimum Tool Approach** – State land stewardship involving invasive species management practices should always incorporate the principles of the Minimum Tool Approach. Any group or individual implementing such practices on State land should only use the minimum tools, equipment, devices, force, actions or practices that will effectively reach the desired management goals. Implicit in this document is the stricture to implement a hierarchy of management practices based upon the target species and site conditions starting with the least intrusive and disruptive methods. For the management of aquatic invasive species, hand harvesting and benthic matting are to be used unless a different approach has been reviewed and approved by the Department and the Agency.
2. **Erosion Control** - Some of the species specific methods described in Appendix B require digging or pulling of plants from the soil. Where vegetation is to be removed, it must be determined if the proposed control method and extent of the action will destabilize soils to the point where erosion is threatened. Generally if more than 25 square feet of soil surface is cleared or plant removal occurs on steep slopes, staked silt fencing should be installed and maintained as a temporary erosion control practice. In some cases seeding and organic, non-hay mulching may be required.
3. **Re-vegetation** - Although not required, replanting or reseeding with native species may sometimes be necessary. All of the species specific control methods described in Appendix B are aimed at reducing or eliminating invasive species so that natives are encouraged to grow and re-establish stable conditions that are not conducive to invasive colonization. In most cases, removal or reduction of invasive populations will be enough to release native species and re-establish their dominance on a site. The site specific work plan for treatment of invasive species should include monitoring provisions and contingency plans for revegetating the site.
4. **Composting** - Because of the extremely robust nature of invasive species, composting terrestrial invasive plants in a typical backyard compost pile or composting bin is not appropriate. However, methods can be used whereby sun-generated heat can be used to destroy the harvested plant materials, such as storage in a sealed 3 mil thickness (minimum) black plastic garbage bags on blacktop in the sun until the plant materials liquefy. If a larger section of blacktop is available, make a black plastic (4 mil thickness minimum) envelope sealed on the edges with sand bags. The plant material left exposed to the sun will liquefy in the sealed envelope without danger of dispersal by wind. The bags or envelopes must be monitored to make sure the plants do not escape through rips, tears or seams in the plastic. **When composting is suggested later in the text it is understood**

that liquefying the plant material in or under plastic is the desired action; not disposal in backyard composters or open landfill composting piles.

5. **Material Collection and Transportation** – While on the control site, place all cut plant material in heavy duty, 3 mil or thicker, black contractor quality plastic clean-up bags. Securely tie the bags and transport from the site in a covered vehicle in order to prevent spread or loss of the plant material during transport from the control work site to the appropriate staging or disposal location. The main root structure, root fragments and/or horizontal rhizomes from harvested controlled Japanese, giant or bohemian knotweed infestation should be bagged only to facilitate transport to an appropriate staging area. All knotweed root structure, root fragments and rhizome propagules should be separately bagged from any cut, aerial canes and crowns. Over an open bag, remove as much adherent soil as possible from the root/rhizome structure prior to spreading the root/rhizome parts out onto a secure, impervious surface. Once completely dried out, the root/rhizome structure may be burned or disposed of in an approved landfill.

The mature, upright stems and canes of common reed and the knotweeds can be cut, formed into bundles and securely bound with rope or twine. The bundles may then be transported to an appropriate staging or disposal location that has an impervious or near-impervious surfaced area. After the bundles have completely dried out they may be burned at an approved incinerator or burn pit with an appropriate permit.

V. Management Protocols

- a. All Department personnel whose duties involve outdoor field work on State land (e.g., UMP Planners and State Land Managers, Forest Rangers, ECOs, Operations, etc.) will report the location of suspected terrestrial and aquatic invasive species encountered during the course of their ordinary work and to implement BMPs when conducting or supervising work to remove invasive species from State land. Terrestrial and aquatic invasive species identification and management training will be provided as needed.
- b. All site specific work plans must include a site map, an inventory of target and non-target species, an estimate of the size and age of the infestation, target species impacts and concerns, a Natural Heritage review, adjoining land uses and nearby State land units, a proposed treatment method and probability of success, treatment impacts and concerns, an assessment of treatment alternatives, a history of past treatment methods used on site, a timeframe by which the work will be undertaken and completed, a schedule of anticipated future work, and monitoring provisions to determine the effectiveness of the management action.
- c. All work on State land will be conducted using the BMPs and species specific control methods listed in Appendix B, pursuant to the DEC – APA Memorandum of Understanding.
- d. Any individual or group demonstrating an interest and appropriate expertise in implementing the species specific control methods may apply for an AANR agreement to manage terrestrial and aquatic invasive species.
- e. The treatment of invasive species by Department personnel or any other party will only be undertaken pursuant to a site specific plan for the treatment of invasive species and pursuant to all applicable State, federal and local regulations regarding pesticide use, residue removal and disposal.

- f. An AANR and a site specific work plan for treatment of invasive species are required for all non-Department personnel to implement species specific control methods and BMPs on State land.
- g. All site specific work plans and applications for AANRs for the treatment of invasive species will be noticed in the Environmental Notice Bulletin for a 15 day public comment period prior to final approval by the Department.
- h. Appropriate certification (NYS pesticide applicator certification) is required for pesticide applications. The only pesticide application allowed under these guidelines is spot treatment to individual plants using a back pack or hand sprayer, wick applicator, cloth glove applicator, stem injection or herbicide clippers. **No broadcast herbicide applications using, for example, a truck-mounted sprayer, are allowed. In all cases, all herbicide directions for use and restrictions found on the label shall be followed by a New York State Certified Applicator or Technician in an appropriate category.** The application methods described and allowed are designed to reduce or eliminate the possibility that non-target species will be impacted by the pesticide use. All pesticide treatments require follow-up inspection later in the growing season and/or the following year to assess and document effects and possibly re-treat any plants that were missed. The following guidelines apply with respect to the application of herbicides, which must be applied according to respective labels under federal and state law:
- In wetlands with standing water, only the RODEO® glyphosate formulation may be used. If the standing water is greater than one acre in size and/or has an outlet to surface waters, an aquatic pesticides permit is required pursuant to ECL 15-0313(4) and (6) NYCRR327.1 in which case application can only be made by a Certified Applicator or Technician or supervised Apprentice licensed in “Category 5 – Aquatic Vegetation Control”. In wetlands with no standing water, either the RODEO®, ROUNDUP® or the AQUAMASTER® formulation may be used.
 - In uplands either ROUNDUP®, AQUAMASTER® or GLYPRO® may be used.
 - The propose use of herbicides must be detailed in a work plan.
- i. All appropriate and applicable signage and public notification required for pesticide application by or on behalf of the Department shall be used, including adjacent landowner notification, newspaper notice, and temporary on and off-site signs.
- j. These Guidelines do not authorize the use of motor vehicles, motorized equipment or aircraft. All use of motorized equipment on State lands under the jurisdiction of the Department within the Adirondack Park shall be in compliance with Commissioner’s Policy Number 17 (CP-17), and other pertinent Department policy regarding the use of motorized equipment on Forest Preserve Lands.
- k. A UMP or UMP Amendment may be required if the proposed implementation of an activity identified in these Guidelines is considered to cause a potential material change to the use of the land or the vegetation thereon due to its extent, intensity or duration.
- l. Invasive species management materials and methods evolve; any deviation from the BMPs and species specific control methods must be approved by the Department after consultation with the Agency.

- m. Any invasive species management action proposal that involves tree cutting for control or access must comply with constitutional requirements and will be carried out pursuant to LF-91 and a site specific work plan.
- n. Appendix A of these Guidelines contains a list of species that are considered terrestrial or aquatic invasive species. Other species may be added over time recognizing the constant threat of new invasive species. Note that to be eligible for management actions under these Guidelines, species specific control methods must be accepted by the Department after consultation with the Agency. New or revised control methods may be developed by other entities, but also must be reviewed and accepted by the Department after consultation with the Agency.
- o. Those individuals or groups applying for an AANR to manage any invasive species without an approved species specific control method must develop and submit a control method for the species of concern. The submitted control methods will be reviewed and must be approved by the Department and the Agency before the approval of a site specific work plan or issuance of the AANR agreement. Those individuals or groups applying for an AANR to manage aquatic plants identified in Appendix A are limited to hand-harvesting or benthic matting as described in a site specific work plan describing the full course of work.

VI. Potential Environmental Impacts

The control methods and BMPs contained in these Guidelines restrict the use of herbicides so that adverse impacts to non-target species are avoided and native plant communities are restored. Aquatic invasive species will be managed using non-mechanical harvesting techniques (hand-pulling) and temporary benthic matting as described in the Guidelines. Use of pesticides for aquatics is not a part of this guidance.

The removal of these species reduces the potential for disruption and harm to the native ecosystem. It is expected that by using the Guidelines invasive species populations will be managed, and hopefully eradicated, in a timely manner before significant impact to the Forest Preserve resource occurs. Successful implementation of these control methods and BMPs or other recommended control methods will allow natural processes to take place undisturbed by the impacts of invasive species colonization and proliferation.

Any of the control actions described in the Guidelines has the potential for environmental impact. For example, the use of pesticides may cause mortality to non-target species and cutting tress may have both visual and ecological impacts on the landscape. It is recognized that although the BMPs and species specific control methods seek to mitigate these impacts, the potential for impact is real and must carefully be weighed against all other possible actions, including the no-action alternative. It is believed that the protection, preservation, and restoration of native flora and fauna in the Adirondacks is an action that is worth reasonable associated risk. These Guidelines represent a tool for land managers to reduce the potential for disruption and harm to Forest Preserve lands from terrestrial and aquatic invasive species. It is expected that these actions will lead to the preservation and restoration of native ecological communities on State lands within the Adirondack Park.

VII. Effect of This Action

The Guidelines seek to lay the ground rules for managing terrestrial and aquatic invasive species on Forest Preserve lands. It identifies certain species that, if left untreated, have the potential for colonizing backcountry land and water bodies causing severe disruption and degradation of natural systems. The

Guidelines set out a protocol for action and recommend a set of comprehensive BMPs and specific control methods for dealing with invasive species of concern, and sets out a process for developing and incorporating new control methods for additional species. The control methods provide detailed guidance on the use of several techniques for managing terrestrial and aquatic invasive species including hand pulling, cutting, digging, matting and pesticides. Finally, the Guidelines identify a host of additional terrestrial and aquatic invasive species that require surveillance, early detection and, after appropriate consultation with the Regional Supervisor of Natural Resources a rapid response to protect Forest Preserve lands.

Adoption of the Guidelines and implementation through the UMP and site specific work planning process, gives the Department the basic tools needed to preserve, protect and restore the natural native ecosystems of the Forest Preserve.

VIII. Definitions

- a. AANR – An Adopt-A-Natural-Resource Agreement is a stewardship agreement entered into between the Department and an individual or group pursuant to ECL section 9-0113 to preserve, maintain, or enhance state-owned resources. AANRs entered into pursuant to these Guidelines allow the implementation of these Guidelines and specify the responsibilities and limitations associated with the management activity. AANRs extend for a designated period of time and can be terminated by either party upon notification.
- b. Adirondack Park Invasive Plant Program (APIPP) – A partnership including the Department, the Agency, Department of Transportation, and the Adirondack Nature Conservancy whose goals are:
 1. to coordinate a regional early detection and monitoring program in cooperation with staff, volunteers and the public;
 2. to facilitate invasive species management and control with public and private landowners; and,
 3. to increase public awareness and involvement to prevent the spread of invasive species through education and outreach.
- c. Agency – The New York State Adirondack Park Agency (APA), its officers and employees.
- d. Aquatic Invasive Plant Species – A plant that is typically found in wetland or riparian settings (including lakes, ponds, rivers or streams) that is capable of rapid reproduction and displacement of native species.
- e. Area – Lands under the jurisdiction of the Department.
- f. Best Management Practice (BMP) – Best management practices are state-of-the-art mitigation measures applied on a site specific basis to reduce, prevent, or avoid adverse environmental or social impacts.
- g. Biological Control – A method of controlling pests (including insects, mites, weeds and plant diseases) that relies on predation, parasitism, herbivory, or other natural mechanisms. It can be an important component of integrated pest management (IPM) programs.

- h. Certified Applicator – An individual who has successfully completed the course of training and licensing and who holds a valid, appropriate pesticide applicators certificate in New York State.
- i. Control Method – A field tested recommendation for the most effective control of invasive species. Species specific control methods for terrestrial invasive species are attached in Appendix B. As of this writing, only hand harvesting and/or benthic matting are approved control methods for aquatic invasive species.
- j. Department – The New York State Department of Environmental Conservation (DEC), its officers and employees.
- k. Herbicide – A pesticide that is registered in New York State that kills plants. Due to the sensitive nature of Forest Preserve lands, only selected herbicides are included for use under these Guidelines. Glyphosate in the Roundup®, Rodeo®, Aquamaster®, and Glypro® formulations are the herbicides of choice. In wetlands with standing water only the RODEO® formulation may be used. In wetlands with no standing water either the RODEO®, ROUNDUP® or the AQUAMASTER® formulation may be used. In uplands either ROUNDUP®, AQUAMASTER® or GLYPRO® may be used. In all cases herbicides will be used in strict compliance with label precautions and the species specific control methods found in Appendix B.
- l. Herbicide Application Method – The method of herbicide application will be by backpack sprayer, wick applicator, handheld spray or dropper bottle applicator, stem injection, or cloth glove applicator. No application will be allowed by broadcast sprays or by equipment permanently mounted on a vehicle.
- m. Inter-Agency Guidelines (“Guidelines”) – The document agreed to by the Adirondack Park Agency and the Department of Environmental Conservation that outlines regulated management of terrestrial and aquatic invasive species on State land.
- n. Invasive Species – “invasive species” means a species that is:
 - (a) nonnative to the ecosystem under consideration; and
 - (b) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. For the purposes of this paragraph, the harm must significantly outweigh any benefits.
- o. Pest – “Pest” means (1) any insect, rodent, fungus, weed, or (2) any other form of terrestrial or aquatic plant or animal life or virus, bacteria or other micro-organism (except viruses, bacteria or other micro-organisms on or in living man or other animals) which the Department Commissioner declares to be a pest.
- p. Pesticide – Any substance or mixture of substances that is registered in New York State to kill pests. A pesticide may be a chemical substance, biological agent (such as a virus or bacterium), antimicrobial, disinfectant, plant regulator, defoliant, or other device used against a pest.

- q. Site Specific Work Plan – A detailed description of work to be performed at a specific site, the Best Management Practices that will be used to perform the work and the desired final condition of the site once the work is complete.
- r. Terrestrial Invasive Plant Species – A plant that is typically found in upland settings that is capable of rapid reproduction and displacement of native species.

IX. Goal of the Guidelines

The goal of the Guidelines is to restore and protect the native ecological communities on Forest Preserve lands in the Adirondack Park through early detection and rapid response efforts to eradicate or control existing or newly identified invasive species populations.

X. Objectives of the Guidelines

These Guidelines provide a template for the process through which comprehensive active terrestrial and aquatic invasive species management will take place on Forest Preserve lands in the Adirondack Park. The Guidelines provide protocols for implementing BMPs on Forest Preserve land. The protocols describe what management practices are allowed and when they can be implemented, who can be authorized to implement the management practices, and which terrestrial and aquatic invasive species are targeted. The Guidelines are a living document and should be revisited and revised periodically to reflect the dynamic nature of invasive species and the state of knowledge of best management practices.

Reference to these Guidelines will be included in UMPs as they are drafted or revised. UMPs will also include available inventory information on the distribution of invasive terrestrial and aquatic species on or in close proximity to the Unit. The Guidelines will guide invasive terrestrial and aquatic species management activities on Forest Preserve units. The site specific plan for treatment of invasive species will contain up-to-date invasive species inventory data, specific location information, and specific management recommendations for each species on each site including control actions, materials and methods, monitoring, contingencies and restoration actions.

The Guidelines also describe a process by which the Department may enter into AANR Agreements with and facilitate individuals or groups to manage terrestrial and aquatic invasive species on Forest Preserve lands using the listed best management practices, including pesticide use, in the appropriate circumstances. The AANR will be accompanied with a site specific plan for treatment of invasive species based on the BMPs in the Guidelines and include provision for monitoring and additional actions to restore natural communities. As noted above, the site specific plan for treatment of invasive species will provide the detail regarding the selected management options on a site specific basis.

XI. Responsibilities

The responsibility for interpretation and update of these Guidelines and overall management shall reside with the cooperating agencies. The Department shall be responsible for management of terrestrial and aquatic invasive species on Forest Preserve lands while the Agency will be responsible for providing review of, and advice on, the management activities contained in the Guidelines and the assessment of materiality of proposed actions and the management recommendations in UMPs.

Appendix A. Invasive Species

The 92 species included here are non-native organisms that either occur in New York State or are found in adjacent states. They have a proven record of being invasive and disrupting native ecosystems. Asterisked species have recommended control methods that are included in Appendix B. This appendix should be reviewed and updated annually.

Trees

- Black locust (*Robinia pseudoacacia*)
- Norway and sycamore-leaved maple (*Acer platanoides*, *A. pseudoplatanus*)
- Tree-of-Heaven (*Ailanthus altissima*)
- Japanese tree lilac (*Syringa reticulata*)
- Princess tree (*Paulownia tomentosa*)
- Crack willow (*Salix fragilis*)
- European gray willow (*Salix cinerea*)

Shrubs

- Japanese, Morrow's, tatarian, Amur, Bell's and dwarf honeysuckles* (*Lonicera japonica*, *L. morrowii*, *L. tatarica*, *L. maackii*, *L. x. bella*, *L. xylosteum*)
- Autumn and Russian olive (*Eleagnus umbellata*, *E. angustifolia*)
- Cherry eleagnus (*Eleagnus multiflora*)
- Common and smooth buckthorn (*Rhamnus cathartica*, *R. frangula*)
- False Spiraea (*Sorbaria sorbifolia*)
- Multiflora and rugosa rose (*Rosa multiflora*, *R. rugosa*)
- Japanese and European barberry (*Berberis thunbergii*, *B. vulgare*)
- False indigo (*Amorpha fruticosa*)
- Winged euonymus (*Euonymus alata*)
- Butterfly bush (*Buddleja davidii*)
- Blunt-leaved and common privet (*Ligustrum obtusifolium*, *L. vulgare*)

Vines

- Oriental bittersweet (*Celastrus orbiculata*)
- Porcelain-berry (*Ampelopsis brevipedunculata*)
- Mile-a-minute vine (*Polygonum perfoliatum*)
- Kudzu (*Pueraria montana* var. *lobata*)
- Common periwinkle (*Vinca minor*)

Herbs

- Purple loosestrife* (*Lythrum salicaria*)
- Japanese, giant and bohemian knotweed* (*Fallopia japonica* var. *japonica*, *F. sachalinensis*, *F. x bohemica*)
- Common reed* (*Phragmites australis* ssp. *australis*)
- Garlic mustard* (*Alliaria petiolata*)
- Yellow iris* (*Iris pseudacorus*)
- Cypress and leafy spurge (*Euphorbia cyparissias*, *E. esula*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- White and yellow sweet-clover (*Melilotus alba*, *M. officinalis*)

- Wild parsnip (*Pastinaca sativa*)
- Wild chervil (*Anthriscus sylvestris*)
- Reed canary-grass (*Phalaris arundinacea*)
- Black and Pale Swallowwort (*Cynanchum louiseae*, *C. rossicum*)
- Cup Plant (*Silphium perfoliatum*)
- Japanese stiltgrass (*Microstegium vimineum*)
- Flowering rush (*Butomus umbellatus*)
- Spotted and brown knapweed (*Centaurea stoebe ssp. micranthos*, *C. jacea*)
- Canada and bull thistle (*Cirsium arvense*, *C. vulgare*)
- Goutweed (*Aegopodium podagraria*)
- Lesser celandine (*Ranunculus ficaria*)
- Common and yellow foxglove (*Digitalis purpurea*, *D. grandiflora*)

Aquatics

- Eurasian and variable-leaf watermilfoil, and parrotfeather (*Myriophyllum spicatum*, *M. heterophyllum*, *M. aquaticum*)
- Fanwort (*Cabomba caroliniana*)
- Curlyleaf pondweed (*Potamogetion crispus*)
- Waterchestnut (*Trapa natans*)
- Common frog-bit (*Hydrocharis morsus-ranae*)
- Yellow floating-heart (*Nymphoides peltata*)
- Brazilian elodea (*Egeria densa*)
- Hydrilla (*Hydrilla verticillata*)
- Brittle naiad (*Najas minor*)
- Water-lettuce (*Pistia stratiotes*)
- Pacific mosquitofern (*Azolla filliculoides*)
- Didymo (*Didymosphenia geminata*)
- Starry stonewort (*Eichhornia crassipes*)
- Water hyacinth (*Pistia stratiotes*)
- Water primrose (*Ludwigia peploides*)
- Pond water starwort (*Callitriche stagnalis*)
- Three-stamen waterwort (*Elatine triandra*)
- European water fern (*Marsilea quadrifolia*)
- Water spangles (*Salvinia minima*)
- Giant salvinia (*Salvinia molesta*)
- Water soldier (*Stratiotes aloides*)

Insects

- Emerald ash borer (*Agrilus planipennis*)
- Asian long-horned beetle (*Anaplophora glabripennis*)
- Hemlock wooly adelgid (*Adelges tsugae*)
- Sirex woodwasp (*Sirex noctilio*)
- Asian gypsy moth (*Lymantria dispar*)
- Balsam wooly adelgid (*Adelges piceae*)
- Elongate hemlock scale (*Fiorinia externa*)

Appendix B. Species Specific Control Methods

CONTROL METHODS FOR PURPLE LOOSESTRIFE (*Lythrum salicaria*)

PLANT DESCRIPTION

Purple loosestrife is a wetland perennial native to Eurasia that forms large, monotypic stands throughout the temperate regions of the U.S. and Canada. It has a vigorous rootstock that serves as a storage organ, providing resources for growth in spring and re-growth if the plant has been damaged from cuttings. New stems emerge from the perennial roots enabling the plant to establish dense stands within a few years. Seedling densities can approach 10,000 - 20,000 plants/m² with growth rates exceeding 1 cm/day. A single, mature plant can produce more than 2.5 million seeds annually which can remain viable after 20 months of submergence in water. In addition, plant fragments produced by animals and mechanical clipping can contribute to the spread of purple loosestrife through rivers and lakes.

MANAGEMENT OPTIONS

1. Digging/pulling

Effectiveness:

Can be effective in small stands (i.e., <100 plants), low-med density (1-75% area), and <3 acres, especially on younger plants.

Methods:

Hand-pull plants <2 years old. Use mini-tiller for plants >2 years - gets most of roots with minimum soil disturbance, has 3 heavy duty prongs on 1 side that are pushed under base of plant, then pry back on handle to leverage plant out of ground. Tamp down all disturbed soil surfaces. Use weed wrench for plants > 2 years old - good with minimal soil disturbance. In mucky conditions, put base of wrench on small piece of wood (e.g., piece of 2x4) to keep wrench from sinking into mud. Use shovel for plants > 2 years old - dig up plant, then replace soil and any existing cover.

Cautions:

May increase habitat disturbance and increase spread of loosestrife. Requires follow-up treatments of sites for 3 years to eliminate re-sprouting from rhizome fragments left behind. Must pull/dig ENTIRE rootstock or re-rooting will occur. Must pull/dig before the plants begin setting seed or must remove flower/seed heads first (cut and place into bags) to prevent spread of seeds. Also remove previous year's dry seed heads. Erosion control may be necessary if greater than 25 square feet of soil surface is disturbed.

Disposal:

Bag all plant parts and remove from site. Compost* at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits.

Sanitation:

Clean all clothing, boots, tools, equipment and transport vehicle to prevent spread of seed.

2. Cutting

Effectiveness:

* see item #4 "Composting" in General Practices section.

Can be effective in small stands (i.e., <100 plants), low-med density (1-75% area), and <3 acres, especially on younger plants.

Methods:

Remove flower heads before they go to seed so seed isn't spread during the cutting or mowing activity. Must do repeated cutting and mulching to permit growth of grasses.

Cautions:

Need to repeat for several years to reduce spread of plants. Doesn't affect rootstalk and thus, cut pieces can be spread that will re-sprout. Once severed, stems are buoyant and may disperse to other areas and re-sprout. Removal of seed heads should be done as late in the growing season as possible yet before seed set. Early cutting without additional seed head harvest could allow re-sprouting with greater subsequent seed production.

Disposal:

Bag all plant parts and remove from site (compost* at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits).

Sanitation:

Clean all clothing, boots, and equipment to prevent spread of seed.

3. Herbicide

Effectiveness:

Use when >100 plants and <3-4 acres in size.

Methods:

Use glyphosate formulations only. If possible spray seedlings before they reach 12" in height. Cut and bag flower heads before applying herbicide. Apply prior to or when in flower (late July/Aug) so plants are actively growing.

For spot application use:

- sponge tip applicator with wick.
- injection into stem (with large gauge needle).
- 32 oz. commercial-grade spray bottle with adjustable nozzle.

Cautions:

This herbicide is not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All treatment mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act. Choose Rodeo® formulation for applications in standing water or along a shoreline.

4. Biocontrol

Two species of leaf-feeding beetle, *Galerucella californiensis* and *G. pusilla*, have been shown to be effective in controlling purple loosestrife. Over 5 million of these beetles have been released in 30 states including

* see item #4 "Composting" in General Practices section.

New York, the northeastern and midwestern states as well as all of the Canadian Provinces. The beetles have shown dramatic decreases in purple loosestrife populations with subsequent increases in populations of native species. The scientific literature indicates that the beetles are very specific to purple loosestrife with only minor “spillover” effects that do not compromise non-target plant populations.

Effectiveness:

Use if site has at least a half acre of purple loosestrife of medium to thick density.
Best type of control for large patches of loosestrife >3-4 acres.

Methods:

The number of beetles released per site should be based on the size of the site, the density of loosestrife and the economics of purchase. More beetles are generally better than fewer.

Cautions:

Use only if mowing, pesticide and herbicide use are not active practices on the site. The site must not be permanently flooded and should be sunny. Use only if winged loosestrife, (*Lythrum alatum*) and waterwillow (*Decodon verticillatus*) are not major components of the plant community on the release site.

CONTROL METHODS FOR COMMON REED (*Phragmites australis ssp. australis*)

PLANT DESCRIPTION

Phragmites is a perennial grass that can grow to 14 feet in height. Flowering and seed set occur between July and September, resulting in a large feathery inflorescence, purple-hued turning to tan. Phragmites is capable of vigorous vegetative reproduction and often forms dense, virtually monospecific stands. It is unclear what proportion of the many seeds that Phragmites produces are viable. **Please note that identification of phragmites should be done by a professional botanist prior to treatment to distinguish the invasive non-native race from the non-invasive native.**

MANAGEMENT OPTIONS

1. Cutting / Mulching

Effectiveness:

Need to repeat annually for several years to reduce spread of plants. Hand-pulling, though labor intensive, is an effective technique for controlling common reed in small areas with sandy soils. Can be effective in small stands (i.e., <100 plants), low-med density (1-75% area) and <3 acres. The cutting of larger stands having high stem densities is not an effective control method unless coupled with an immediate application of glyphosate to the freshly-cut, stem cross sections or with a cut-stem injection of glyphosate.

Methods:

The best time to cut common reed is when most of food reserves are in aerial portion of plant when close to tassel stage, e.g., at end of July/early August to decrease plant’s vigor. Some patches may be too large to cut by hand, but repeated cutting of the perimeter of a stand can prevent vegetative expansion. Common reed stems should be cut below the lowest leaf, leaving a 6" or shorter stump. Hand-held cutters and gas-powered hedge trimmers work well. Weed whackers with a circular blade were found to be particularly efficient, though dangerous.

Cut and mulch dead stems in winter to remove them and promote germination of other species. Repeat in second year and then every 3-5 years.

Cautions:

Since common reed is a grass, cutting several times during a season, at the wrong times, may increase stand density. However, if cut in late July/early August, most of the food reserves produced that season are removed with the aerial portion of the plant, reducing the plant's vigor. This cutting regime may eliminate smaller colonies if carried out annually for several years. Manual or mechanical cuttings of larger, high density, monospecific common reed stands without the application of glyphosate, is not recommended.

Disposal:

Cut material should be removed from the site and composted* or allowed to decay on the upland to prevent sprouting and formation of rhizomes. Do not attempt to compost rhizomes.

Sanitation:

Clean all clothing, boots, and equipment to prevent spread of seed.

2. Herbicide

Effectiveness:

Herbicide use is a 2 year, 2 step process because the plants may need a "touch-up" application, especially in dense stands since subdominant plants are protected by thick canopy and may not receive adequate herbicide in the first application.

Methods:

Use glyphosate formulations only. Apply after tasseling stage when nutrients going back to rhizome and will translocate herbicide into roots. After 2 to 3 weeks following application of glyphosate, cut or mow down the stalks to stimulate the emergence and growth of other plants previously suppressed. If the plants are too tall to spray, cut back in mid summer and apply glyphosate using a spray bottle for individual foliar spot treatments or swab, syringe w/large gauge needle or Nalgene wide-mouth, Unitary wash bottle to apply 1-2 drops of 50% glyphosate solution directly into each cut stem.

Cautions:

This herbicide is not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast w/in 12 hours because herbicide will be washed away before it can act. Choose Rodeo® formulation for applications in standing water or along a shoreline.

3. Black Plastic

Effectiveness:

Can be effective in small stands (i.e., <100 plants), low-med density(1-75% area). Plants die off within 3-10 days, depending on sun exposure.

* see item #4 "Composting" in General Practices section.

Methods:

Cut plants first to 6-8" (hand-pushed bush hog or weed whacker w/blade). After cutting a stand of common reed, anchor a sheet of black plastic or dark tarp over the cut area using sand bags or rocks. High temperatures under the plastic will eventually kill off the plants. This technique works best when the treated area is in direct sunlight. Plastic should be at least 6 millimeters thick. Hold plastic in place with sandbags, rocks, biodegradable stakes, etc. Can treat runners along the plastic edges with a spot application of Rodeo® or Roundup®. The plastic can be removed the following year when the covered plants have been killed. A few common reed shoots may return. These can be cut, hand-pulled or re-treated with appropriate herbicide.

Cautions:

Must monitor to determine if shoots are extending out from under the plastic.

Disposal:

Can leave cut material under plastic or bag all plant parts and remove from site (compost* at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits).

Sanitation:

Clean all clothing, boots, and equipment to prevent spread of seed.

4. Pulling

Effectiveness:

Can be effective in small stands (i.e., <100 plants). Very labor intensive control method, best results when infestation occurs in sandy soils.

Methods:

Hand-pull plants <2 years old. Use shovel for plants >2 years old - dig up plant, then replace soil and any existing cover.

Disposal:

Bag and remove all plant parts from site (compost* at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits).

Sanitation:

Clean all clothing, boots, and equipment to prevent spread of seed.

6. Excavation

Effectiveness:

Can be effective for patches up to ½ acre in size. Cost is the limiting factor.

Methods:

When working in wetlands only tracked equipment shall be used. Rubber-tired excavators can operate from adjacent pavement or upland areas.

* see item #4 "Composting" in General Practices section.

Cautions:

The patch should be excavated to below the depth of rhizome development. Follow-ups later in the season or the following year must be conducted to verify that all the plants have been removed

Disposal:

Bag and remove all plant parts from site (compost at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits).

Sanitation:

Clean all clothing, boots, and equipment to prevent spread of seed.

CONTROL METHODS FOR GARLIC MUSTARD (*Alliaria petiolata*)

PLANT DESCRIPTION

Garlic mustard is a naturalized European biennial herb that typically invades partially shaded forested and roadside areas. It is capable of dominating the ground layer and excluding other herbaceous species. Its seeds germinate in early spring and develops a basal rosette of leaves during the first year. Garlic mustard produces white, cross-shaped flowers between late April and June of the following spring. Plants die after producing seeds, which typically mature and disperse in August. Normally its seeds are dormant for 20 months and germinate the second spring after being formed. Seeds remain viable for up to 7 years.

MANAGEMENT OPTIONS

1. Pulling.

Effectiveness:

Hand pulling is an effective method for removing small populations of garlic mustard, since plants pull up easily in most forested habitats. It is best to pull plants when seed pods are not yet mature, but they can be pulled during most of the year.

Methods:

Soil should be tamped down firmly after removing the plant. Soil disturbance can bring existing garlic mustard seed bank to the surface, thus creating a favorable environment for additional germination within the control site.

Cautions:

Care should be taken to minimize soil disturbance but to remove all root tissues. Re-sprouting may occur from mature plants root systems if not entirely removed. Cutting is preferred to pulling when garlic mustard infestations are interspersed amongst native grasses/forbs or other sensitive or rare flora.

Disposal:

If plants have capsules present, they should be bagged and disposed of to prevent seed dispersal. Bag and remove all plant parts from site (compost* at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits).

* see item #4 "Composting" in General Practices section.

Sanitation:

Clean all clothing, boots, and equipment to prevent spread of seed.

2. Cutting

Effectiveness:

Cutting is effective for medium to large sized populations depending on available time and labor resources. Dormant seeds in the soil seed bank are unaffected by this technique due to minimal disturbance of the soil.

Methods:

Cut stems when in flower (late spring/early summer) at ground level either manually (with clippers or a scythe) or with a motorized string trimmer. This technique will result in almost total mortality of existing plants and will minimize re-sprouting.

Cautions:

Cuttings should be conducted annually for 5 to 7 years or until the seed bank is depleted.

Disposal:

Cut stems should be removed from the site when possible since they may produce viable seed even when cut. Bag and remove all plant parts from site (compost* at DOT Residency, dispose in approved landfill or incinerate with appropriate permits).

Sanitation:

Clean all clothing, boots, and equipment to prevent spread of seed.

3. Herbicide

Effectiveness:

Roundup will not affect subsequent seedling emergence of garlic mustard or other plants.

Methods:

Use glyphosate formulations only. Product should be applied after seedlings have emerged, but prior to flowering of second-year plants. Application should be by spray bottle or wick applicator for individual spot treatments.

Cautions:

This herbicide is not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast w/in 12 hours because herbicide will be washed away before it can act. Choose Rodeo® formulation for applications in standing water or along a shoreline.

* see item #4 "Composting" in General Practices section.

CONTROL METHODS FOR JAPANESE, GIANT AND BOHEMIAN KNOTWEED (*Fallopia japonica ssp. japonica*, *F. sachalinensis*, and *F. x. bohemica*)

PLANT DESCRIPTION

The knotweeds are herbaceous perennials which forms dense clumps 1-3 meters (3-10 feet) high. Its broad leaves are somewhat triangular and pointed at the tip. Clusters of tiny greenish-white flowers are borne in upper leaf axils during August and September. The fruit is a small, brown triangular achene. Knotweed reproduces via seed and by vegetative growth through stout, aggressive rhizomes. It spreads rapidly to form dense thickets that can alter natural ecosystems. Japanese knotweed can tolerate a variety of adverse conditions including full shade, high temperatures, high salinity, and drought. It is found near water sources, in low-lying areas, waste places, and utility rights of way. It poses a significant threat to riparian areas, where it can survive severe floods.

MANAGEMENT OPTIONS

1. Digging

Effectiveness:

This method is appropriate for very small populations.

Methods:

Remove the entire plant including all roots and runners using a digging tool. Juvenile plants can be hand-pulled depending on soil conditions and root development.

Cautions:

Care must be taken not to spread rhizome or stem fragments. Any portions of the root system or the plant stem not removed will potentially re-sprout.

Disposal:

All plant parts, including mature fruit, should be bagged and disposed of in the trash to prevent re-establishment (stockpile* at DOT Residency, dispose of in an approved landfill or incinerate with appropriate permits).

Sanitation:

Clean all clothing, boots, and equipment to prevent spread of seed.

2. Cutting

Effectiveness:

Repeated cutting may be effective in eliminating Japanese knotweed. Manual control is labor intensive, but is a good option where populations are small and isolated or in environmentally sensitive areas.

Methods:

Cut the knotweed close to the ground at least 3 times a year. Plant native species to act as competitors as an alternative to continued treatment.

* Stockpiling implies temporary storage prior to transfer to a permanent treatment facility.

Cautions:

This strategy must be carried out for several years to obtain success. Both mechanical and herbicidal control methods require continued treatment to prevent reestablishment of knotweed.

Disposal:

Bag all plant parts and remove from site (stockpile at DOT Residency, dispose of in an approved landfill or incinerate with appropriate permits).

Sanitation:

Clean all clothing, boots, and equipment to prevent spread of seed.

3. Herbicide

Effectiveness:

Glyphosate treatments in late summer or early fall are much more effective in preventing re-growth of Japanese knotweed the following year.

Methods:

Use glyphosate formulations only. In late June/early July cleanly cut or mow down existing stalks/canes. Allow the knotweed to re-grow. After August 1, spray knotweed all re-growth with ROUNDUP®, RODEO®.

A cut-stem treatment utilizing glyphosate formulations can be an effective control for smaller colonies of knotweed. In early to mid-July cut the existing stems just below the 2nd or 3rd node above the soil surface. Immediately after cutting apply by swab or small spray bottle a 50% solution of glyphosate to the freshly-cut cross section and into the internodal cavity of each stalk/cane. Monitor treatment area by early to mid-August and repeat cut-stem treatment to any residual stems.

Stem injection is another promising control method for smaller colonies of knotweeds. Currently, a supplemental label for AQUAMASTER® (glyphosate) herbicide exists for this stem injection method. In late June/early July inject 5 mLs of AQUAMASTER® below the 2nd node above the ground of each stem in the clump. Use suitable equipment that must penetrate into the internodal region. JKInternational manufactures a stem injection tool that is suitable and recommended for this control method.

Cautions:

Established stands of Japanese knotweed are difficult to eradicate even with repeated herbicide treatments. However, herbicide treatments will greatly weaken the plant and prevent it from dominating a site. Adequate control is usually not possible unless the entire stand of knotweed is treated (otherwise, it will re-invade via creeping rootstocks from untreated areas).

These herbicides are not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast w/in 12 hours because herbicide will be washed away before it can act. Choose Rodeo® formulation for applications in standing water or along a shoreline.

CONTROL METHODS FOR JAPANESE, MORROW'S, TATARIAN, AMUR AND BELL'S HONEYSUCKLES

(Lonicera morrowii, L. tatarica, L. japonica, L. maackii, L. x. bella)

PLANT DESCRIPTION – JAPANESE HONEYSUCKLE

Japanese honeysuckle (*Lonicera japonica*) is a perennial trailing or climbing woody vine of the honeysuckle family (Caprifoliaceae) that spreads by seeds, underground rhizomes, and aboveground runners. It has opposite leaves that are ovate, entire (young leaves often lobed), 4-8 cm long, with a short petiole, and variable pubescence. In the southern part of the range the leaves are evergreen, while in more northern locales the leaves are semi-evergreen and fall off in midwinter. Young stems are reddish brown to light brown, usually pubescent, and about 3 mm in diameter. Older stems are glabrous, hollow, with brownish bark that peels in long strips. The woody stems are usually 2-3 m long, (less often to 10 m). *Lonicera japonica* creates dense tangled thickets by a combination of stem branching, nodal rooting, and vegetative spread from rhizomes.

Lonicera japonica (including the varieties) is easily distinguished from native honeysuckle vines by its upper leaves and by its berries. The uppermost pairs of leaves of *Lonicera japonica* are distinctly separate, while those of native honeysuckle vines are connate, or fused to form a single leaf through which the stem grows. *Lonicera japonica* has black berries, in contrast to the red to orange berries of native honeysuckle vines. The fruits are produced September through November. Each contains 2-3 ovate to oblong seeds that are 2-3 mm long, dark-brown to black, ridged on one side and flat to concave on the other.

The fragrant white (fading to yellow) flowers of *Lonicera japonica* are borne in pairs on solitary, axillary peduncles 5-10 mm long, supported by leaflike bracts. The species has white flowers tinged with pink and purple. Individual flowers are tubular, with a fused two-lipped corolla 3-4 (-5) cm long, pubescent on the outside. Flowers are produced late April through July, and sometimes through October.

MANAGEMENT OPTIONS

1. Mowing and Pulling

Effectiveness

Removing the above ground portion of *Lonicera japonica* reduces current year growth but does not kill the plant, and generally stimulates dense regrowth. Cut material can take root and should therefore be removed from the site (not practical with most infestations).

Methods

Hand pulling is highly effective. Pull out Japanese honeysuckle by the roots in winter wherever it climbs, aim the roots upward and tie them in place. The absence of light energy causes the trailing vines to decline precipitously next year. This method greatly reduces spraying requirements.

Disposal:

All plant parts, including mature fruit, should be bagged and disposed of in the trash to prevent re-establishment (stockpile* at DOT Residency, dispose of in an approved landfill or incinerate with appropriate permits).

* Stockpiling implies temporary storage prior to transfer to a permanent treatment facility.

Cautions

Mowing is an ineffective control method, stimulating growth and encouraging formation of dense, albeit shorter, mats. Bush-hogging is an ineffective control, as *Lonicera japonica* re-invades within one growing season.

2. Herbicide

Effectiveness

In northern states, *Lonicera japonica* retains some leaves through all or most of the winter (semi-evergreen or evergreen), when most native plants have dropped their leaves. This provides a window of opportunity from mid-autumn through early spring when it is easier to spot and treat with herbicides, fire or other methods without damaging native species.

Controls

A foliar application of 1.5% glyphosate shortly after the first frost appears to be the most effective treatment, applied after native vegetation is dormant and when temperatures are near and preferably above freezing. Applications within 2 days of the first killing frost are more effective than applications later in the winter. *Lonicera japonica* is less susceptible to herbicides after the first hard frost (-4°C).

Cautions

Soil disturbance should be avoided in infested areas to minimize germination of seed in the seedbank. Treated plants should be re-examined at the end of the second growing season, as plants can recover from herbicide application.

These herbicides are not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast w/in 12 hours because herbicide will be washed away before it can act.

PLANT DESCRIPTIONS – BUSH HONEYSUCKLES

Exotic bush honeysuckles (Morrow's, Bell's, Amur and tatarian) are upright, multi-stemmed, oppositely branched, deciduous shrubs that range in height from 2 m to 6 m. The opposite leaves are simple and entire, and paired, axillary flowers are showy with white, pink, or yellow corollas. The fruits of *Lonicera spp.* are red, or rarely yellow, fleshy berries (Gleason and Cronquist 1991).

In flower, exotic bush honeysuckles can be distinguished from all native bush honeysuckles except swamp fly-honeysuckle (*L. oblongifolia*) by their hirsute (hairy) styles. In fruit, the red or rarely yellow berries of the exotics separate them from the blue- or black-berried natives waterberry (*L. caerulea*) and bearberry honeysuckle (*L. involucrata*). The exotic bush honeysuckles also generally leaf-out earlier and retain their leaves longer than the native shrub honeysuckles.

Within the exotic bush honeysuckles, *L. maackii* alone has acuminate, lightly pubescent leaves that range in size from 3.5 to 8.5 cm long and peduncles generally shorter than 6 mm. Its flowers are white to pink, fading to yellow, 15-20 mm long. Its berries are red or with an orange cast. Height ranges to 6 m.

In North America, there has been considerable confusion regarding the correct identification of *L. morrowii*, *L. tatarica*, and *L. x bella*, their hybrid. The literature contains a number of references to plants called by the

name of one of the parents, but described as having characters more like those of the hybrid. *L. x bella*. The hybrid therefore, may be more common than the literature would indicate, and accurate field identification may be similarly problematic.

The two parent species of *L. x bella*, however, are dissimilar. *L. morrowii* has leaves that are elliptic to oblong gray-green, soft-pubescent beneath, and are 3-6 cm long. Its flowers are pubescent, white fading to yellow, 1.5-2 cm long, on densely hairy peduncles 5-15 mm long. The fruits are red. The height ranges to 2 m. *L. tatarica* has leaves that are ovate to oblong, glabrous, and are 3-6 cm long. Its flowers are glabrous, white to pink, 1.5-2 cm long, on peduncles 15-25 mm long. The fruits are red or rarely yellow. Height ranges to 3 m.

L. x bella has intermediate characteristics. The leaves are slightly hairy beneath. Flowers are pink fading to yellow, on sparsely hairy peduncles 5-15 mm. long. Fruits are red or rarely yellow. Height ranges to 6 m.

MANAGEMENT OPTIONS

1. Grubbing, Pulling, Cutting

Effectiveness

Mechanical controls include grubbing or pulling seedlings and mature shrubs, and repeated clipping of shrubs. Effective mechanical management requires a commitment to cut or pull plants at least once a year for a period of three to five years.

Methods

Grubbing or pulling by hand (using a Weed Wrench or a similar tool) is appropriate for small populations or where herbicides cannot be used. Mature *L. maackii* shrubs growing in shaded forest settings can be eradicated by clipping once a year, during the growing season, until control is achieved. Other bush honeysuckles growing in more open settings can be managed by clipping twice yearly, once in early spring and again in late summer or early autumn.

Disposal:

All plant parts, including mature fruit, should be bagged and disposed of in the trash to prevent re-establishment (stockpile* at DOT Residency, dispose of in an approved landfill or incinerate with appropriate permits).

Cautions

Any portions of the root system not removed can resprout. Because open soil can support rapid re-invasion, managers must monitor their efforts at least once per year and repeat control measures as needed. Winter clipping should be avoided as it encourages vigorous re-sprouting.

2. Herbicides

Effectiveness

Most managers report that treatment with herbicides is necessary for the control of *L. maackii* populations growing in full sun and may be necessary for all large bush honeysuckle populations.

Controls

Use formulations of glyphosate (brand names Roundup, and for use near water bodies, Rodeo) as foliar sprays or cut stump sprays and paints with varying degrees of success. Glyphosate is a non-selective

* Stockpiling implies temporary storage prior to transfer to a permanent treatment facility.

herbicide which kills both grasses and broad-leaved plants. For cut stump treatments, 20-25% solutions of glyphosate can be applied to the outer ring (phloem) of the cut stem. 2% solutions of glyphosate can be used for foliar treatments. Glyphosate should be applied to the foliage late in the growing season, and to the cut stumps from late summer through the dormant season.

Cautions

The subsequent flush of seedlings following all herbicide treatments must also be controlled. These herbicides are not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act.

CONTROL METHODS FOR YELLOW IRIS (*Iris pseudacorus*)

Plant Description

Yellow iris (*Iris pseudacorus*) is a robust, clumping perennial herb in the Iridaceae (Iris family). *Iris pseudacorus* is easy to identify in flower, since it is the only totally yellow-flowered *Iris* in wild lands in the United States. At maturity, *I. pseudacorus* grows to a height of 0.40-1.5 meters (1.3-4.9 ft) tall. Its thick fleshy rhizomes often form dense horizontal mats, with each rhizome measuring 1 to 4 cm in diameter with roots that may extend vertically 10-20 (30) cm deep. The stiff, sword-like leaves are glaucous, number approximately 10 per ramet, are about 50-100 cm long by 10-30 mm wide, have raised midribs, and are arranged with sheathing and overlapping leaf bases.

Flowers of *I. pseudacorus* are borne on tall erect peduncles. Each inflorescence may have one to several large, showy flowers. The flowers measure 8-10 cm in diameter and vary from pale yellow to almost orange in color. The flowers are bisexual. The perianth segments (3 sepals and 3 petals) are fused at the base, and form a flaring tube with the sepals spreading and reflexed. The 3 stamens are each individually fused by their filaments to the sepals, and the showy tongue-shaped sepals are often adorned with brown spots or purple veins, and are generally less than 6 cm long. The petals are erect and less conspicuous, and are narrower than the sepals. The 3 style branches are petal-like with two-lobed lips, are mostly < 25 mm long, and are opposite and curved over the sepals. *I. pseudacorus* has an inferior, 3-chambered ovary. Fruits are elongated capsules.

Seeds of *I. pseudacorus* are pitted, pale brown, disc-shaped (roughly circular and flattened), and measure approximately 2.0-5.0 mm in diameter and 0.5-3.0 mm tall. Seeds are arranged in three densely packed vertical rows within the seed pod or capsule. These erect capsules at maturity are a glossy green color and measure 4-8 cm in length, 5.0-8.0 mm in width, and are 3-angled and cylindrical.

1. Digging, Pulling, Cutting

Effectiveness

Manual or mechanical methods that remove the entire *I. pseudacorus* rhizome mass can successfully control small, isolated patches.

Methods

Pulling or cutting *I. pseudacorus* plants may provide adequate control, but only if it is repeated every year for several years to weaken and eventually kill the plant. Dead-heading (removing the flowers and/or fruits) from plants every year can prevent seed development and seed dispersal, but will not kill those plants.

Cutting the foliage, followed by a herbicide application (see below for details), can provide good control with minimal off-target effects.

Disposal:

If plants have capsules present, they should be bagged and disposed of to prevent seed dispersal. Bag all plant parts and remove from site (compost* at DOT Residency, dispose of in approved landfill or incinerate with appropriate permits).

Cautions

These methods, however, are very time and labor-intensive, since even small rhizome fragments can resprout. Additionally, digging disturbs the soil, may fragment rhizomes, and promote germination of *I. pseudacorus* and other undesirable species from the soil seed bank.

Care should be taken when pulling, cutting, or digging *I. pseudacorus*, since resinous substances in the leaves and rhizomes can cause skin irritation.

2. Herbicide

Effectiveness

Iris pseudacorus can be effectively controlled by herbicides. Since it usually grows in or adjacent to water, an aquatic-labeled herbicide and adjuvant must be used. Glyphosate (for example, trade names Rodeo®, Aquamaster® or Glypro®) applied in a 25% solution (13% a.i.) using a driplless wick/wiper applicator, or applied in a 5 to 8% solution if sprayed, when used with the appropriate non-ionic surfactant adjuvant, can effectively kill *I. pseudacorus*. *I. pseudacorus* can be effectively controlled by stem injection utilizing Aquamaster® applied at .5 to .7 mL of product per flowering stem.

Controls

The timing and choice of application technique will determine control efficacy and should work to minimize off-target effects. *Iris pseudacorus* can be controlled by either directly applying the herbicide to foliage, or by immediately applying herbicide to freshly cut leaf and stem surfaces. Herbicides can be directly applied to *I. pseudacorus* foliage or cut stems by a driplless wick system or using a backpack sprayer.

Cautions

These herbicides are not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants. Do not apply in windy

* see item #4 "Composting" in General Practices section.

conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act.

Be sure to always take appropriate precautions and wear suitable clothing and equipment, and follow all instructions on the herbicide label. Use a biodegradable tracer dye in the herbicide mix so you can watch for accidental contact or spill of the herbicide.

Appendix C. Herbicide Labels and Material Safety Data Sheets (MSDS)

Appendix D. NYSDEC Steps for Using Herbicides to Control Invasive Plants

Appendix E. State Land Terrestrial and Aquatic Invasive Plant Inventory

In 2004 and again in 2005 Adirondack Nature Conservancy/Adirondack Park Invasive Plant Program staff and Student Conservation Association/AmeriCorps Environmental Steward staff in cooperation with the Department undertook a systematic effort to identify and quantify the extent of terrestrial invasive species on Forest Preserve units in the Adirondack Park. Documented priority invasive threats included garlic mustard (*Alliaria petiolata*), Japanese knotweed (*Fallopia japonica ssp. japonica*), common reed (*Phragmites australis ssp. australis*), purple loosestrife (*Lythrum salicaria*), and Japanese barberry (*Berberis thunbergii*). Other invasive species found included black locust (*Robinia pseudoacacia*), Japanese, Morrow's, tatarian, Amur and Bell's honeysuckles (*Lonicera japonica*, *L. morrowii*, *L. tatarica*, *L. maackii*, *L. x. bella*), Canada and/or bull thistle (*Cirsium arvense*, *C. vulgare*) and wild parsnip (*Pastinaca sativa*). The following summary table documents the 2005 field work. Detailed location and population information has been provided to the Regional Land Manager.

State Land Unit	Terrestrial Invasive Species Present	Total Number of Populations	Total Area Affected in Square Feet (acres)
Moose River Wild Forest	garlic mustard, honeysuckle, wild parsnip	12	3620 (.08)
Sargent Ponds Wild Forest	garlic mustard, Canada thistle	6	1210 (.03)
Blue Mountain Wild Forest	Japanese knotweed, wild parsnip	4	3950 (.09)
Vanderwhacker Mountain Wild Forest	purple loosestrife, Japanese knotweed, honeysuckle, Canada thistle	27	14310 (.33)

State Land Unit	Terrestrial Invasive Species Present	Total Number of Populations	Total Area Affected in Square Feet (acres)
Shaker Mountain Wild Forest	garlic mustard Japanese knotweed, purple loosestrife, black locust, honeysuckle, common reed	33	38870 (.89)
High Peaks Wilderness	Japanese knotweed	1	13500 (.31)
Ferris Lake Wild Forest	garlic mustard, Japanese knotweed, purple loosestrife, common reed, Japanese barberry, honeysuckle	48	33780 (.78)
West Canada Lake Wilderness	garlic mustard, Japanese knotweed	3	420 (.01)
Black River Wild Forest	garlic mustard, common reed, Japanese knotweed, honeysuckle	14	11950 (.27)
Saranac Lakes Wild Forest	Japanese knotweed, Japanese barberry, Canada thistle, honeysuckle	12	6130 (.14)
Total		160	127740 (2.93)

In addition to the formal survey of the above nine Wild Forest units and one Wilderness unit, the survey team kept track of other invasive species occurrences on Forest Preserve lands noted during their ordinary course of work. Below is a summary table for several additional sites.

Location	Terrestrial Invasive Species Present	Total Number of Populations	Total Area Affected in Square Feet (acres)
Pepperbox Wilderness/Stillwater Dam	Japanese knotweed	2	700 (.02)
Cascade/Porter Mountain Trailhead and trail	garlic mustard	1	50 (.001)
Barnum Pond Boat Launch	purple loosestrife	1	1500 (.034)
Second Pond Boat Launch	Japanese knotweed	1	550 (.013)
Camp Santanoni	Japanese knotweed	2	1200 (.03)
Mt. Arab Trailhead Parking Area	Japanese knotweed	4	2000 (.05)
Grass River/Special Trout Area Parking Area	Japanese knotweed	2	1050 (.024)
Schroon Lake Boat Launch	purple loosestrife	1	100 (.002)

Appendix 9: Invasive Species Control Guidelines

Location	Terrestrial Invasive Species Present	Total Number of Populations	Total Area Affected in Square Feet (acres)
Region 6 Boonville Field HQ	giant knotweed	1	300 (.007)
Lake Colby Boat Launch and Public Beach	purple loosestrife	2	400 (.01)
Total		17	7850 (.18)

There are approximately 81 Wilderness, Wild Forest, Canoe and Primitive State Areas in the Park that comprise 51 land management units. A straight extrapolation of the above data to all State land units would indicate 752 terrestrial invasive species populations occupying 600,378 square feet (13.8 acres). Of course, a straight extrapolation will not yield numbers as accurate as a comprehensive survey. Also it should be noted that the ten units were all Wild Forest areas and therefore have a higher level and more varied type of use than would be expected in Wilderness areas and potentially higher levels of terrestrial invasive species infestations. Furthermore, the numbers should be placed in context. There are approximately 2.4 million acres in Wilderness, Wild Forest, Canoe and Primitive classification. If there were 13.8 acres of terrestrial invasive species infestation it represents a very minute portion of the whole. This level of invasion is an indication that invasives are at very low population levels and the chance of eradication is high. It's also a sobering wake-up reminding us that *early detection and rapid response are key ingredients to protecting the natural systems on our State lands*. Experience in other parts of New York State and other states proves that if the infestation is allowed to consolidate it will be impossible to eradicate and will create an expensive, never-ending management effort merely to keep population levels low enough to limit environmental degradation.

The survey team also visited 28 of the 47 Department campgrounds in the Adirondack Park during summer 2005. Of the 28, 16 had minor to severe infestations of terrestrial invasive plants. The most common problem species was garlic mustard, followed by Japanese knotweed, purple loosestrife, and honeysuckle. The following table summarizes the extent of invasives knowledge on Forest Preserve campgrounds.

Campground	Terrestrial Invasive Species Present	Number of Populations
Paradox Lake Campground	garlic mustard, wild chervil	2
Lewey Lake Campground	garlic mustard	3
Limekiln Lake Campground	garlic mustard, honeysuckle	13
Carry Falls Camp Sites and Boat Launch	garlic mustard	several/many
Cranberry Lake Campground	garlic mustard	21+
Nick's Lake Campground	garlic mustard	49
Eighth Lake Campground	garlic mustard	33
Golden Beach Campground	garlic mustard	101+
Brown Tract Pond Campground	garlic mustard, honeysuckle	4
Lake Durant Campground	garlic mustard	6
Lake Eaton Campground	garlic mustard	6

Campground	Terrestrial Invasive Species Present	Number of Populations
Fish Creek-Rollins Pond Campground	garlic mustard	2
Meadowbrook Campground	garlic mustard	1
Moffitt Beach Campground	garlic mustard	14
Sacandaga River Campground	Japanese knotweed	5
Taylor Pond Campground	purple loosestrife	1
Total		261+

The inventory provides a preliminary indication that the following Department campgrounds appear to be free of target terrestrial invasive plant species: Wilmington Notch, Jones Pond, Buck Pond, Meacham Lake, Sharp Bridge, Au Sable Point, Putnam Pond, Little Sand Point, Point Comfort, Poplar Point, Forked Lake and Fourth Lake Picnic Area.

The following campgrounds and day-use areas have not been inventoried: Alger Island, Caroga Lake, Crown Point Reservation, Eagle Point, Hearthstone Point, Hinckley Reservoir Picnic Area, Lake George Battlefield Picnic Area, Lake George Battlefield, Lake George Beach, Lake George Islands, Lake Harris, Lincoln Pond, Luzerne, Moffitt Beach, Northampton Beach, Poke-O-Moonshine, Roger Rock and Tioga Point.

It is noted that not all terrestrial invasive species infestations require the use of herbicides. The protocols in section VI and the best management practices attached in Appendix B provide clear guidance as to which actions are best and allowed. In addition, all pesticide use will be approved by the Regional Supervisor of Natural Resources through an AANR agreement and based on a site specific plan for treatment of invasive plants.

2007 Field Inventory Data

Following is the update from Steven Flint based on 2007 field work. The survey team visited 40 of the 45 Department campgrounds in the Adirondack Park during summer 2007. Of the 40, 16 had minor to severe infestations of terrestrial invasive plants. The most common problem species was garlic mustard, followed by Japanese knotweed, purple loosestrife, and honeysuckle. The following table summarizes the extent of invasives knowledge on Forest Preserve campgrounds.

Campground	Terrestrial Invasive Species Present	Number of Populations
Paradox Lake Campground	garlic mustard, wild chervil, purple loosestrife	3
Lewey Lake Campground	garlic mustard, purple loosestrife	6
Limekiln Lake Campground	garlic mustard, honeysuckle	13
Carry Falls Camp Sites and Boat Launch	garlic mustard	several/many
Cranberry Lake Campground	garlic mustard	80+
Nick's Lake Campground	garlic mustard, honeysuckle	49
Eighth Lake Campground	garlic mustard, honeysuckle	33
Golden Beach Campground	garlic mustard	101+

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Brown Tract Pond Campground	garlic mustard, honeysuckle, crown vetch	4
Lake Durant Campground	garlic mustard	6
Lake Eaton Campground	garlic mustard	6
Fish Creek-Rollins Pond Campground	garlic mustard at Rollins Pond, Fish Creek clean	2
Meadowbrook Campground	garlic mustard	1
Moffitt Beach Campground	garlic mustard, purple loosestrife	14
Sacandaga River Campground	Japanese knotweed	5
Taylor Pond Campground	purple loosestrife	3
Total		326+

The inventory provides a preliminary indication that the following Department campgrounds appear to be free of target terrestrial invasive plant species: Wilmington Notch, Buck Pond, Sharp Bridge, Point Comfort, Poplar Point, Eagle Point, Alger Island, Lincoln Pond and Fourth Lake Picnic Area.

The following campgrounds and day-use areas have not been inventoried: Hinckley Reservoir Picnic Area, Lake George Battlefield Picnic Area, Lake George Islands, Tioga Point, Indian Lake Islands and Lower Saranac Lake Islands.

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APPENDIX 10: SUMMARY OF PUBLIC COMMENT

The following are comments received during the public comment period for the Draft UMP, followed by the DEC responses to those comments.

TRAILS

-Suggests changing proposed North Country National Scenic Trail (NCNST) to a marked trail that goes south of current proposed route.

1. Existing trails would be a preferable location on which to site the NCNST. The Department will be looking closely at existing trails, historic and current that lie within the outlined corridor the NCNST will take through the Hoffman Unit and will choose portions of these existing trails where appropriate.

-Fully supportive of NCNST, and a ski loop around Big Pond. New trail plans should evaluate whether existing or long forgotten trails can be used to minimize cost and fragmentation.

2. See #1 above.

-Would like a trail constructed to top of Hoffman Mountain.

3. The focus of management in the Hoffman Notch Wilderness is to maintain the existing trail structure, improve access to the periphery and maintain interior portions of the unit as trail-less areas. The proposed trail in the southeast corner of the unit will allow for a shorter bushwhack path to Hoffman Mountain.

-Proposed NCNST location is best (most feasible route)

4. The proposed NCNST location will minimize intrusion into the core of the unit but will provide an interesting route through the Hoffman Notch Unit.

-Former North Pond trail was at one time a snowmobile trail that connected to Severance Hill trail, which could be utilized once again.

5. These historic and currently used trails are in the process of being inventoried and will be utilized where possible for new trail layout.

-In favor of Big Pond loop trail. Hoffman Notch trail is nice but challenging for transportation. There are other options for trail location around Big Pond.

6. A loop trail is a convenient type of trail for recreational users with one vehicle. This plan calls for construction of a bridge and new trail segment should rights to cross private property not be obtained or if rights are lost in the future.

-Would like to see easement secured for private land trail.

7. The private section of trail needed to complete the loop trail is a relatively short segment. A secured easement to use this trail location would be preferable to construction of a longer trail segment.

Appendix 10: Summary of Public Comment

-A shorter version of trail should be included.

8. *Existing and proposed trails in this unit include a wide variety of trail combinations and lengths.*

-Hoffman mountain would be challenging to get to.

9. *See # 3 above. Trail construction to the top of Hoffman Mountain would be a significant undertaking and would place a new trail into a relatively trail-less area. With the number of mountains throughout the Adirondacks which have trails it may be appropriate to identify some without established trails. This plan proposes no trail construction to Hoffman Mountain keeping it a bushwhack and unique challenge.*

-Should mark the trail to Marion Pond, I do not approve of DEC stocking fish in ponds and keeping the trails to them secret except to fishermen. Fishermen are going to tie flagging on trail so you might as well mark the trail. I would like to see a trail up to a ledge with a view on Hayes Mt. too, or Washburn. Foot trails belong in Wilderness and there are so few miles now that most of us cannot use the forest preserve as it could be, without any overuse problems. The vast difference between wilderness that has almost no trails and wild forest with 850 miles of motor vehicle trails with no regulation at all is rather hard to understand.

10. *The trail to Marion Pond provides a unique experience while not proving too challenging for most. Fortunately maps, word of mouth and even this UMP make this trail evident to any individuals who care to look into it and explore on their own. Washburn, within the core of Hoffman, will remain trail-less. Hayes, a generally domed and forested mountain, does provide a few views to the east which can be reached by bushwhack, a fairly easy bushwhack that affords views of Bailey Pond can be found from the forested ridge top found directly between Marion and Bailey Ponds.*

-Leave Marion Pond alone, no trail marking etc. There are many Adirondack ponds that are easy to get to, leave this one a little bit of a challenge / exploration.

11. *See #10 above.*

-Support the proposals to establish new trails in the vicinity of Big Pond

12. *These new trails will provide unique loop and through trail possibilities.*

- support the proposal to route the North Country Trail through the Hoffman Notch Wilderness

13. *The NCNST appears to have much support. The portion through the Hoffman Notch Wilderness should provide an enjoyable experience.*

-suggest that the UMP contain a more detailed inventory of existing unmarked trails and campsites in the unit; (paths that I am familiar with include: path to North Pond originating from the Big Pond trail, path to Marion Pond originating from Bailey Pond, a dead-end path leading generally toward Bailey Pond from the Minerva Stream snowmobile trail. Should old snowmobile trail between North Pond and Platt Brook be included in inventory as a Class I path? There is at least one established site on Marion Pond that the UMP has overlooked.

14. *The inventory of existing unmarked trails and campsites in this plan is somewhat lacking, however we are currently updating these unmarked trails and campsite locations and plan to continue updating them*

into the future. While it may be difficult to get all these old trails and campsites inventoried it is understood there are a large number of them present in the unit and future management actions will take this fact into consideration when planning individual projects and siting new trails. Maps will be added to this plan which show some of the various unmarked trails.

- The formal designation of the herd path south of Big Pond. This is an old trail which needs to be re-signed and taken care of; I for one use this trail often in my guiding and personal use. It does make a great “loop” trail, as we have used it for a snowshoe race in the past.

15. This trail is a popular trail and has received much public support for its existence. Formal adoption of this trail is proposed for in this plan.

- Rerouting trail near Big Marsh is a good idea

16. Rerouting the Notch Trail to the north of Big Marsh will eliminate the need for two large stream crossings, reducing the need for maintenance and should provide a favorable alternative to the current trail location.

- I strongly endorse the proposal to route the NCNST through the HNWA and I am pleased that the HNWA UMP includes a discussion of this proposed trail, even though the exact route has yet to be defined. In exploring the proposed route of the NCNST “corridor of opportunity” we have found a number of unmarked trails or paths that are not listed or discussed in the UMP, but which could provide current or future public access through the area. Some of these unmarked paths could also be used in the future as parts of the proposed NCNST, since the use of existing paths would minimize the need to build new trails that could impact the Adirondack’s wilderness character.

17. The proposed NCNST route will indeed be looked at very closely and will use appropriate existing trails where possible to reduce the redundancy of trails in the unit, reduce the impact to the unit and to simplify the process of opening such a trail.

- Severance trail is in good shape even with the high use it gets, though because a stream floods the bottom part in early spring, a few more rocks would help prevent the trail from widening. The roar of traffic from the Northway follows a hiker all the way up the trail, a short walk west from the top will bring you the sounds of wilderness. A marked trail should be created to some appropriate place for those who need no motor noise to feel they are in a wilderness, so they can “listen to the silence”.

18. The Mt. Severance Trail does see a lot of use and is in need of some maintenance. The current trail ends at the scenic vista, a common destination for most. If recreational users of this area wish to bushwhack further to the west of this trail they are welcome to do so. There are many other opportunities in this unit and nearby units for hiking marked trails which would provide greater opportunities for solitude.

- Big Pond – The loop trail around the pond when completed will be a fine addition to the present trail to the pond. It would make canoeing on the beaver flow, then carrying on to Big Pond, easier for boat trippers. The lake is perfect for lightweight solo canoes and rich in wildlife and natural beauty.

19. This loop trail will provide direct access to the southern edge of Big Pond for those who wish to carry in lightweight boats.

Appendix 10: Summary of Public Comment

- Illegal trails- Near Big Pond, one of which is blazed and painted bright orange on 66 trees in 1/3 of a mile, as well as illegal developed campsites nearby, need to be restored as much as possible.

20. The trail in question is a prime example of an eye sore and an inappropriate and poorly sited trail. Regulations called for in this plan will “prohibit the marking of trails with plastic ribbons, paint, blazes or other devices”. This illegally marked trail will be restored to natural conditions as much as possible.

- There is a fisherman’s trail going south from the Blue Ridge Rd. near the Boreas River which would be an easy but spectacular trail because of the dense layer of moss covering the ground by the acre. There is even parking across the road but only fishermen know about this and probably many other trails. These trails should not be improved to more than a primitive level, just be marked and follow-able by the average hiker. The narrow windiness of bushwhack trails are part of their attractiveness.

21. There are a number of bushwhack trails in the unit. Bushwhack trails provide access to various parts of this wilderness area and are not marked.

- The North Country National Scenic Trail would be an acceptable use of the southern HNW if it uses one of the existing tunnels under the Northway.

22. It is planned that the NCNST use the large access tunnel beneath the Northway approximately 1.6 miles north of the I-87 interchange # 28.

- The trail to Bailey Pond is through an extended seepage area at the beginning. Corduroy or boardwalk should be added to prevent “snake bellies” when more people use the area. One steep dip could be bridged with three logs, making it easy for skiers and snowshoers in winter, and old people the rest of the year. These improvements would cost very little, protect the land, and make using the forest preserve much easier for average people.

23. The beginning of the Bailey Pond Trail is wet and could use a short re-route to avoid problem areas. The parking lot in this location could also use improvements due to excess moisture. Both problem areas will be addressed in this plan. Drainages along the old road which leads to Bailey Pond will also be assessed and addressed with either stone or logs to prevent erosion from foot traffic and facilitate cross country ski use.

- Hoffman Mountain should be left to be a challenge to the energetic and able bushwhacking mountain climber.

24. See #3 above.

- Better trail routing in the Big Marsh through trail and better bridges everywhere, though as small and natural-looking as possible, will make the original purposes of healthy, safe and natural exercise of NY citizens in the wild forests of the state possible for the vast majority of citizens who are willing to work for the privilege. A short slow hike in a wild place can be just as satisfying for a very young or less able person than a long, fast one that is a “green blur”, but **stream crossings need to be made possible**, especially in winter. Skiers especially need decent bridges in late winter when water can wash out stream channels through deep snow leaving steep banks impassable to many people.

25. It is the vision of this plan to maintain the laid out trail system and associated structures in a manner which supports protection of the environment and safe passage to the user. Bridges will be constructed in

such a way to blend with the surroundings as much as possible. In instances where bridges are not used this plan proposes to armor trails and stream crossings and install stepping stones to facilitate stable and safe all-season trail use and stream crossings while preventing trail degradation.

Protect the Adirondacks is in favor of ways to support DEC science financially by initiating a “**non-consumptive**” patch or button with a substantial cost (\$25?) which is well advertised and can be bought easily at a number of sites. We understand that hunting, fishing and trapping fees and taxes help pay for associated wildlife personnel activities. We “non-consumptives” would be glad to have a way to visibly help fund non-game activities that would increase long-term viability of all feasible native species and restore populations of some species such as spruce grouse to historic areas. An excise tax on equipment used in muscle-powered sports would be happily paid too, if the money were used for interpretation and wildlife viewing, study and photographing opportunities.

26. This proposal is outside the scope of this UMP.

All visitors should have to **sign registers** as is noted in this UMP, or pay for their rescue if they are lost or injured. It is the very least citizens can do to help plan for management objectives and conserve forest preserve money for needed management activities, not emergencies. Some fishermen and hunters are known to be resistant to signing their names so enforcement is necessary. Perhaps name and phone number could be the only required information if they want to keep their destination secret.

27. Signing registers has many benefits. Safety is the main purpose of Trail Registers- names, destinations and contact information can help Forest Rangers locate Wilderness users if there is a problem. Another way in which Trail Registers are used is to tabulate use data which an area receives. A record of use data is critical for management and maintenance of the area.

In summary, the Hoffman Notch Wilderness UMP generally treats the unit as the unique wild area it is; but it is so lightly used now that a few more marked trails would give us all more places to experience the natural world in an appropriate way, on foot. Given the heavy motorized use of roads and snowmobile trails in the Wild Forest parts of the Adirondack Park and the too frequent and often too low disturbance caused by airplanes, Wilderness needs to be a peaceful refuge from modern urban-type noise available for all levels of athletic ability.

28. New trails and access points to the unit have been outlined in this plan and will hopefully provide improved access to the unit while maintaining a core trail less area where aspects of solitude can be enjoyed by those seeking it.

-All of the trail upgrades, bridge construction, trail rerouting, improved parking and proposed tent sites described in the proposed UMP should be encouraged.

29. Upon approval of this UMP, DEC will begin to implement the changes and improvements outlined in the plan.

- Of utmost importance to this area is the proposed location of the North Country National Scenic Trail. This trail will become the backbone of this wilderness area by joining the Bailey Pond, North Pond – Big Pond areas with the Northway underpass near Schroom Falls. Hopefully the DEC will be able to begin work in the very near future in order to make this trail a reality.

30. Yes, see #29

- The trail that is now known as the "Snowshoe Race" loop needs to be recognized and events such as the Snowshoe Race should be permitted for low environmental impact events in the Hoffman Notch Wilderness Area. The DEC needs to continue in its efforts to establish a permanent easement on a small parcel of private property in the Big Pond area for this loop.

In the Adirondack Park State Land Master Plan for the Hoffman Notch it states Hoffman Mountain was selected as a potential ski development but defeated in the referendum of 1967. Subsequent studies by independent experts have revealed that the mountain is not basically suited for a major ski center." I request that the DEC make any of these subsequent studies available to the public and if such studies cannot be found, that the State Land Master Plan be amended accordingly.

31. *-The loop trail is recognized and this plan calls for formally adopting and marking this trail. -This plan calls for provisions to permit low impact environmental events and manage them through the Temporary Revocable Permit process.*

-If an easement or agreement cannot be reached to locate a trail segment across a portion of private property, this plan calls to construct a short trail and bridge on state land to make this loop trail possible.

-The DEC does not make final changes to descriptions in the State Land Master Plan, however, due to this comment a recommendation was sent to the APA to remove this description from the State Land Master Plan at the next update, as the subsequent studies mentioned in the Master Plan could not be located or provided to the DEC at the time of preparation of this plan.

-All existing unmarked trails should be included in the trail inventory listed on page 38 of the draft UMP including:

- 1) Trail south and west of Big Pond mentioned on page 76 that is to be marked (I support this trail marking).
- 2) Trail to Marion Pond
- 3) Trail to North Pond
- 4) Trail toward Bailey Pond from the Minerva Snowmobile trail
- 5) Trail going north-south east of Hedgehog Hill
- 6) Trail and road system in the area of Platt Brook, Smith Hill and Dirgylot Hill
- 7) Trail heading north between Bailey Hill and Washburn Ridge

32. see #14

I support the building of the North Country National Scenic Trail through the HNWA.

33. see #13

To establish another point of interest for the public a trail up Jones Hill from the NE would be a relatively easy way to get a spectacular view of the Hoffman Notch Wilderness Area interior and Hoffman Mountain. This trail would be about three miles long and would need a bridge across Platt Brook. The existing unmarked trail system could be used for more than half of the route. The climb would be about 1300 feet. This route could be used by the NCNST but even if the NCNST never happened this trail to Jones Hill would be a nice destination hike.

34. *This area will be looked into more closely before the construction of the trail and possible future portion of the NCNST called for in this plan. Incorporating scenic vistas, interesting features and existing trails where possible are all objectives used when siting a hiking trail.*

- I would like to support the North Country National Scenic Trail conceptual route across the southern edge Hoffman Notch Wilderness Area as noted in the Hoffman Notch Wilderness UMP and the NYS DEC *North Country National Scenic Trail, Final Adirondack Park Trail Plan and Generic Environmental Impact Statement* July 2008. The NCNST at 4600 miles, crosses the 7 northern states and is a foot trail of national significance. It is constructed to blend lightly with the land with minimal environmental impact. Hoffman Notch helps the route avoid the High Peaks Wilderness as it crosses the Adirondack Park from Black River Wild Forest to Crown Point.

35. *See #13*

- strongly supports proposals to establish new trails in the vicinity of Big Pond, and the proposed route of the North Country National Scenic Trail through the Hoffman Notch Wilderness.

36. *See #12 and #13*

- One concern broached by our members was a lack of Class I paths in the inventory of foot trails. A comprehensive list will assist future land managers make well informed decisions if they are able to analyze all trails being utilized by hikers. Existing paths that were not included in the inventory include a path to North Pond originating from the Big Pond Trail; there is also a path to Marion Pond originating from Bailey Pond, and lastly a dead-end path leading generally toward Bailey Pond from the Minerva Stream snowmobile trail.

37. *See #14*

TENTSITES

- Detail was lacking compared to campsite inventories established by other Adirondack Forest Preserve Unit Management Plans with regard to the inventory of campsites in the Hoffman Notch Wilderness. In addition to an overall lack of detail, this UMP has overlooked at least one campsite on Marion Pond our members use.

38. *The inventory of existing trails and campsites is ongoing. Historically used campsites are scattered throughout this wilderness and have been dealt with for years through camping permits issued by the local Forest Ranger. This plan proposes identifying some appropriate locations for formally designating new and historically used primitive tent sites. The Marion Pond campsite will be added to the inventory.*

BETTER ACCESS TO UNIT

-Interested in access from Schroon Falls with well marked registered access. Parking area should be signed as well.

39. *This plan calls for improvement of this access, marking of trail to pedestrian underpass and installation of trailhead signage.*

-The sportsmen request designated routes to the fishing ponds be opened for off-road vehicles. Roads already exist to these ponds; Bailey, Marion, Big and North. DEC policy of denying boats left at these ponds, forcing anglers to carry-in and carry-out each day greatly reduces their time to fish. Early morning and late afternoon fishing will not be allowed as time must be spent lugging prams, rowboats, etc. back and forth, in and out daily. The establishing of a designated corridor for off-road-vehicles will allow the anglers to spend more time enjoying their sport.

The Hoffman area is crisscrossed with roads from past settlements and logging. The ponds in this area were favorite fishing places before DEC banned boats being located on state land during the fishing season. This denial of access and discrimination against anglers and sportsmen is unnecessary as roads already exist that are capable of supporting off-road vehicles, especially those trailering / transporting boats in and out of the area. Snowmobile trails cross these lands that connect Schroon Lake to Minerva, North Hudson, and Newcomb. The Hoffman area was once considered a candidate for a ski resort to rival Gore and Whiteface. All these past uses show that this area is a perfect fit for a designated route for off-road vehicles to these ponds on existing roads.

Additionally, reopening these roads as a designated corridor will allow the DEC to comply with the Americans with Disabilities Law. The law is very clear that no discrimination is allowed and that power-driven mobility devices are allowed every place that is open to any one user group (i.e. Hikers). Our Disabled Veterans, handicapped, elderly, and other less than physically fit would now have a chance to enjoy the outdoors environment, go fishing, or just enjoy nature and the solitude. It would end DEC's discrimination at least in this one area of the state owned land. DEC compliance with the Americans with Disabilities Law is long overdue, especially for our Disabled Veterans.

40. The classification of Wilderness areas is not an attempt to discriminate against anglers or sportsmen rather the recognition of a unique area and an attempt to protect its resources. Hunting, fishing and trapping have long been recognized as an important form of recreation and management tool. Use of motor vehicles and motors in general are not permitted in Wilderness areas. Designation of motor vehicle routes into the Hoffman Notch Wilderness would not coincide with the principles of wilderness management and the APA has determined that a UMP cannot contain recommendations to reclassify state lands. Sportsmen are welcome to hike to Hoffman Notch water bodies and bring with them a lightweight boat or utilize a non motorized wheeled boat carrier in order to access these ponds. Camping up to three days without a camping permit is allowed in Hoffman Notch Wilderness either at sites that will be designated as a result of this UMP or at any location which is at least 150 feet from a water body, trail or road. Storage of a boat in your campsite during your stay is also permitted. The DEC is in compliance with the Americans with Disabilities Act and will decide on a case by case basis how best to accommodate the needs of people with disabilities.

-Trails are concentrated in south end of unit. Severance Hill popularity is because of view and accessibility. Other viewpoints aren't near existing trails. Northern section of unit was used more prior to Northway construction, especially by hunters. \$250,000 was spent in 1964, yet DEC has not finished providing access to the east side of the unit. If hunting is to be feasible in all of unit, better access must be provided. Northway underpasses should be better utilized.

41. Improved access is needed for this unit especially along the north and east boundaries. This UMP calls for improvement of the trailhead located approximately 1.6 miles north of I-87 Interchange 28 near the gravel pit. This plan also calls for the location of a bridge and development of a trail on adjacent Hammond Pond Wild Forest leading from the vicinity of the fish weir to the pedestrian underpass located just north

and west of the weir location. The pedestrian underpass in this location has not been able to be used by most due to the difficulty of the Schroon River crossing. Development of this area would provide users much improved access to the northeast quadrant of Hoffman Notch Wilderness. A short unmarked trail segment is proposed heading south into the unit from the Blue Ridge Rd. near the western boundary of the unit. This trail will follow the state land boundary into the old access road to the Durgin Farm and should significantly improve access to the northwest quadrant of the Hoffman Notch Wilderness. This UMP calls for the boundaries of the unit to be better signed and painted in general which should better clarify boundaries for private land owners, administrative purposes and for public users. Clearly defined boundaries may also help improve access to the unit.

-Underpasses should be better utilized.

42. *See #41 above.*

-Eastern/n.eastern areas need easier access, including water crossings.

43. *See #41 above.*

- A foot bridge is sorely needed over the main inlet to Big Pond on the north side for rescue purposes, if nothing else.

44. *This crossing will be assessed during future management of this area to determine the most appropriate form of crossing structure if necessary.*

-Improving the parking lot on Blue Ridge Rd. is a good idea.

45. *Improvement of this parking area will accommodate more vehicles and will allow for easier winter maintenance.*

- A beautiful campsite on the north shore of Big Pond and another great spot in a cove along the east shore, about 75 to 100 yards off the main trail would make great primitive camp spots. Would it be possible to also include one primitive camp spot on North Pond as well?

46. *A campsite has been proposed for North Pond. Two appropriate campsites will be identified and designated on Big Pond however; they will need to meet the separation guidelines of ¼ mile.*

- A sign is needed at the parking area of the Big Pond Trailhead. The parking lot, trail and access tunnel located north of I-87 exit 28 needs to be signed and plainly marked to improve access. Need a bigger parking area on Blue Ridge Rd. as well as a sign.

47. *The final plan has been modified to address these issues.*

- Education of visitors about the forest preserve and its wild components should be a major purpose of DEC management. We should have at least a bare minimum of information to help people appreciate the area. Every kiosk should have a display of information about the Park, forest preserve, and natural history of the specific unit to challenge / educate the visitors to the area. Local naturalists might create the display for their own areas. To get visitors to look at the natural features, they need the information right on the trail. We are wasting the wild uniqueness of the forest preserve by not helping people look at natural features of

all kinds with opened eyes and ears. The website information proposed in the UMP for the unit would be useful for residents but not necessarily for the many visitors who will not know about it or be able to access it. It could include much additional natural and cultural history and many maps for different destinations.

48. Trailheads as opposed to the interior would be an appropriate location for any additional information about the unit. Perhaps as kiosks are updated and added to the unit some additional information can be added as well as a reference to the internet accessible data called for in this plan. Given that this is a Wilderness area, however, one of DEC's management goals for Hoffman Notch, as required by the Adirondack Park State Land Master Plan (APSLMP), is to make the "imprint of man's work substantially unnoticeable". While parking areas and trailhead registers help provide a safe recreational experience, excessive signage and interpretive opportunities are generally not provided in Wilderness areas.

- A campsite on North Pond would be appropriate. The trail should be maintained well enough for winter use because a snowshoe trip across it to Johnson Pond is an easy bushwhack to a beautiful wilderness pond with a striking view of Hoffman Mt.

49. See # 46 above

- As there is not a single one in this wilderness, a lean-to should be built somewhere on the east side of the unit so that new visitors are able to see this iconic traditional Adirondack shelter. This should be in a spot that is not going to be overused because of too easy accessibility or visibility, possibly on North Pond or near a large stream.

50. A lean-to to replace the campsite proposed along the new 4-mile trail segment has been called for in this plan.

- Hiking trails proposed in south east corner of unit which may utilize old snowmobile trails should have small bridges constructed of native materials and be suitable for snowshoers and skiers with high railings for when there is deep snow.

51. Where small bridges are necessary they will be constructed of native materials and with all season use in mind.

Marion Pond - The last part of the road to the Hoffman Notch trail from Loch Muller needs maintenance to allow normal fuel-efficient cars to use it. It is not fair to the general public to allow use of large four wheel drive trucks or jeeps on roads in spring if they will be destroyed for use by most drivers.

52. This access road and parking lot need to be improved and maintenance of this area is called for in this plan.

- The outlet and inlet crossings of Bailey Pond have cables for high water and that is all that can be expected, though many people could not handle them. Rock hopping is easy at average water levels. The old road going on north to the Marion Pond bushwhack trail includes a long raised esker-like feature, but straight, flat on top and with steep sides maybe 75 feet down to the stream, and goes through beautiful hardwoods rich with wildflowers in spring. The bushwhack trail to Marion Pond should have the orange ribbons taken down and marked to make following it easy, but that is about all it needs. Hikers will quickly make routes around the inevitable blowdowns.

53. Cables are not considered a natural material in the Adirondack Park State Land Master Plan and therefore are not permitted in Wilderness areas. The trail to Marion pond is not called to be marked but will remain an unmarked trail. Occasional blow down removal may occur on this trail only to define an appropriate route.

-Historically the Hoffman Notch Wilderness contained a large number of trails that appear on older topo maps. With the loss of snowmobiling, this area has been an underutilized asset and unfortunately many of these trails are no longer maintained and are in jeopardy of being lost. This UMP process is critical for recognizing these trails so that they can once again be opened, used and become a positive economic factor in this region's struggling economy.

54. Numerous historic trails exist in this unit. This plan clearly defines the location of the marked and unmarked routes that will be managed within this unit. The interesting historic network of trails in Hoffman Notch Wilderness will continue to be identified and will also be looked at when planning the new routes described in this plan in order to minimize redundancy and find the most appropriate route. The historic network of trails may continue to be used by the public but will not be recognized as developed trails mentioned in this plan. An inventory of these trails will be kept as they are discovered and will be available as options in future revisions of this plan if additional trail segments are recommended at that time.

- I go on record "Leave it alone". Forest preserve becomes desecrated by afforded and easy access. I suggest you keep the trails long and tight.

55. Your comment is a Wilderness sentiment held by many. The goal of this plan is to find a balance between providing appropriate Wilderness access while protecting the natural resources of the area.

- If we are serious about encouraging more use of this great resource we need to start by improving the access. This means spending money first on the entrances, including the SW entrance on Cheney Pond Road Minerva. This Minerva trailhead is not mentioned in the draft UMP. There is an unmarked parking area probably on private land.

56. Access points to be improved have been described in this plan. The western boundary of the Hoffman Notch Wilderness is along a snowmobile trail which separates this unit from Vanderwhacker Mt. Wild Forest. Hoffman Notch Wilderness can be accessed from many points along this trail. The northern terminus of this trail is Cheney Pond which can be accessed from The Blue Ridge Rd. by motor vehicle. A small parking lot exists along the Blue Ridge Rd. at the access road to Cheney Pond.

- All trailheads should be marked with a sign visible from the public road, clear marking of formal parking area and a register with a map showing the part of the HNWA accessible from that trailhead.

57. These are all excellent points and hopefully can be carried out during the implementation of this plan.

- Interior improvements are needed but less importantly than properly informing the public about access points at trailheads.

58. Improving access to the Hoffman Unit while protecting its resources is a main focus of this plan.

- This unit could be improved with added emphasis on access. Small investments would go a long way restoring and marking entrances, including the SW entrance on Cheney Pond Road Minerva. The Minerva

trailhead not mentioned in the draft UMP already has an unmarked parking lot. All trailheads should be marked with a sign visible from the public road, clear marking of a formal parking area and a register with a map showing the part of the HNSA accessible from that trailhead.

59. Improved access to the Hoffman Notch Wilderness while also protecting the wilderness character of the area is a goal of the Department. This UMP seeks to recognize where the public has access to the unit and provide a method for identifying these locations on the ground. If the Minerva trailhead mentioned here is the small lot on the east side of Cheney Pond Rd. .6 miles north of Irishtown Rd.. It is not located on State Land.

INVASIVE PLANTS

-All efforts should be made to reduce invasive species introduction. At recent APIP conference, Vanderwhacker Mountain Wild Forest was mentioned as one of least invaded areas. Biological controls, if not already used, should be used to prevent any further spreading from Hoffman into Vanderwhacker. Hopefully eradication of purple loosestrife within Hoffman Notch will be possible. Care must be taken when building parking lots not to introduce invasive species into the unit.

60. Invasive plants are a major planning consideration and source of concern. The DEC will continue to work with partners to stop the spread of invasive plants into and from the unit.

CONFLICTING USES

-Concerned about potential hunter / hiker / skier conflicts which may occur.

61. Conflicts between recreational users are almost unavoidable. Hiking and skiing will continue to occur during the hunting season. No single use takes precedent over another use in this case, however, users must recognize and respect other users. The DEC attempts to educate users of state lands about what uses occur on those lands, when various uses occur, how to be prepared and how to avoid or respect other uses.

- There are two spring houses located in the southern portion of the HNSA which appear to be in good repair. Are these on NYS land?

62. Multiple spring houses are located along the southern and eastern portions of the unit and have varying degrees of rights of way to maintain and use these spring houses. A more detailed account of these is being added to this plan, including a map in the appendix.

ORGANIZED EVENTS

-Competitive events - page 60 in plan outlines a management principle stating competitive events are not appropriate for Wilderness areas. Also, page 83-84 note that group size, even with a permit should be limited to 15 for day use and 8 for overnight camping. Though this is sound guidance for maintaining a wilderness setting, we ask that this policy be reconciled with the fact that an annual competitive snowshoe event is held on the southern trails in the Hoffman Wilderness. We support DEC's management policy of deferring competitive events to wild forest, but we also recognize the fragile winter economy of some communities. Because of the high value of habitat in Hoffman Notch, we suggest limiting the competitive event to the trails where it is traditionally held.

63. This traditional use snowshoe race event has occurred in the Hoffman Notch Wilderness in the past and was considered an appropriate use for this area. The race was managed through the issuance of a

Temporary Revocable Permit, a process that will continue to be used to handle events that the Department feels are compatible with wilderness principles.

-Snowshoe loop trail needs to be recognized; snowshoe races should be allowed as they are low impact.

64. *See #62 above*

-Supports snowshoe race.

65. *See #62 above*

-concerned that the document does not discuss competitive events (UMP should discuss Hoffman Notch snowshoe race in historical terms, DEC's concerns assumptions etc. were lessons learned? What will permitting criteria be for future events in other organizers request the use of wilderness facilities?)

66. *This important information was added to the plan.*

- This loop trail was used for a snowshoe race last year run by the people of Schroon Lake. Snowshoe racing, a non-destructive use of a basically flat trail (snow protecting the substrate, unlike running races), should be allowed in wilderness with a detailed Temporary Revocable Permit (TRP).

67. *See #62 above*

REGULATIONS

-question the proposal to restrict camping above 3000 feet in elevation; (Current regulations in High Peaks Wilderness limits camping between 3500 and 4000 feet to designated sites only, and this is the standard that is being proposed for other wilderness areas as well. I suggest it would be more appropriate to simply extend the provisions of the existing regulations to include Hoffman Notch)

68. *Existing Wilderness camping regulations, including no camping above 3,500 feet, will be extended to include Hoffman Notch and will therefore, result in protection of the peak of Hoffman Mt. but would not include the other peaks in this wilderness. Should future conditions of peaks within the unit show negative impacts as a result of camping, a regulation will be drafted for Hoffman Notch Wilderness that will restrict camping above 3000 feet in elevation to designated sites.*

- Marion Pond is a jewel now used almost only by fishermen, some of whom leave too much debris when they camp for others to carry out. If everyone signed the registers, maybe there would be less of a trash problem. The two aluminum rowboats there make fishing easy, but unlike the oldtime wooden boats which eventually rotted away when they sprang too many leaks, aluminum does not disappear when the owners get too old to get them out again or they become unusable.

69. *Storage of personal property on State land is not allowed. As the Department is made aware of personal or discarded materials being stored on state land, they will be dealt with as soon as possible and as resources permit.*

-ADK supports NYCRR 190.13(d)(3) which limits camping in the High Peaks Wilderness between 3500 and 4000 feet to designated sites only. This standard is being proposed for other Wilderness areas as well. While the Natural Heritage Maps do not indicate any rare, threatened or endangered plant species, a Bird

Conservation Area has been identified within the unit at altitudes above 2800 feet. ADK will support whatever measures necessary to protect special habitats, however for consistency sake, we should keep regulations as uniform as possible to prevent confusion amongst campers.

70. See # 68 above

ENCOURAGEMENT

-Very excited about this plan as well as Scaroon Manor

71. *Hopefully this plan will help to protect this unique area and provide Wilderness compatible opportunities for recreation.*

-Support resolution passed by town in favor of plan.

72. *Support from the public and from local towns will certainly aid in management of the Hoffman Notch Unit.*

- In closing we would like reiterate our strong support of the department's proposals, and appreciation for your attention on this important issue. We are delighted that the unique character and history of the area will be preserved for future generations to enjoy.

73. *Thanks for your support.*

WILDERNESS

-suggest that the DEC review and consider federal wilderness monitoring techniques for tracking quality trends in all Adirondack wilderness areas. Often the issues and concerns that we have in New York parallel issues in the National Wilderness Preservation System and state land managers often duplicate efforts of federal land managers. I recommend that DEC personnel read and consider adopting certain federal policies and guidelines regarding wilderness management. A particularly useful document is entitled "Keeping It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System".

74. *DEC staff are aware of "Keeping It Wild" and have begun to develop strategies for monitoring wilderness qualities in the Adirondacks and Catskills, similar to the federal program.*

-In the adjacent Vanderwhacker Wild Forest unit to the west of HNW, Stony Pond is a beautiful, wild, peaceful pond and bog complex where loons breed every year and the area is generally teeming with wildlife. It deserves to have Wilderness status summer and winter. It is pristine in summer, but in winter it is a snowmobile trail and is slated to be a major "community connector" despite major problems with the route. If that impractical hope is abandoned (and a connector made that doesn't cross the busy 28N highway two times or climb and descend 1000 feet in a few miles), the main problem would be that there would have to be a three mile Primitive Corridor leading to three camps deep in the forest adjoining Hoffman Notch Wilderness. The route into the camps has a deeded right of way, though it is deeply wallowed and eroded to the point that ATVs have trouble getting in there. Stony Pond would be an excellent addition to Hoffman Notch which has very little ponded water, partly because it is one of the few places on forest preserve in the whole area where truck traffic noise from the 1000 foot climb from Minerva to the crest **cannot be heard.**

75. *Many people feel that Forest Preserve land classifications should be different from what they are (some in one direction and some in the opposite direction). Unit Management Plans cannot contain recommendations to reclassify state lands.*

- The Hoffman Notch had once been the core of the Town of Schroon's snowmobile trails. The Wilderness classification prohibits motorized vehicles in this area. However, it is not just urban legend that back in the 1970's there were promises of compensation for the loss of the many miles of snowmobile trails with the implementation of the Adirondack Park State Land Master Plan. We are still patiently waiting.

76. *The creation and/or designation of snowmobile trails occurs during the unit management planning process for Wild Forest areas. The Department performs an extensive analysis of the area, and engages in discussions with local officials, snowmobile clubs, and the general public regarding the future of snowmobiling within a given unit. Any future snowmobile trail designations will continue to utilize the same process.*

WILDLIFE

- Tradition should not be a reason for using leg hold traps, a practice no longer acceptable to the majority of owners of our wildlife, all New Yorkers, not just sportsmen. Killing an animal is now the only way a person can take ownership of a wild animal that otherwise belongs to none and all of us, an odd situation.

77. *Foot hold traps are a legal and efficient means to restrain and harvest furbearers in New York, including some species like coyotes and fox that are very difficult to harvest using other methods. Moreover, the Department has participated in scientific studies to evaluate the use of a variety of traps, including foot hold traps. These studies result in recommendations or "Best Management Practices (BMPs)" for trappers to use the best, most efficient, and most humane traps on the market. The Department promotes these BMPs and strictly regulates all aspects of furbearer trapping to ensure that harvests are sustainable over time.*

- Because a host of native mammals and predatory birds depend on hares and grouse for their winter survival, and even hares do not ever reach "overpopulation" levels in the Adirondacks, hunters should be encouraged to voluntarily leave them for the wildlife, starting with the Hoffman Notch Wilderness UMP.

78. *Populations of hares and grouse in the Adirondacks are not limited by hunting mortality, rather, by habitat quality. Both of these species require young, regenerating forest that is limiting within the Forest Preserve.*

- Wildlife corridors should be planned for, somehow connecting units that are now separated by high speed highways. Lower speed limits at night and in other low visibility conditions could lower the devastation of wildlife caused by high speed as well as lower the amount of fossil fuel we burn and hence our contribution to global weather and climate changes.

79. *Wildlife corridors that allow animal movements across fragmented landscapes are very important for a number of species. However, you are confusing corridors with wildlife passages that allow movements across highways (for example, underpasses and overpasses). While it is unfortunate that some animals are killed along highways, this form of mortality does not limit wildlife populations in the Adirondacks. Moreover, simply constructing these passages does not guarantee that wildlife will necessarily use them.*

-Wildlife - Instead of focusing on what sportsmen want in the way of hunting, fishing and trapping “opportunities”, might we begin to think more of what prehistoric conditions were like for native animals and try to maximize those conditions and population numbers **for the wildlife rather than the desires of sportsmen?**

80. The Department does not attempt to manage for “prehistoric conditions.” The Department manages the wildlife resource in a scientific and sustainable manner for consumptive and non-consumptive uses.

- **American martens** are just now becoming fairly widespread again in the Adirondacks. Even many native Adirondackers do not know they exist, let alone in their backyards. We think trapping them in Wilderness generally should be discouraged until they are common in their previous ranges throughout the Adirondacks. What is the need for knowing their numbers (which trappers provide for DEC) except for knowing how many can be trapped without too much damage to the population? Any trapping at all will slow down their increase in range, and how can that be a good thing?

81. Martens are not “just” becoming fairly common. Martens have been expanding their range throughout the Adirondacks since the 1940s and currently occupy most of Adirondack Park. Understanding the distribution and trends of the marten population is important for conserving this species on the Adirondack landscape (for example, habitat conservation) and monitoring efforts as part of a scientifically-rigorous means of ensuring sustainable harvests of marten. Since 1978 New York State has had an open marten trapping season under a highly regulated harvest system involving permits and bag limits. At the same time, our marten population has expanded throughout the Adirondacks, indicating that trapping has not limited population growth. Lastly, because much of the Adirondacks are remote and inaccessible by sportsmen, there are large areas that are not trapped. These areas, combined with the highly regulated nature of our marten trapping season, ensure that harvests do not negatively impact marten populations.

- Concerning reintroducing extirpated species: DEC boiler plate says it can be done “where their existence is compatible with other elements of the ecosystem”. How can a native animal not be compatible with the rest of its natural habitat? DEC has been given the mandate to reintroduce extirpated native animals “wherever feasible”.

82. Implicit in this comment is the assumption that the ecosystem has not changed since the species was extirpated. For example, Canada lynx are a native species and reintroduction is not likely feasible given current conditions within Adirondack Park. Recent habitat suitability models suggest that snowfall and hare populations are limiting in this area, resulting in only a small portion of the High Peaks being considered suitable lynx habitat. In fact, an attempted reintroduction of lynx in the Adirondacks failed, likely due to limitations in habitat and prey populations. To suggest that native species be reintroduced simply because they are “native” does not take into consideration the conditions or suitability of the current ecosystem to support those species.

FISHERIES

-“Reclaiming” Marion Pond means poisoning (with rotenone, maybe the least obnoxious piscicide available but highly toxic to fish) almost every aquatic animal in the water. The goal is to restore native brook trout, but how long before fishermen foul the waters again? There needs to be much stricter enforcement and stiffer penalties (permanent loss of fishing rights?) to prevent trash fish being introduced over and over to scores of water bodies all over the Park. Stocking waters with non-native fish, no matter how “historical”, for put and take fishing, seems an expensive luxury for one small interest group, and stocking non-native brown trout is given as a possibility for Marion Pond. This is to “promote angler use”. Why promote an

activity which often results in degradation of the natural conditions--in Wilderness? Permit fishing, but don't promote it, and Protect does not support ever introducing non-native fish in Wilderness.

83. For pond reclamation, DEC treats with rotenone concentrations of 1.0 ppm (parts per million). That concentration has proven to have minimal impacts to amphibians and aquatic invertebrates. Such "non-target" species are tolerant of rotenone at treatment concentrations, can avoid the pesticide and/or have life stages are available to repopulate the pond. In past reclamations, DEC compared post-treatment invertebrate samples with pre-treatment collections, and the comparisons showed that invertebrate diversity after reclamation is equal to or greater than it was prior to removal of non-native fish populations. Post-treatment mortality and survival observations led DEC to conclude that odonates (damselflies and dragonflies) are virtually not impacted in ponds treated with rotenone at concentrations used in New York. Concerning amphibians, post-treatment sampling was conducted at several treated waters where limited amphibian mortality had been documented. At each pond, field personnel were able to collect all species that had experienced mortality. In most cases, other amphibian species that had not shown up in the mortality collections were also documented. Marion Pond is proposed to be restocked with Adirondack strain heritage brook trout after the non-native fishes are removed. While brown trout may be stocked in some wilderness ponds where there is not potential for native species to persist due to abundance on non-native and competing fish species, and where reclamation of the waterbody would not be feasible. Thus the intent and expectation is that brown trout will not be stocked following the reclamation of Marion Pond.

-Fish, native and not, are raised and stocked in an industrial fashion, a very questionable practice in Wilderness, to accommodate fishermen. Hunting and trapping regulations should be more concerned with natural native animal populations rather than with keeping them at a certain level in response to the desires of recreational sportsmen

84. Fishing is one of many activities which are especially appropriate for wilderness areas, and DEC is responsible for promoting fishing and other forms of recreation where appropriate. DEC is also responsible for managing fisheries through regulations, stocking, and habitat management, and providing diverse angling experiences for a wide variety of interest groups. Stocking is just one of the tools we use, and it is a necessary tool to ensure persistence of native fish species as part of the natural aquatic ecosystems appropriate in wilderness and other areas.

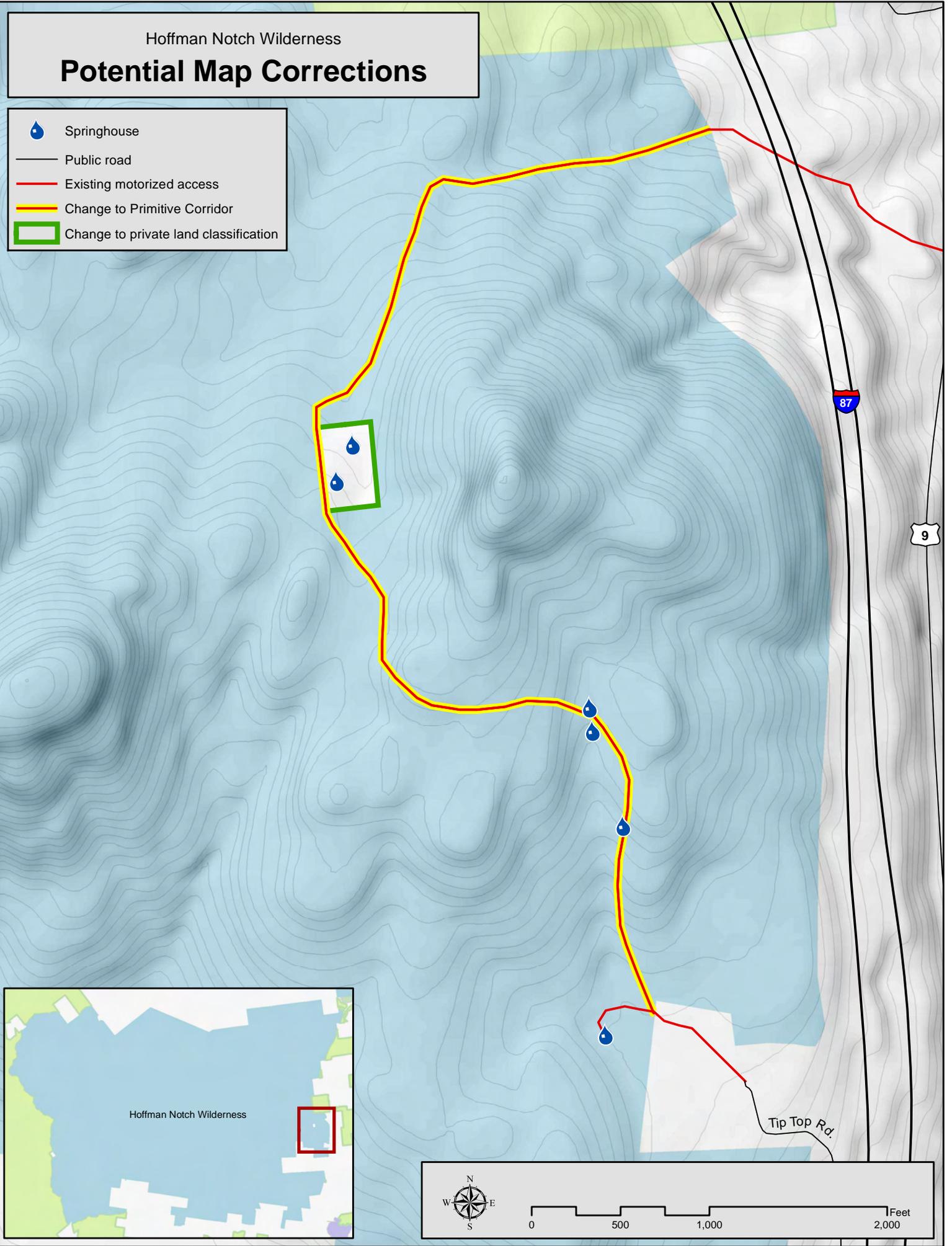
The Department supports and manages for the consumptive and non-consumptive use of wildlife species and the conservation of healthy ecosystems. Our hunting and trapping regulations are designed to ensure that wildlife harvests are sustainable over time.

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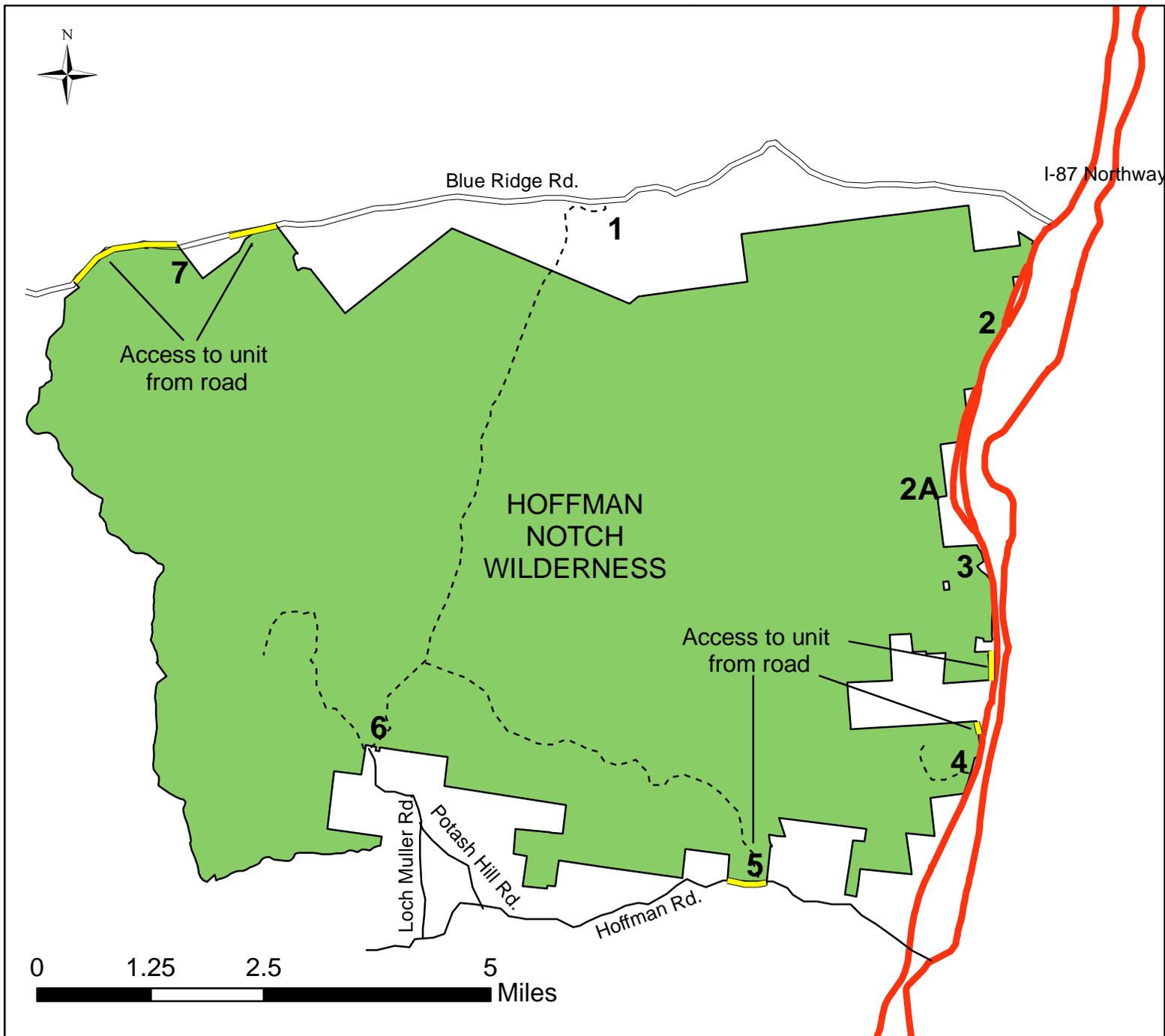
APPENDIX 11: MAPS

Hoffman Notch Wilderness Potential Map Corrections

-  Springhouse
-  Public road
-  Existing motorized access
-  Change to Primitive Corridor
-  Change to private land classification



Hoffman Notch Entry Points



1 - Existing driveway / trailhead Blue Ridge Rd. Hoffman Notch Trail. This parking lot will be enlarged to accommodate 5 cars.

2 - Pedestrian underpass beneath Northway - Must access through Hammond Pond Wild Forest and cross Schroon River. Dependent upon bridge across Schroon river through Hammond Pond Wild Forest UMP.

2A - Pedestrian underpass near 17th brook, not planned to be used due to close proximity of entry point #3.

3 - Vehicular underpass and parking lot 1.6 miles north of I-87 exit #28. Parking lot will be improved.

4 - Pedestrian underpass and trailhead parking lot for Severance Hill trail.

5 - Trailhead Hoffman Rd. access to Big Pond Trail. Parking lot to be increased 1-2 vehicle spaces to accommodate 5 vehicles.

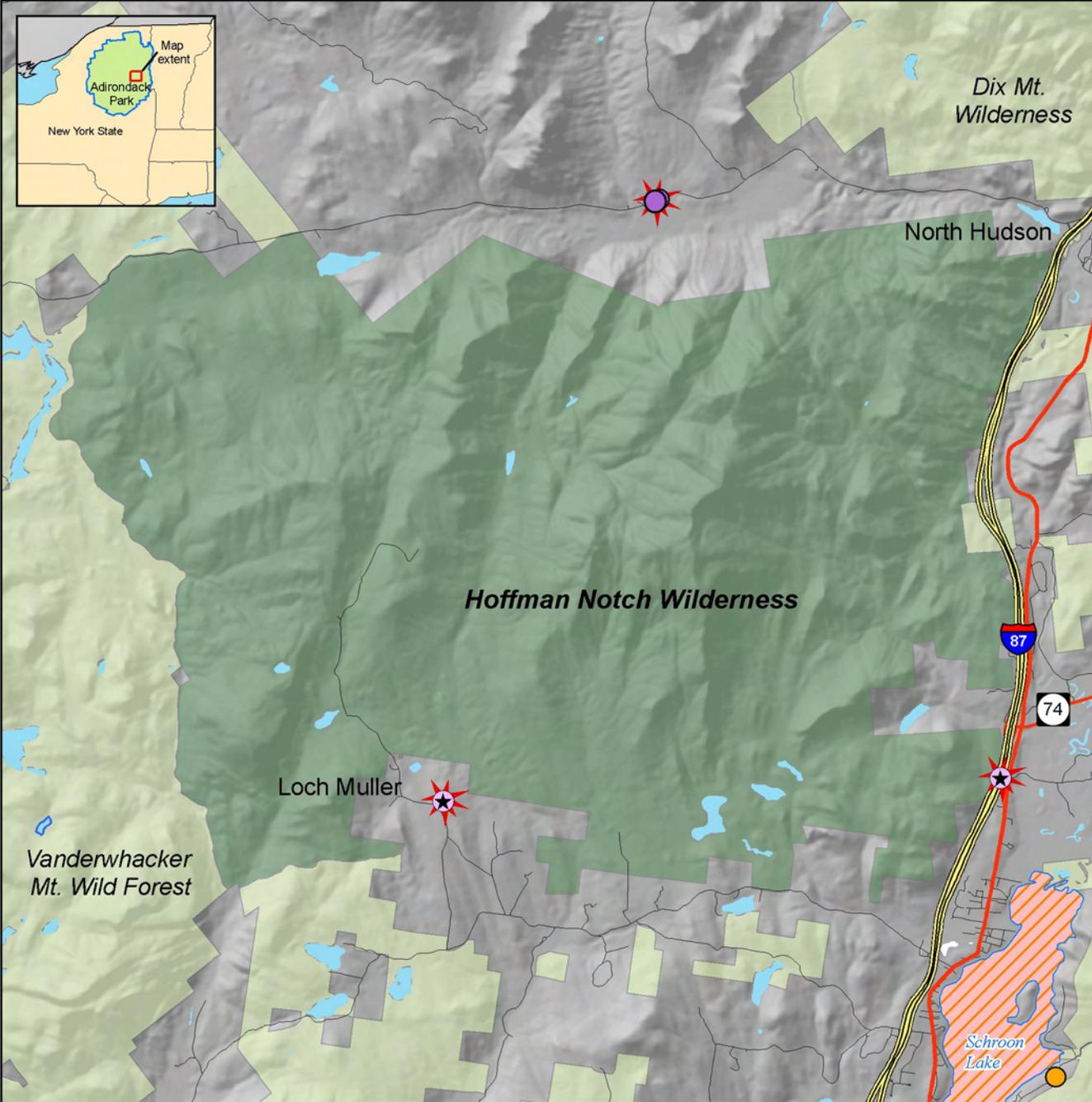
6 - Trailhead end of Loch Muller Rd. Road and parking lot will be improved to allow easier access for low-clearance vehicles.

7 - Existing driveway along Blue Ridge Rd. 3-4 car parking lot will be constructed in this location.

Hoffman Notch Wilderness

Documented Terrestrial & Aquatic Invasive Plant Species

New York State Department of Environmental Conservation



Legend

- Interstate
- U.S. Highway
- State Highway
- Local Road
- Hoffman Notch Wilderness
- Other Public Lands

Terrestrial Invasive Plants

Species

- Spotted knotweed
- Purple loosestrife
- Phragmites
- Sites discussed in text

Aquatic Invasive Plants

- No infestation found
- Variable-leaf watermilfoil detected
- No data

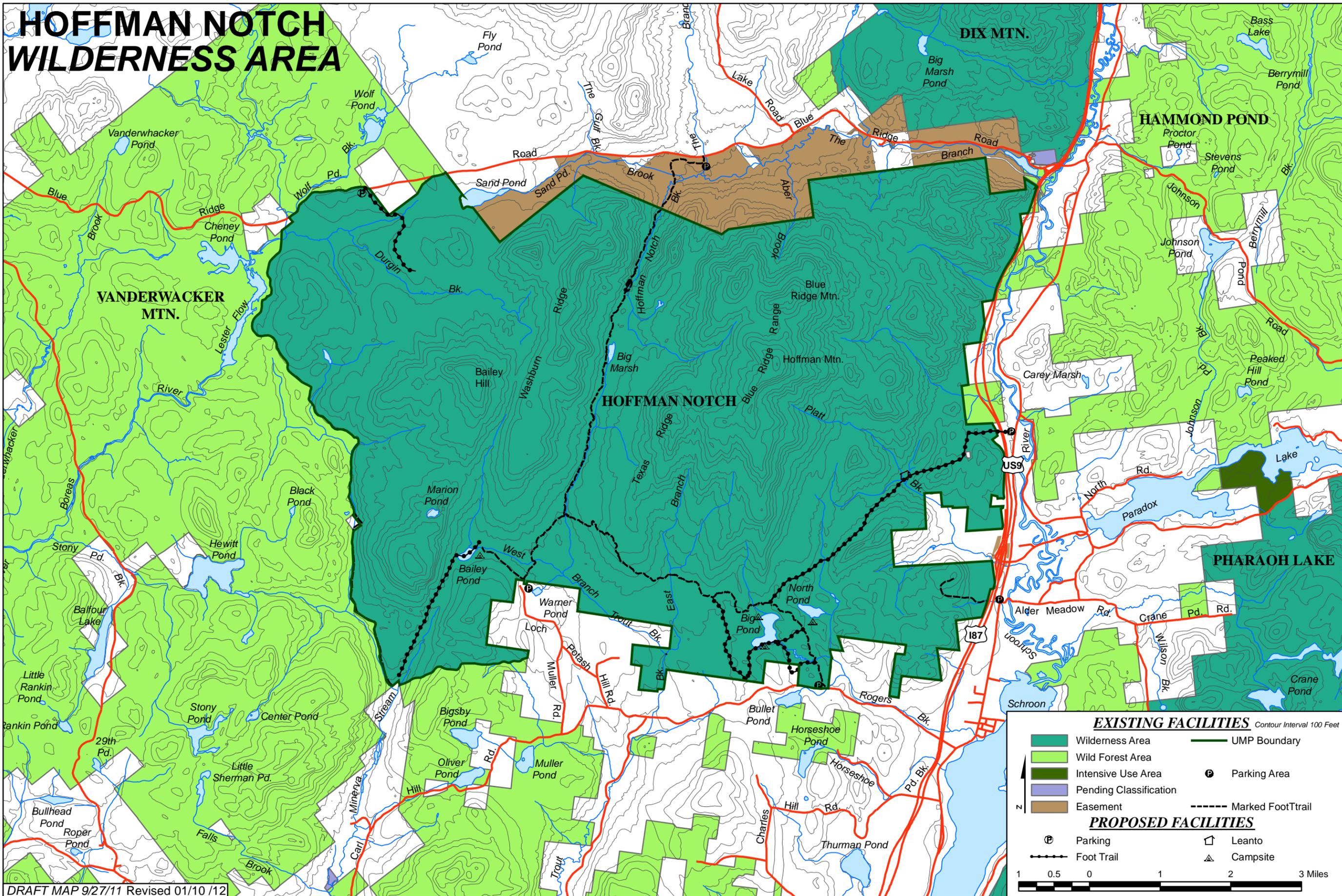


0 0.5 1 2 Miles

Scale 1:110,000
1 inch = 1.73 Miles

Map produced by the SUNY-ESF Adirondack Ecological Center under the auspices of the UMP-GIS consortium. Ownership boundaries are not for legal use. 5/21/08

HOFFMAN NOTCH WILDERNESS AREA



DRAFT MAP 9/27/11 Revised 01/10/12

EXISTING FACILITIES Contour Interval 100 Feet

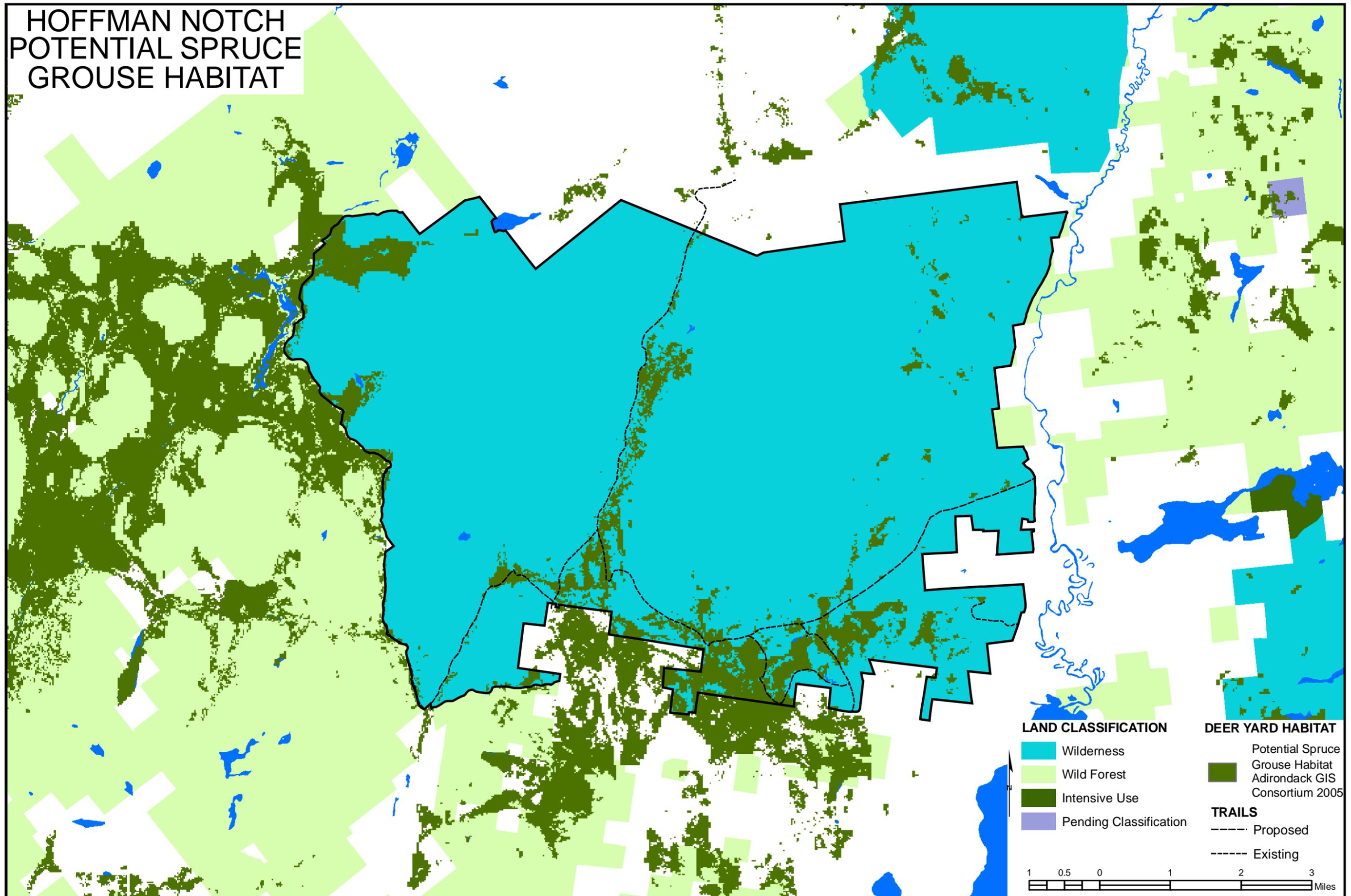
Wilderness Area	UMP Boundary
Wild Forest Area	Parking Area
Intensive Use Area	Marked Foot Trail
Pending Classification	
Easement	

PROPOSED FACILITIES

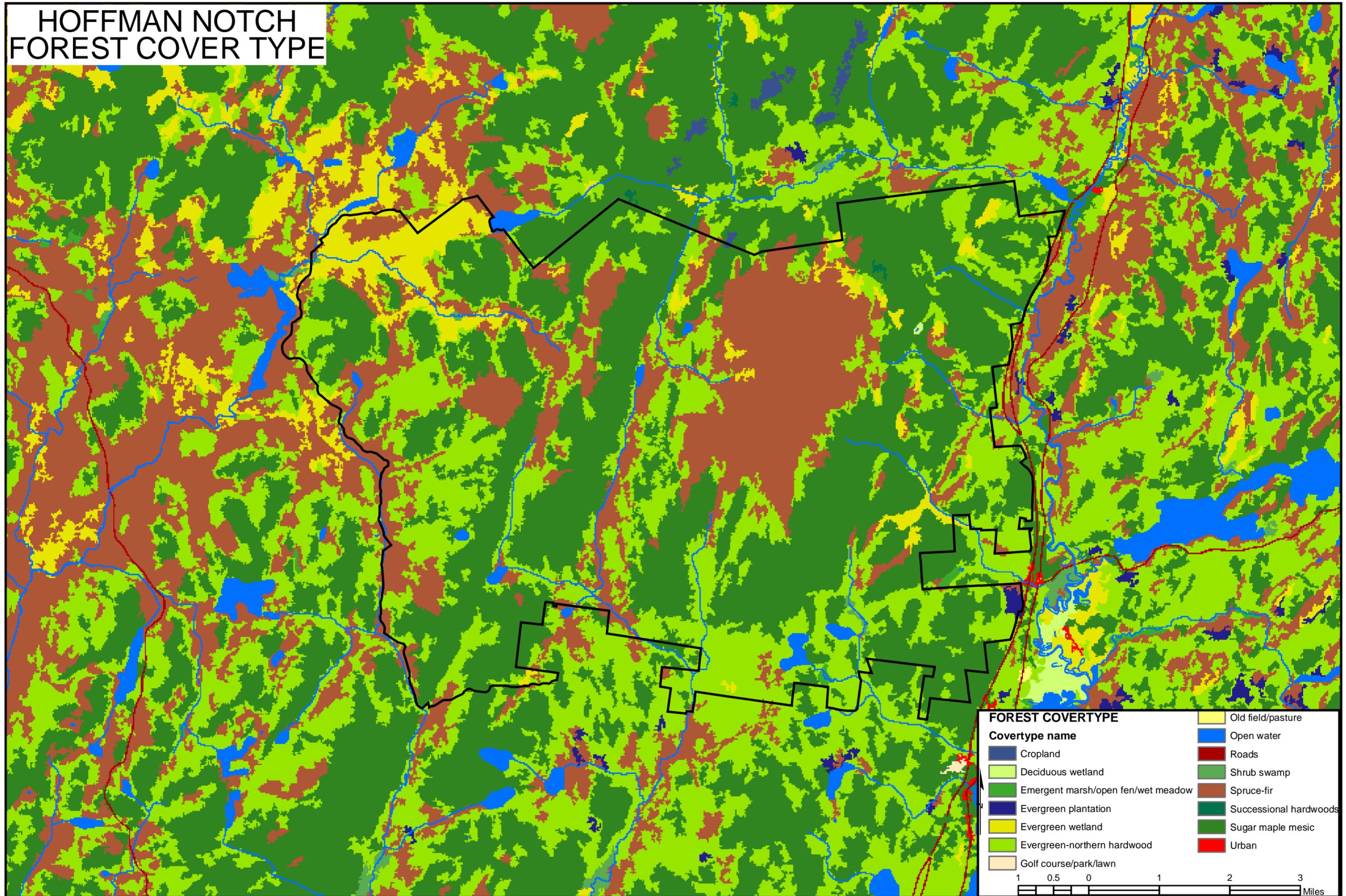
Parking	Leanto
Foot Trail	Campsite

1 0.5 0 1 2 3 Miles

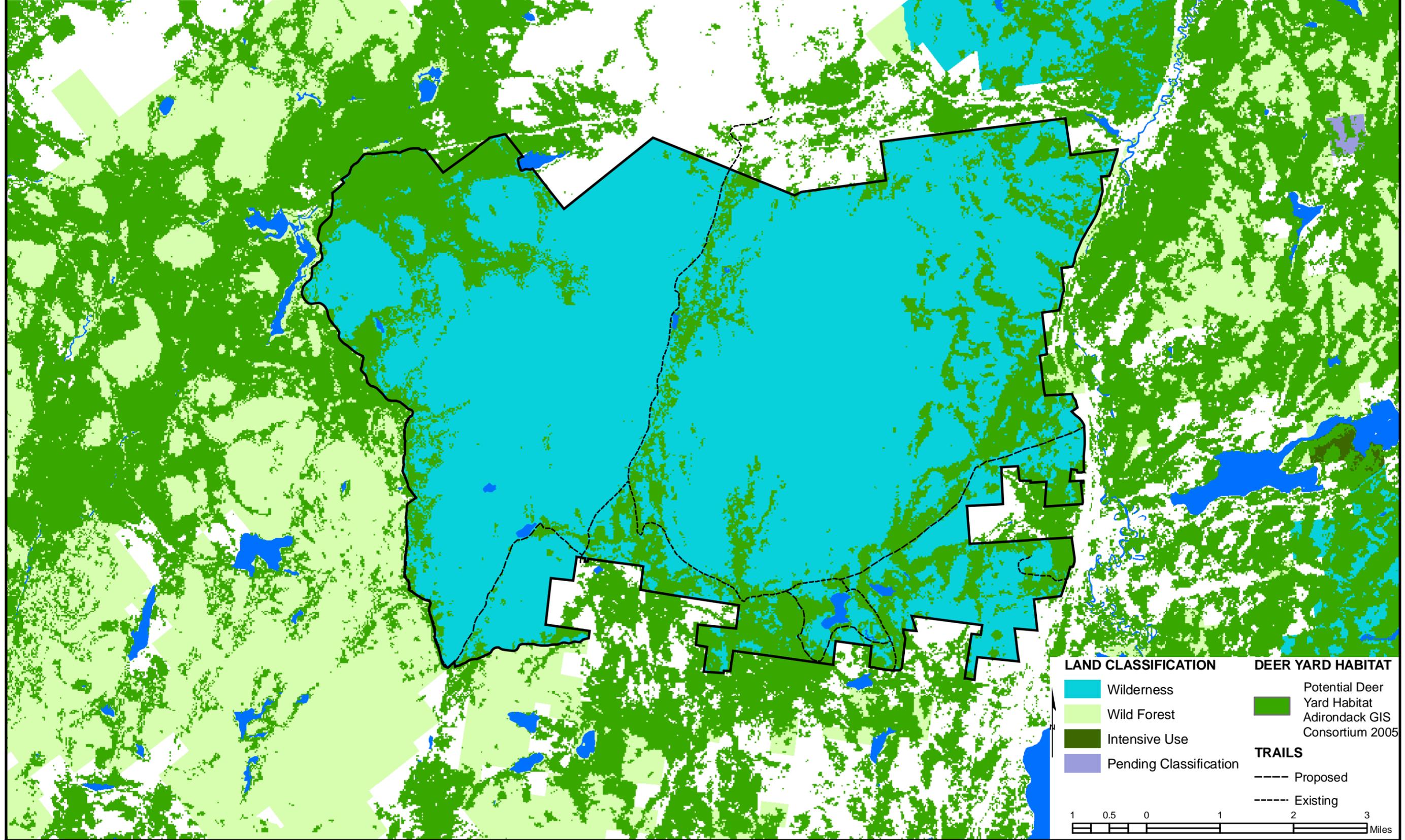
HOFFMAN NOTCH POTENTIAL SPRUCE GROUSE HABITAT



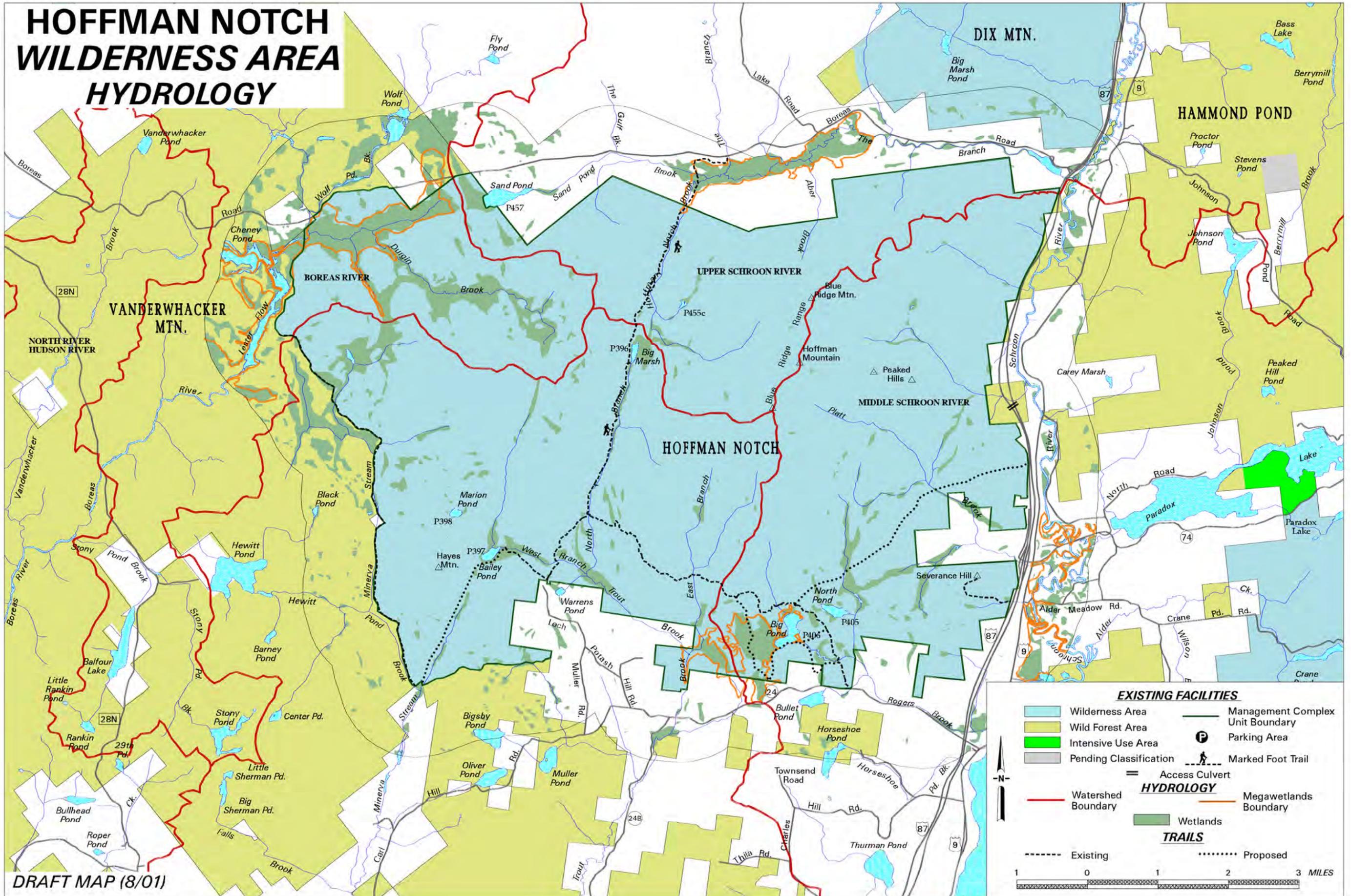
HOFFMAN NOTCH FOREST COVER TYPE



HOFFMAN NOTCH POTENTIAL DEER YARD HABITAT



HOFFMAN NOTCH WILDERNESS AREA HYDROLOGY



DRAFT MAP (8/01)

EXISTING FACILITIES

- Wilderness Area
- Wild Forest Area
- Intensive Use Area
- Pending Classification
- Management Complex Unit Boundary
- P Parking Area
- Marked Foot Trail
- Access Culvert

HYDROLOGY

- Watershed Boundary
- Megawetlands Boundary
- Wetlands

TRAILS

- Existing
- Proposed

