

Coffin's Island Land Use and Management Plan

Table of Contents

1.	Purpose and Background	2				
2.	Legal Protections as Conservation Land	3				
3.	Description of Parties Involved in the Plan	4				
4.	Site Description	4				
5.	Land Use	7				
6.	Management Plan	8				
7.	Maps	11				
	A. Outstanding Resource Water (ORW) Map	11				
	B. Water Resource Protection District	12				
	C. Potential Public Water Supply	13				
	D. Wetlands Map					
	E. Topographic Map					
	F. Elevation Lines	16				
	G. Soil Map	17				
	H. NHESP 2005 Priority Habitats for State-Protected Rare Species	18				
	I. High Priority BioMap Core Habitat Designations					
	J. Map of Existing and Potential Trails	20				
	K. Public Access (Approximate Parking, Gate, and Sign Placement)	21				
8.	Signatures	22				
Aŗ	ppendices					
•	Appendix A: Newburyport City Council and Newbury Town Meeting Acquisition Vote Lan	iguage				
	Appendix B: Deed	0 0				
	Appendix C: Self-Help Program Post-Completion Responsibilities					
	Appendix D: Article 97 and M.G.L. c. 132A, 11					
	Appendix E: Stewardship Council					
	Appendix F: Priority Habitat and High Priority Habitat BioMap Definitions					
Appendix G: NHESP Oak-Hickory Forest Natural Community Classification						
	Appendix H: Natural Heritage Checklist (Biodiversity Days)					
	Appendix I: Massachusetts Historical Commission Inventory Form					
	Appendix J: Historic Maps					
	Appendix K: Sample Signs					
	1 0					

1. Purpose and Background

Coffin's Island is a scenic, historic, and environmental treasure located in both Newbury and Newburyport. The two communities jointly own the property and will manage it according to the specifics set forth in this plan, approved by the Conservation Committees of each community.

This Land Use and Management Plan:

- describes the site,
- □ identifies the conservation values of the Coffin's Island property,
- □ defines the intended uses,
- outlines the types of active interventions needed to protect those conservation values and perpetuate those uses,
- and describes the parties and procedures involved in managing the site.

Signed copies of the initial Plan and each updated Plan will be kept by the Conservation Commissions and Planning Offices of the City of Newburyport and the Town of Newbury as a permanent record of the agreement on how to manage this permanently protected open space property. In addition, a signed copy of the initial Plan will be kept by the Massachusetts Office of Environmental Affairs, Division of Conservation Services. This plan may be updated from time to time as additional research occurs or new issues arise.

This Plan was written by the Coffin's Island Stewardship Council, under the jurisdiction of the Conservation Commissions of the City of Newburyport and the Town of Newbury.

Acquisition Background

Coffin's Island is so named to honor its history and to recognize the distinct upland topography within the larger Wet Meadow area of the Common Pasture. The much larger Common Pasture is regionally important for its scenic beauty, historical significance, priority habitat, drinking water protection, and agricultural character, among other attributes. The Coffin's Island property provides much of the southern "frame" to the Common Pasture landscape.

Acquisition of this property was part of the initial phase of protecting the Common Pasture, a major goal of the 2005-2010 Newburyport Open Space and Recreation Plan. Acquisition of the property was also responsive to the wishes of Newbury residents, as expressed in a survey for the Newbury Master Plan: More than three-quarters of survey respondents supported preserving the rural character of the town.

Coffin's Island--called at the time of acquisition the "Herrick property," after the sellers--is a 23.5-acre parcel, straddling the border of Newburyport and Newbury, with access from Scotland Road. The site consists of 13.58 acres in Newburyport (Map/Lot 89-3) and 9.91 acres in Newbury (Map/Lots R-44-2, 3, 5). Lot size was established by a survey by Apple Engineering dated December 16, 2004. The property contains no buildings or other "improvements," except historic stonewalls and a causeway/cart path.

Coffin's Island was acquired as the result of efforts by the Newburyport Open Space Committee, the Parker River Clean Water Association, Essex County Greenbelt Association, and the Trust for Public Land. The Newbury Town Meeting and Newburyport City Council voted to jointly acquire the property in October 25, 2005, and November 14, 2005, respectively, for conservation and passive recreation purposes. (See Appendix A for vote language.) Final documents were recorded at the Salem Registry of Deeds on December 19, 2005. The property will be protected open space in perpetuity, under the joint jurisdiction of the Conservation Commissions of the two communities, as provided in the Deed, and managed according to this Plan. (See Deed in Appendix B.)

The Trust for Public Land and Essex County Greenbelt Association assisted with the acquisition, which

involved state, local, and private funds. Sources of funds included \$351,000 from the Massachusetts Division of Conservation Services Self-Help Grant program; \$130,125 from Newburyport Community Preservation Act open space funds; \$10,000 from Essex County Greenbelt Association; \$10,000 from Field's Pond Foundation; \$3,000 from the Brookline Bird Club; \$150 was from the Essex County Ornithological Club, and \$152,025 in private donations, mostly from Newbury residents. The property was initially purchased December 19, 2005, by the Trust for Public Land from William Herrick III and Susan Herrick; the two communities then acquired the property the same day from the Trust for Public Land. Newburyport Senior Project Manager Geordie Vining coordinated details of the joint acquisition and the joint grants administration on behalf of both communities.

Funds for required wetlands restoration work and road work at the entry were provided by the Parker River Clean Water Association. Funds for a gate and signage—needed in the near term to secure the property and meet state grant requirements--were provided by Newburyport Community Preservation Act open space funds.

2. Legal Protections as Conservation Land

(Grant Program Requirements)

Coffin's Island status as conservation land is currently protected by:

- protections associated with the state's Self-Help grant program,
- □ state law Article 97 protections applying to both Newburyport and Newbury, and
- □ language in the Deed, which expires after 30 years.

In addition, the Coffin's Island Stewardship Council, at the request of the Newburyport Community Preservation Committee, will explore the procedural requirements for a conservation restriction, as an additional layer of protection.

Self-Help Program

As mentioned, the Coffin's Island property was acquired with the assistance of the state's Self-Help grant program, which includes certain requirements important to site use and management decisions. (See Appendix C, "Self-Help Program Post-Completion Responsibilities.")

Among the applicable requirements of the Self-Help Program of the Division of Conservation Services of the Massachusetts Executive Office of Environmental Affairs (EOEA):

- Self Help conservation areas must be kept for conservation use and available for compatible, passive outdoor recreation use. Natural resource management and (natural resource) development are encouraged but must be consistent with the purpose(s) for the acquisition, and with state law protecting rights to open space.
- □ All (Self Help) Program sites must be kept open for public use at reasonable hours and times of the year according to the type of area. The governing commission may establish appropriate standards for said use without approval of the Division (of Conservation Services).
- □ The governing commission may delegate maintenance functions to other public or private agencies as long as (the commission members) maintain adequate administration and control over the site to assure public access, and appropriate conservation or recreational use.
- □ (Self Help Program) participants may impose reasonable limits on the type and extent of use of areas and facilities acquired or developed with (Self Help) Program assistance when such a limitation is necessary for maintenance or preservation, and providing said limits apply to residents and nonresidents alike. Thus, limitations may be imposed on the numbers of persons using an area or the type of users such as "hikers only" providing they are consistent with sound land and water management practices and deemed necessary and vital to natural resource protection.

Article 97

In addition to other Self-Help Program rules (See Appendix C), the state Division of Conservation Services requires that the property "shall be retained and used at all times for open space purposes in accordance with M.G.L.c. 132A, 11." (See Appendix D.) Conservation land acquired with Self Help program funds is understood to have "Article 97" protections. (See Appendix D.)

Deed

The Deed specifies that the two communities are granted the property "for conservation and passive recreation purposes." (See Appendix B.)

Community Preservation Act Funding

The Community Preservation Act also includes requirements that protect conservation land acquired with CPA funds:

Chapter 44B: Section 12. (a) A real property interest that is purchased with monies from the Community Preservation Fund shall be bound by a permanent deed restriction that meets the requirements of chapter 184, limiting the use of the interest to the purpose for which it was acquired. The deed restriction shall run with the land and shall be enforceable by the city or town or the commonwealth. The deed restriction may also run to the benefit of a nonprofit, charitable corporation or foundation selected by the city or town with the right to enforce the restriction.

The Coffin's Island Stewardship Council will explore the procedural requirements for placing a conservation restriction on the property, as requested by the Newburyport Community Preservation Committee.

3. Description of Parties Involved in the Plan

The creation, implementation, and updating of this Plan will be undertaken by the Coffin's Island Stewardship Council, under the joint jurisdiction of the Conservation Commissions of Newburyport and Newbury. For a detailed discussion of the Stewardship Council, see Appendix E.

4. Site Description

A. Common Pasture Context

The conservation values of Coffin's Island overlap to some extent with the conservation values of the much larger Common Pasture. The present day Common Pasture can be roughly considered to extend from Crow Lane and Hale Street in Newburyport to Turkey Hill Road in Newburyport and West Newbury and to Scotland Road in Newbury, to the eastern branch of the Little River. The most important conservation values are these:

Scenic Vistas

Residents treasure the Common Pasture for its extensive vistas, including traditional haying and pastoral uses, and views of wildlife. The land is a gateway to both Newbury and Newburyport, and its signature open landscape—unique in the greater Boston region—is enjoyed by thousands of commuters and visitors every day. The scenic value of the Common Pasture has also long been recognized by artists, including the noted 19th Century painter, Martin Johnson Heade, in his work *Newburyport Meadows*.

Historical Significance

The Common Pasture has been designated a Heritage Landscape by the state Department of Conservation and Recreation in partnership with the Essex National Heritage Commission. This historic pasture dates back to the area's original settlement in 1635, and large expanses of the original landscape remain undeveloped in a patchwork of open fields, working farmland, wooded uplands, streams, and wetlands. At the risk of being lost to residential and industrial development, the historic landscape was listed as one of

the Massachusetts' "Ten Most Endangered Historic Resources" by Preservation Mass in 2004. Under the direction of Preservation Planner Jessica Rowcroft of the state Department of Conservation and Recreation, a professional consulting team has completed a Mass Historical Commission inventory form that documents the history and existing historic resources that define the character of this area, as a step toward seeking listing on the National Register of Historic Places.

Priority and Core Habitat

The open land in the Common Pasture was designated as Priority Habitat by the Massachusetts Natural Heritage and Endangered Species Program. Federal and state-listed species such as the upland sandpiper, American bittern, northern harrier, Long's bulrush, spotted turtle, barn owl, and blue-spotted salamander have been documented in the area. In addition to providing habitat for these threatened and endangered species, the Common Pasture also supports a wide variety of wetland, grassland, and wooded upland plants and animals.

Because of the presence of a globally rare species, parts of Coffin's Island and the Common Pasture have also been designated as High Priority Core Habitat in the Massachusetts BioMap Project. The BioMap is a planning tool designed by Natural Heritage to provide guidance for land conservation by identifying exemplary natural communities and habitat for rare species, as well as landscape areas that buffer and connect habitat areas.

Conservation of this area follows the guidelines suggested by the Massachusetts Bio Map.

Water Resource Protection District

Much of Coffin's Island falls within Watershed Zones B and C of the Newburyport Water Resource Protection District for the main water supply, which serves not only Newburyport but also parts of Newbury and West Newbury. (See map B in Section 7.) The 2002 state Department of Environmental Affairs/Newburyport Water Department Source Water Assessment Program (SWAP) reports recommends "the purchase of property within the surface water protection areas that is not currently owned by the Newburyport Water Department." Protection of Zone B and C land helps protect the City's drinking water and reduce the ongoing cost of treatment that could otherwise be required. In addition, conservation of Coffin's Island and the Common Pasture provide for groundwater recharge.

B. Physical Location

The 23.5 acre Coffin's Island site is identified as Assessors Map R44, Lots 2, 3, and 5 in Newbury (9.91 +/-acres) and Map 89 Lot 3, Parcel ID: 089-003-00 in Newburyport (13.58 +/- acres). (To the best of our knowledge, the recent survey maps completed by Apple Engineering and on file in Newbury Town Hall are more accurate than the Assessors' Maps of either community.) Coffin's Island lies to the North/Northeast of Scotland Road and extends across the border of the Town of Newbury and the City of Newburyport. The site is surrounded by agricultural land to the north and northeast. An existing dirt cart path connects the upland area of the site to Scotland Road.

C. Historic Use and Features

The site exhibits various signs of historic use, most recently timber harvesting, and apparently was once used as a place to excavate fill for road building in the general area, which can be seen in various excavated pits. The cart path, in use for many years by owners and abutters, provides access to the parcel and fields beyond. Old stone walls pass through the area, approximating boundaries in some places.

There are no buildings on the property.

A Massachusetts Historical Commission Inventory Form has been completed for the larger Common Pasture, of which Coffin's Island is a part. (See Appendix I.)

D. Physical and Topographical Description

The parcel is in the Merrimack River watershed, draining to the Artichoke Reservoir, a public drinking water supply. The parcel is designated as an Outstanding Resource Water (ORW). Refer to ORW Map.

The 23.5 acre parcel is comprised of approximately 15.5 acres of upland and approximately 7.5 acres of wetland. Refer to the Wetlands Map.

Elevation parameters range from 19 feet to 39 feet above mean sea level. A distinct ridge runs from northwesterly to south easterly. Refer to the Topographic Map.

Soil information taken from the Essex County Soil Survey (Northern) Map 12 indicates the following soils on site:

- (1) Medisaprists MD.
- (2) Hinckley Loamy Sand Hfc.
- (3) Charlton Very Stony Fine Sandy Loam CoB.
- (4) Charlton Very Stony Fine Sandy Loam CoC.
- (5) Rock Outcrop Charlton Holis Complex RoC.
- (6) Paxton Fine Sandy Loam PaD.
- (7) Paxton Fine Sandy Loam PaB.

Refer to the Soil Map.

E. Priority Habitat and High Priority BioMap Core Habitat

The Massachusetts Natural Heritage and Endangered Species Program (NHESP) has designated the entire parcel as Priority Habitat because of the documented presence of State listed species as endangered, threatened or of special concern. Refer to the Priority Habitat Map.

The NHESP has designated the area as High Priority BioMap Core Habitat because of the presence of a globally rare species in the area. Refer to the Priority Habitat and High Priority BioMap Core Habitat Designations contained in Appendix F.

F. Vegetation

Preliminary research suggests that much of Coffin's Island falls into the Oak-Hickory Forest Natural Community designation as determined by <u>A Guide to the Natural Communities of Massachusetts</u>, published by Manomet Center for Conservation Sciences, 2005. The identity of other probable Natural Communities, particularly wetland communities, will be verified in the future by the Stewardship Council.

The property hosts an upland canopy dominated by northern red oak (85%), pignut hickory (10%), and red maple (5%). Sapling trees are mainly a variety of cherry species, elm species or sweet birch species. Beech saplings and mature white pine are also present. The upland groundcover contains bracken fern, partridgeberry. Various wildflowers can be observed and there is a wide variety of other plants.

Wetland Resource Areas within or adjacent to Coffin's Island can be typified as shrub marsh extending to a forested swamp. It is expected that a wide variety of plant life is present because of the diversity of habitats.

The Natural Heritage Checklist of species developed for use by students and amateur naturalists in conjunction with Biodiversity Days is included in Appendix H. A comprehensive list of plant species will be determined by future inventory.

G. Wildlife

Coffin's Island hosts a diversity of habitats, and a wide variety of animal life can be expected.

Birds and mammals abound. The Division of Fisheries and Wildlife has designated this area, estimated habitat (WH4). Two (2) certified vernal pools (numbers 629 & 630) can be found within WH4. Future

research is needed to be done in the springtime to determine if the pond along the cart road is a vernal pool.

The Natural Heritage Checklist of species developed for use by students and amateur naturalists in conjunction with Biodiversity Days is included in Appendix H. A comprehensive list of animal species will be determined by future inventory.

H. Existing Access, Parking and Trail Conditions

Parking is along Scotland Road and pedestrian access is along the cart path. The cart path and logging skidder trail are the only trails presently on the parcel. In the near future, the cart path will be restored to its historic pre-alteration condition. It is anticipated that new trails and improvement of the skidder trail will take place, along with the installation of an observation platform for wildlife viewing. For a map of the existing cart path, skidder trail, and potential future trails and observation platform, refer to the Maps section.

A local farmer and abutter has a historic right to "pass and repass" through the Coffin's Island property to access his land. (See Deed in Appendix B.)

5. Land Use

Land use at the Coffin's Island conservation area will focus on conservation of natural and historical resources, including but not limited to habitat protection for plants and wildlife, as well as watershed protection, while allowing for passive public recreation. The Stewardship Council will periodically review land use types at the site to determine if adjustments or changes are needed.

A. Conservation and natural resource protection

The goal of this management plan is to ensure that the conservation values associated with this property are identified and protected. Thorough inventories of plants and wildlife will be conducted and used to develop long-term management goals.

B. Watershed Protection

This property is within the Newburyport Water Resources Protection District Zones B and C, which delineate areas needed to protect the drinking water supply of Newburyport and parts of Newbury and West Newbury. The significant area of wetlands on the property is key to the hydrological balance within the Artichoke Reservoir watershed and the headwaters area of the Little River watershed. By preserving these wetlands in their natural state, the City of Newburyport and the Town of Newbury will benefit from the existing flood attenuation, pollutant attenuation, pollution prevention, and habitat services of the wetlands. Preserving this property is concurrent with the goals of the Newburyport Water Resources Protection District and Source Waters Supply Protection Plan. As more information is collected about natural resources at this property and as management goals are established, watershed protection will be viewed as an important criteria in establishing the management goals.

C. Passive Recreation

An important goal of this management plan is to provide safe public access to the property for passive enjoyment of the ecological, scenic, and historical values found there.

1. Allowed Uses

- a) Hiking, nature observation, snowshoeing, cross-country skiing, biking, horseback riding, and other activities consistent with low-impact passive recreation.
- b) Cutting and trimming of trees, shrubs and other plants by authorized individuals in order to maintain trails, ensure public safety, and manage habitats for plants and animals.
- c) Placement of signs, kiosks, gates, fences, boardwalks, wildlife-viewing platforms, and similar structures as necessary to manage the property to conserve natural resources.
- d) Use of motorized vehicles and power equipment by authorized individuals to maintain and manage the property, including trails, access points, etc. Also allowed is emergency access by police, firefighters, or other public officials carrying out their lawful duties.

2. Prohibited Activities, including but not limited to:

- a) Use of any motorized vehicles, including trucks, motorcycles, and all-terrain vehicles, for recreational purposes.
- b) Overnight camping is prohibited while the Stewardship Council researches the feasibility of allowing the activity.
- c) Open fires, possession of alcohol, paintball, or other activities that are detrimental to the property in the view of the Stewardship Council.
- d) Any type of commercial activity.
- e) Hunting with firearms for game and waterfowl. Archery-hunting is also prohibited while the Stewardship Council researches the feasibility of allowing the activity.
- f) Trapping, unless with written permission from the Town of Newbury and/or the City of Newburyport.
- g) Constructing or placing any building, dwelling, asphalt paving, concrete or other similar unnatural structure, temporary or permanent, on, above, or beneath the property.
- h) Mining, excavating, dredging, or otherwise removing soil, loam, gravel, rock, or similar natural materials, or altering natural contours and features of the property.
- i) Placing, filling or dumping of soil, refuse, trash, equipment, underground tanks or similar unnatural items on the property.
- j) Cutting, removing, or otherwise destroying trees, shrubs, and any other plants on the property, except as part of a vegetation management plan in place for the property.
- k) Activities detrimental to drainage, flood control, water conservation, erosion control, or soil conservation on the property.
- 1) Any other use of the premises or activity which would materially impair the conservation interests or which are prohibited by federal, state, or local law or regulation, or which are inconsistent with the intent that the property remain predominantly in its natural condition.

6. Management Plan

A. Introduction

The purpose of the management plan is to provide guidance to the Town of Newbury and the City of Newburyport to protect and enhance the physical and natural resources associated with the Coffin's Island Conservation Area.

The primary focus in the first year of the plan will be to establish safe public access to include

signage, parking, and trails while concurrently conducting a natural resources inventory to collect useful baseline documentation. Efforts will be made to understand public use patterns and study potential uses, such as camping and archery hunting, to determine if they are appropriate for this conservation area.

In the years following the first year, use the baseline documentation as well as observations and research to establish long-term management goals at the property.

B. Site Design Overview

The basic site design will involve signage to mark the entrance to the conservation area as well as marking of parking areas and trails. A designated parking area for four to six vehicles will be established, along with a trail system that will provide access to the interior of the area. Initially, management of the landscape, which is almost entirely upland mixed hardwood forest mixed with lower wetland area, will be minimal as we use the first year to inventory the site and better understand the future management needs of the site.

C. Specific Management Actions

Parking Area

Parking for this conservation area was carefully studied in consultation with local officials, including public safety and public works officials. It was determined that the safest and most appropriate area for parking was on the south side of Scotland Road across from the entrance to the property. An area for four to six vehicles, parked parallel to the road, is proposed, along with a painted pedestrian crosswalk and appropriate signage to designate the parking area.

Signage

Signage at the site will include a sign that designates the entrance; a sign that shows all the cooperating organizations and agencies; a sign that lists allowed and prohibited activities; and signs for boundaries indicating when one is entering or leaving the property.

The latter boundary-marking signs will be posted at the request of an abutter. (M. Harbaugh contacted all abutters by phone during the months of January and February 2006 to gather information about any concerns they might have. One abutter, a hay farmer, requested a sign that alerts trail users to the property boundary, so they do not inadvertently trespass onto private property.)

As a future action, the Stewardship Council will consider the placement of a trail kiosk containing maps and interpretive information.

See Appendix K for sample sign design and language.

Trails and Gate

The trail system to be implemented will, for the most part, re-use existing cart paths and logging roads, so cutting and clearing of vegetation will be minimal. Initially the cart path at the entrance to the property off Scotland Road will be restored to its original width and height, per order of the Newbury Conservation Commission. Official trails will be appropriately marked and other trails will be phased out. A trail map will be posted near the property entrance.

A gate will be placed at the main access point from Scotland Road. Although the exact design has not been finalized, the gate will be designed to prohibit unauthorized motor vehicles but, when open, will be wide enough for emergency vehicles to pass through. To the side of the gate will be some type of pedestrian access point, which may include a modified stile.

Listed Species

Certain federal- and state-listed rare species occur at the site but require complete inventories and cataloguing before any specific management actions can be proposed. In the near term (Spring 2006), J. Teixeira and S. Moore will attempt to locate vernal pools and inventory certain species most easily identified in the Spring.

Invasive Species

Certain invasive species, including Japanese knotweed, are confirmed to occur at the property but a full inventory is needed. Once this is completed, a management plan for invasive species will be developed.

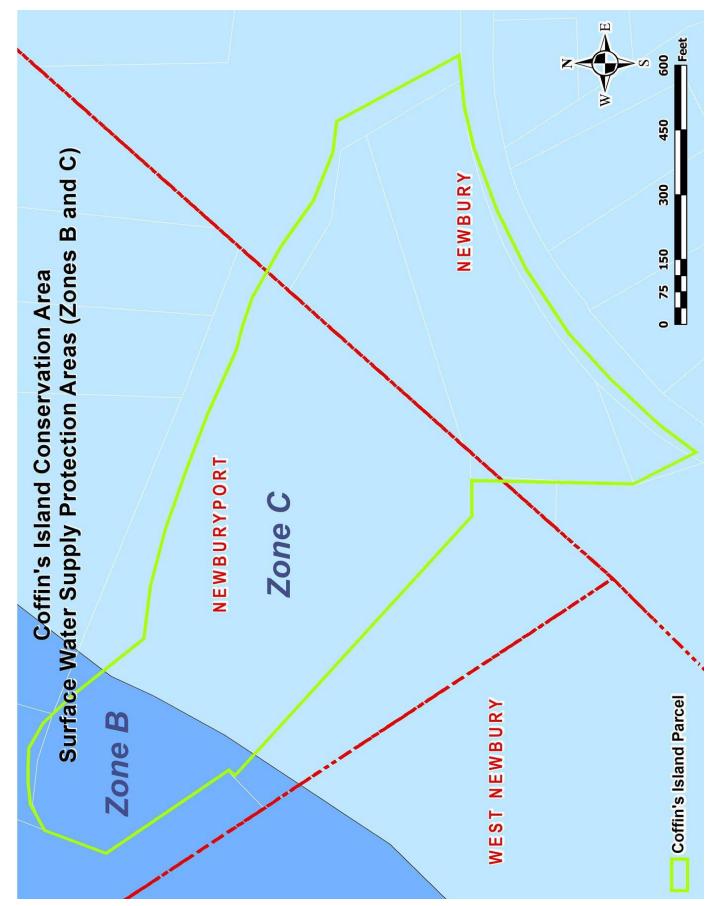
<u>Uses</u>

Certain public uses were determined to require further review and study before a decision could be reached on their appropriateness for the site. These included overnight camping and archery hunting. Both of these activities will be carefully considered during the first year of the management plan and will be directly addressed in the second year of the plan.

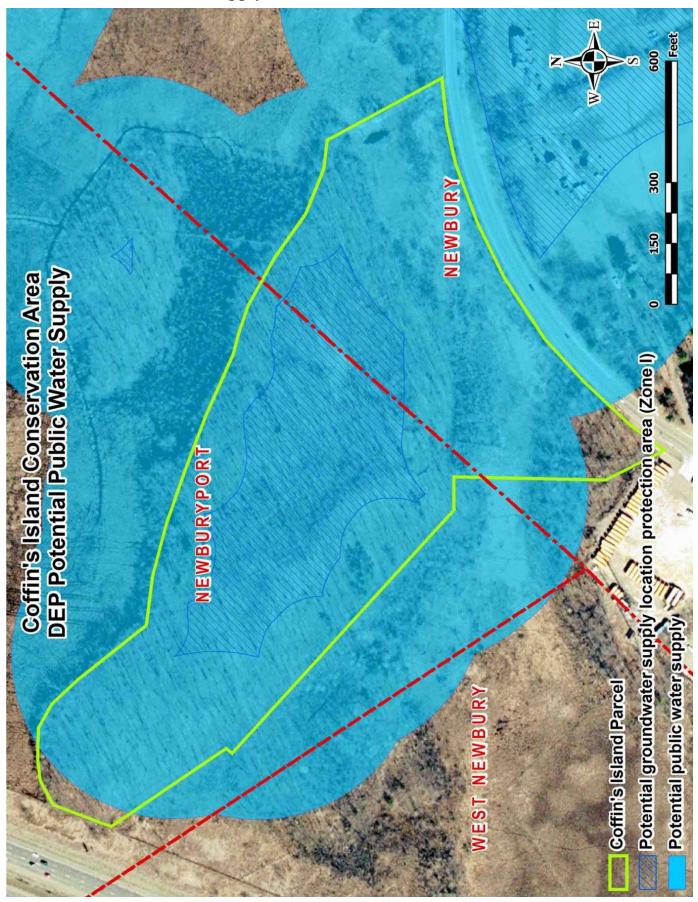
7. Maps

A. Outstanding Resource Water (ORW) Map MassGIS Outstanding Resource Waters Layer Coffin's Island Conservation Area WEST NEWBURY

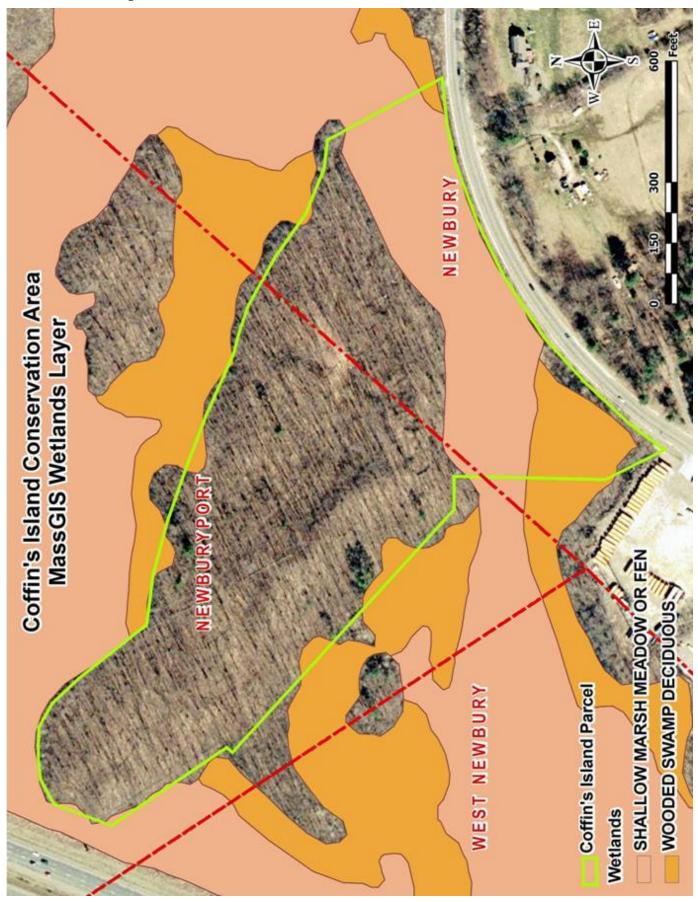
B. Water Resource Protection District



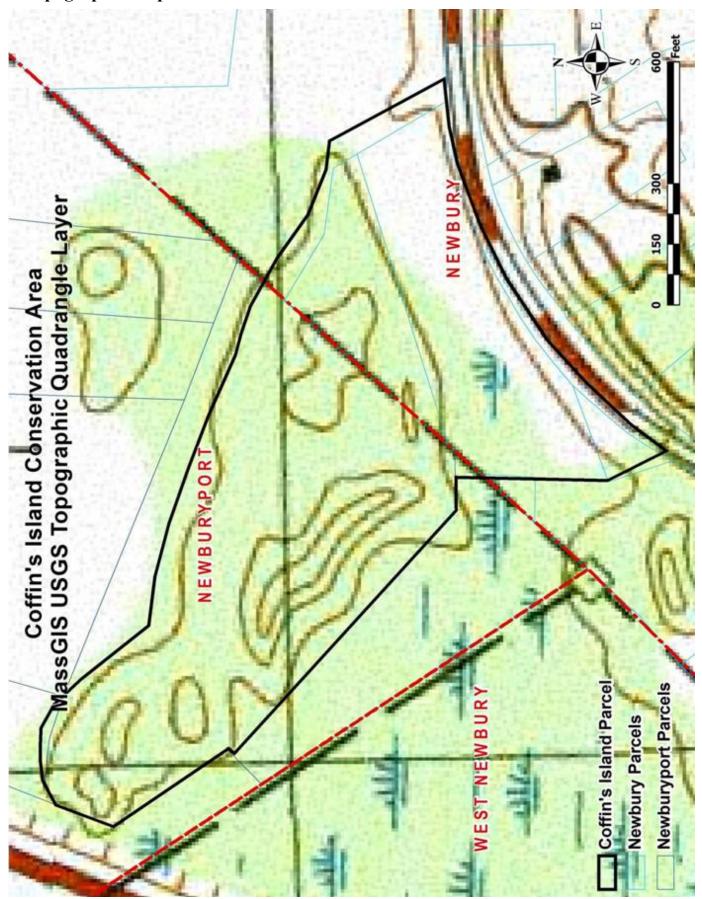
C. Potential Public Water Supply



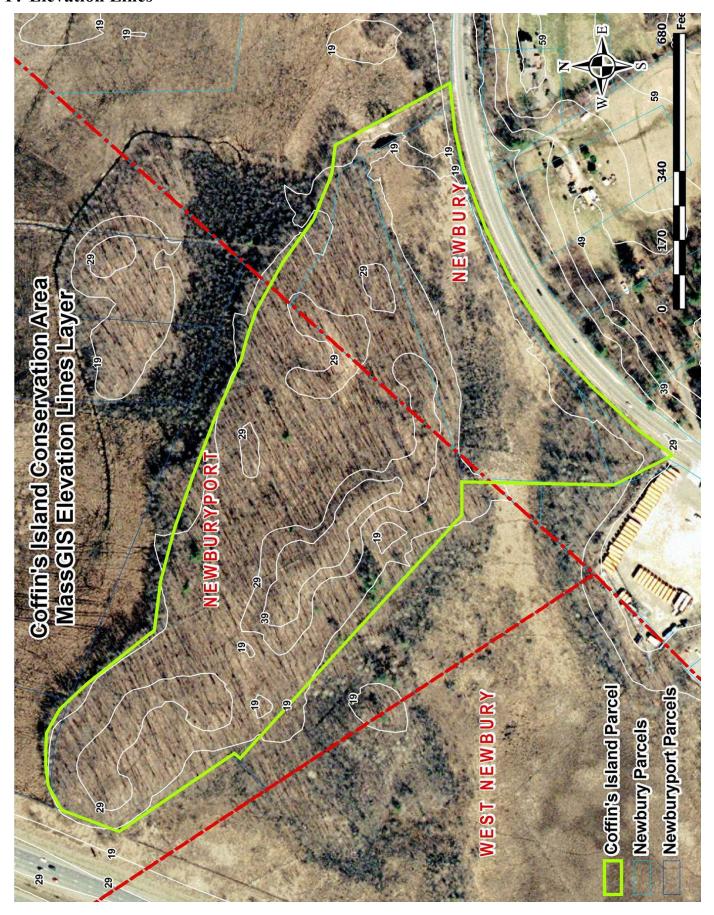
D. Wetlands Map



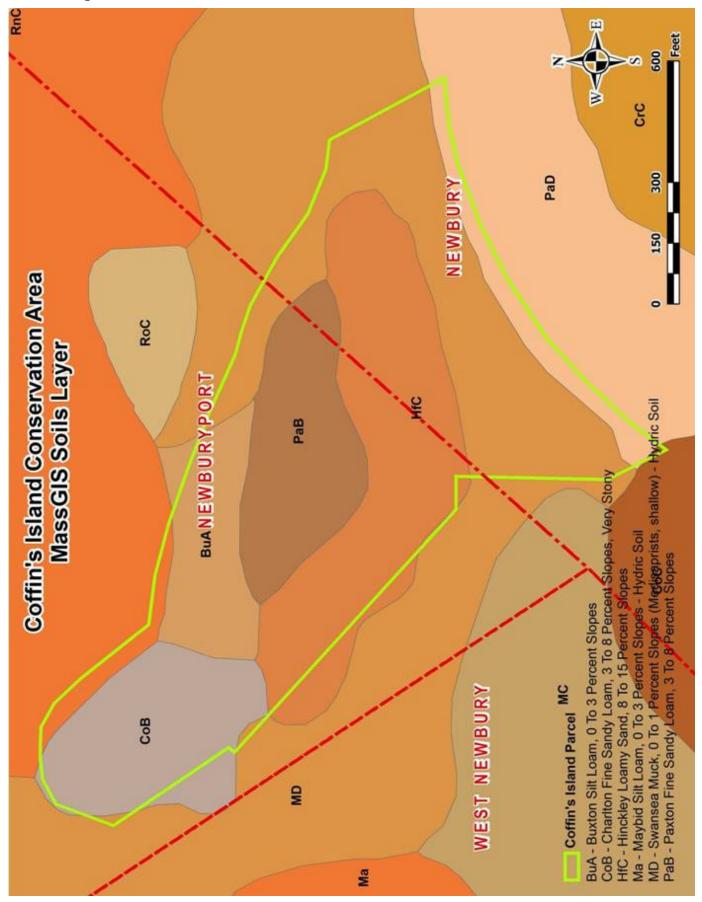
E. Topographic Map



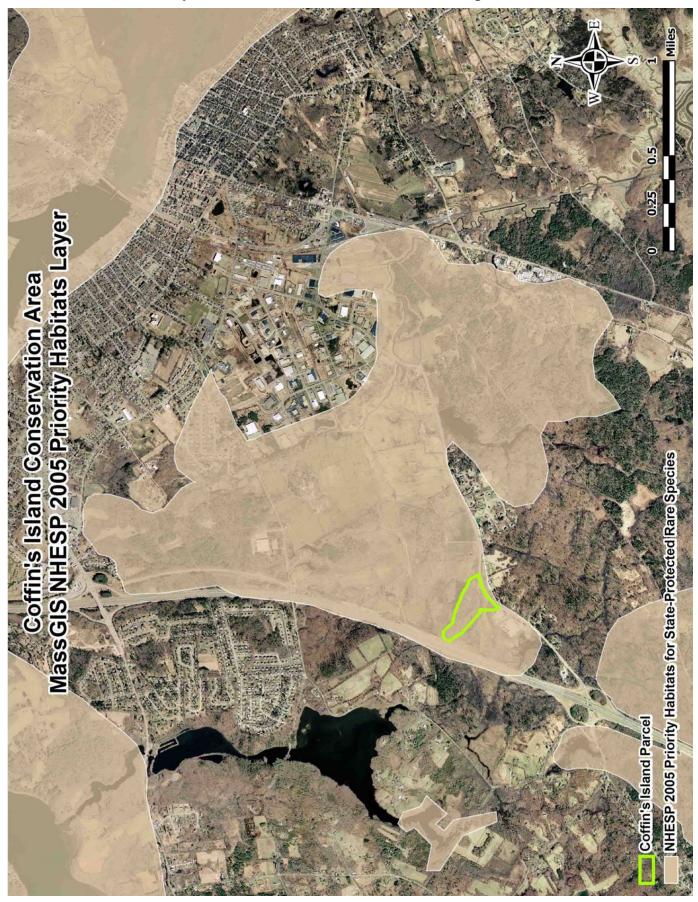
F. Elevation Lines



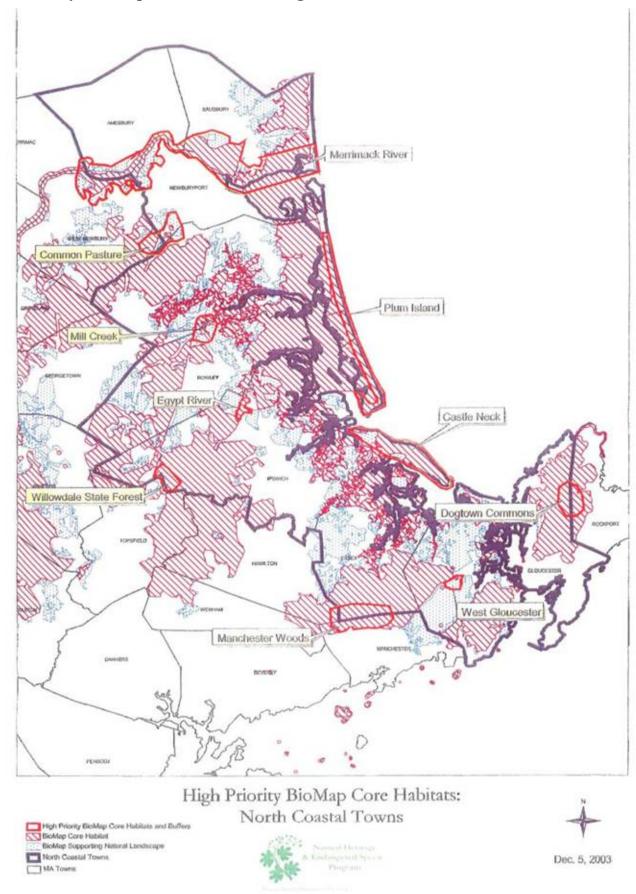
G. Soil Map



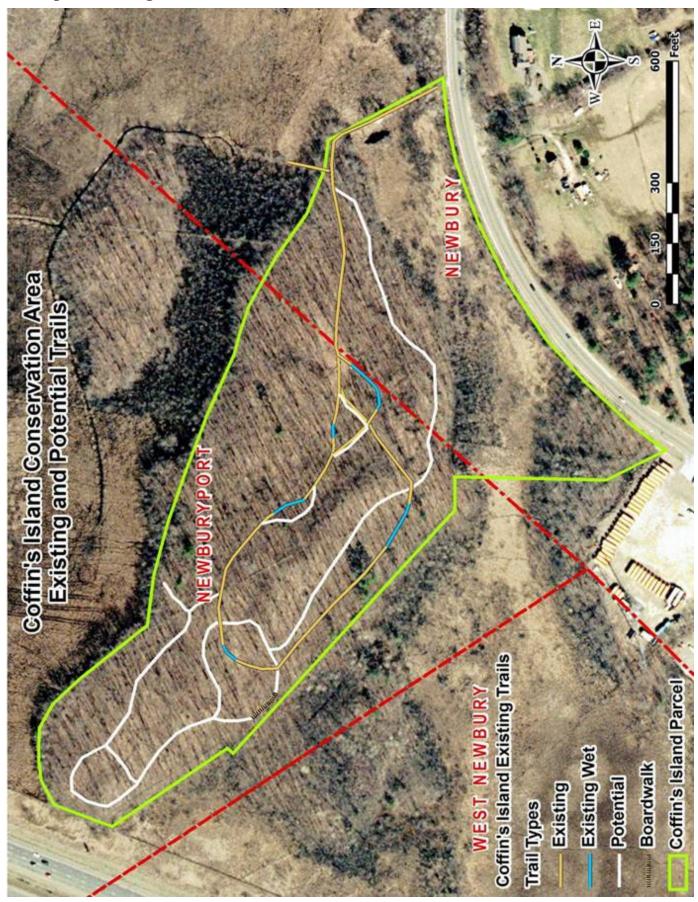
H. NHESP 2005 Priority Habitats for State-Protected Rare Species



I. High Priority BioMap Core Habitat Designations



J. Map of Existing and Potential Trails



K. Public Access (Approximate Parking, Gate, and Sign Placement)



Signatures Newburyport Conservation Commission Date: **Newbury Conservation Commission** Date: Approved by:

22

Department of Conservation and Recreation

Appendices

Appendix A: Newburyport City Council and Newbury Town Meeting Acquisition Vote Language

ACCEPTANCE OF DEED

The foregoing Quitclaim Deed is hereby accepted pursuant to the authority granted by the votes of the Newburyport City Council dated October 31 . 2005, and Nevember 14. 2005, attested copies of which are recorded herewith and any other authority in any way appertaining.

EXECUTED as of this 14 day of December 2005.

CITY OF NEWBURYPORT

By its Mayor.

Mary Anne Clancy

COMMONWEALTH OF MASSACHUSETTS

Essex, ss

Notary Public:

My Commission Expires:

PATRICIA E. BARKEC

NOTARY PUBLIC

COMMONWEALTH OF MASSAI

My Comm. Expires Sept. 15, 30 (1)

268522/nbpt/0044

CITY OF NEWBURYPORT



IN CITY COUNCIL

ORDERED:

Date:

October 31, 2005

THAT the City Council of the City of Newburyport having reviewed the Community Preservation Committee recommended projects for FY2005 through the Budget & Finance and Planning & Development Committees recommend at this time the following project be funded:

Project #1

.....

Amount \$300,000

Open Space Acquisition / Common Pasture

Herrick Property

Councillor James Shanley

Chairperson Planning & Development

In City Council October 31, 2005:

Councillor Shanley moved to approve seconded by Councillor Holaday.

Michael Dissett, Chairman of the Community Preservation Committee, explained the committee's position on this acquisition.

So voted on a unanimous voice vote.

Approve:

Mary Anne Clancy, Mayor

Attest:

John F/. Moak, City Clerk

Date:

11-14-05

A TRUE COPY ATTEST

John F. Moak, City Clerk Newburyport, Massachusetts

CITY OF NEWBURYPORT



IN CITY COUNCIL

ORDERED:

Date:

November 14, 2005

THAT the City Council of the City of Newburyport authorizes the Mayor, Mary Anne Clancy, on behalf of the City of Newburyport, to acquire for conservation and passive recreation, by negotiated purchase or otherwise, a certain property located on Scotland Road, known as the Herrick Land, consisting of 8 +/acres in Newbury, more or less, shown as R44-0-2, R44-0-3 and R44-05 on the Newbury Assessors Maps and 14 acres in Newburyport, more or less, shown as 89-3 on the Newburyport Assessors Maps. Said land is to be conveyed jointly to the Town of Newbury and the City of Newburyport under the provisions of Massachusetts General Laws, Chapter 40, § 8C, as it may hereafter be amended and other Massachusetts statutes relating to Conservation, to be managed and controlled by the Conservation Commission of the Town of Newbury and the Conservation Commission of the City of Newburyport. The Conservation Commission of the City of Newburyport, in conjunction with the Mayor, shall also be authorized to file on behalf of the City of Newburyport any and all applications deemed necessary for grants and/or reimbursements from the Commonwealth of Massachusetts or the United States under the Self-Help Act (Chapter 132A, § 11) and/or any other state or federal programs including those in aid of conservation land acquisition and to receive and accept such grants and reimbursements, including grants from private parties, for this purpose and/or any others in any way connected with the scope of this vote; and the Conservation Commission in conjunction with the Mayor shall be authorized to transfer the amount of any financial contributions received by the City of Newburyport designated for the purchase of the Herrick land to the Trust for Public Land or to William III and Susan Herrick; and the Conservation Commission in conjunction with the Mayor shall be authorized to enter into all agreements, including inter-municipal agreements with the Town of Newbury, as may be necessary on behalf of the City of Newburyport to affect said purchase; and the Mayor shall be authorized to enter into all agreements, including a purchase and sale agreement, and to execute any and all instruments as may be necessary on behalf of the City of Newburyport to affect said purchase.

	Councillor James	Shanley
In City Council November 14, 2005: Councillor Gillis moved to approve seconded by unanimous voice voic.	Councillor Holaday. Motion to appr	rove passed on
Approve: Mary Anne Clancy, Mayor	Attest: John F. Moak, City	y Clerk
Date: 11 29 05	A TRUE COPY AT	TEST

John F. Moak, City Clerk Newburyport, Massachusetts

ACCEPTANCE OF DEED

The foregoing Quitclaim Deed is hereby accepted pursuant to the authority granted by the vote under Article 12 of the Newbury Special Town Meeting held on October 25, 2005, an attested copy of which is recorded herewith, G.L. c. 40, § 8C and any authority in any way appertaining.

EXECUTED as of this 14th day of December, 2005, by the Chairman of the Newbury Conservation Commission, duly authorized by vote of a majority of the full Commission.

Douglas Packer, Chairman Newbury Conservation

COMMONWEALTH OF MASSACHUSETTS

Essex, ss.

On the 14th day of December, 2005, before me, the undersigned Notary Public, personally appeared Douglas Packer, personally known to me, and acknowledged to me that he signed it voluntarily for its stated purpose, as a member and Chairman of the Conservation Commission of the Town of Newbury.

Anthony E Penski

Notary Public

My Commission Expires: 1/29/2010

Appendix A: Newburyport City Council and Newbury Town Meeting Acquisition Vote Language

APPROVED: TOWN OF NEWBURY Board of Selectmen

Vincent J. Russo, Chairman

Charles Bear

oseph Story

COMMONWEALTH OF MASSACHUSETTS

ESSEX, ss.

On this 13th Day of December, 2005, before me, the undersigned Notary Public, personally appeared Vincent J. Russo, Charles Bear and Joseph Story, each personally known to me, and acknowledged to me that they each signed voluntarily for the stated purpose as the Board of Selectmen of the Town of Newbury.

Anthony E. Penski

Notary Public

My commission expires: 1/29/10



QUITCLAIM DEED

THE TRUST FOR PUBLIC LAND a California nonprofit public benefit corporation, having an address of 33 Union Street, Boston, Suffolk County, Massachusetts,

FOR CONSIDERATION OF SIX HUNDRED FIFTY THOUSAND DOLLARS (\$650,000.00) PAID,

GRANT WITH QUITCLAIM COVENANTS, jointly, to the Inhabitants of the CITY OF NEWBURYPORT, a Massachusetts municipal corporation, acting by and through its Mayor, with an address of 60 Pleasant Street, Newburyport, Massachusetts, County of Essex and the Inhabitants of the TOWN OF NEWBURY, a Massachusetts municipal corporation, acting by and through its Board of Selectmen, with an address of 25 High Street, Newbury, Massachusetts, County of Essex, for conservation and passive recreation purposes, pursuant to the provisions of Massachusetts General Laws, Chapter 40, Section 8C, as it may hereafter be amended and other Massachusetts statutes relating to conservation, to be managed and controlled by the Conservation Commission of the Town of Newbury and the Conservation Commission of the City of Newburyport,

The land in Newburyport and Newbury, Essex County, Massachusetts, described and bounded in accordance with Exhibit A, attached hereto and incorporated herein.

This conveyance is made subject to and with the benefit of easements, rights, and restrictions of record, to the extent the same are in force and applicable.

For Grantor's title see Deeds from Susan Herrick, Trustee and William H. Herrick, Trustee recorded on December 16, 2005 as Instrument Number _____ and from William H. Herrick recorded on said date as Instrument Number _____.

The undersigned certify that there has been full compliance with the provisions of G.L.c.7, §40J in connection with this conveyance.

No deed stamp taxes are due on this conveyance pursuant to G.L.c.64D, §1.

WITNESS our hands and seals this 15th day of December, 2005.

THE TRUST FOR PUBLIC LAND

Print Name: Dorotoy Nelson Stookey

Title: Regional Counsel

COMMONWEALTH OF MASSACHUSETTS

On this 15th day of December, 2005, before me, the undersigned Notary Public, personally appeared Dorothy Nelson Stookey, who proved to me through satisfactory evidence of identification, which was personal knowledge, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose on behalf of The Trust for Public Land.

Bruck M. Ferreia
(Official Signature and Seal of Notary)

Return to: Deborah A. Eliason Kopelman and Paige, P.C. 31 St. James Ave Boston, MA 02116

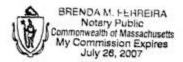


EXHIBIT A

SCOTLAND ROAD NEWBURY AND NEWBURYPORT, MASSACHUSETTS

Parcel One:

A certain lot of land, together with the buildings and improvements thereon, if any, situated in Newbury, Essex County, Massachusetts, being bounded and described as follows:

The parcel of fresh meadow on the Northerly side of Scotland Road known as the long meadow, bounded as follows:

Commencing at the Southeasterly corner thereof on said Road at the point where the Westerly side of the causeway which runs Northerly from said Road across the Easterly end of said meadow joins said road, thence about South 77° West by said Road about sixty-one rods to land of owner unknown; thence about North 13° East by the last mentioned land twenty-three rods, eight links, more or less, to the upland now or formerly belonging to Phineas A. Dodge on various courses as the wall runs to the Westerly side of said causeway, and thence Southerly by the Westerly side of said causeway abut seventeen rods, eight links to the point of beginning. Containing about five acres, one hundred fifty-three rods (less the area of said causeway.)

Also being identified as "Parcel 2 – Scotland Road, Assessor's Map 44, Parcel 3" on Deed from Richard N. Cunningham and Dorothy I. Cunningham recorded with said Deeds at Book 16016, Page 377.

Parcel Two:

A certain piece or parcel of woodland lying Northerly from South Street, otherwise called the Scotland Road, partly in Newbury and partly in Newburyport, Essex County, Massachusetts, bounded and described as follows, viz:-

Commencing at the Southeasterly corner thereof by land now or formerly of Mary K. Coffin at the point where the causeway which runs from the road across the meadow to said woodland joins said woodland, thence running Northerly by the wall four rods to a corner; thence running Westerly and Northwesterly on various courses by the wall in part by said land of Mary K. Coffin, in part by land of the Toppan heirs and in part by land of the heirs of Alfred Little to a stake and stone by the one-half acre piece devised by Richard Coffin to his son, Moses Coffin by his will admitted to probate in said County May 8, 1862; thence turning and running Southwesterly by said Moses Coffin lot nine rods, fifteen links to a stake and stone; thence turning and running Northwesterly four rods to a stake and stone by the wall by land of the heirs of Toppan; thence turning and running about South 21° East by said wall to the end of the wall; and thence continuing

Appendix B: Deed

on the same line by said heirs' land to a stake and stone by land of Charles E. Brown; thence about South 86° East by said land of Brown about five rods to the long meadow, so called, being other land of said Mary K. Coffin; thence Easterly by the wall by said other last named land to the point of beginning; containing about nine acres, ninety-six rods, more or less.

Also refer to Property Map Book of Newbury, Essex County Massachusetts, Map R44, Lot 5 and Assessors' Map of Newburyport, Essex County Massachusetts Parcel ID 089-003-00.

Together with the right to pass and repass in common with said Mary K. Coffin and other persons having rights of way over the causeway aforesaid to and from said highway.

Parcel Three:

A certain lot of woodland situate in Newburyport aforesaid, lying Northerly from South Street containing about three acres, eighty-eight rods, more or less, said lot lying near the above described premises, bounded and described as follows, viz:-Commencing at the Northerly corner of the one-half acre lot devised by Richard Coffin to Moses Coffin, thence running Westerly and Southerly by the fence about forty-three rods to a stone wall by land formerly of Stephen Sawyer; thence by said land formerly of Sawyer as the fence stands Southeasterly about twenty-three rods, seven links to land of the heirs of Robert Brown; thence Southeasterly by said heirs land six rods, twenty links to a stake and stones; thence Northerly about twenty-one rods to the point of beginning.

Parcel Four:

A triangular piece of land containing 14,500 square feet, more or less and shown on Newbury Assessor's Map 44, Parcel 2.

For Granto	r's title see	a Quitclaim Deed from William H. Herrick III and a Quitclaim
Deed of Su	san Herrick	and William H. Herrick as Trustees of the Herrick Family Realty
		15, 2003 recorded with said Registry of Deeds as Instruments
number	and	respectively.

G:\RJM\38628\EXHIBIT A TPL TO TOWN.DOC

Appendix C: Self-Help Program Post-Completion Responsibilities

301 CMR 5.00: SELF-HELP AND URBAN SELF-HELP PROGRAMS

5.08: Post-completion Requirement

- (1) Operation, Maintenance, and Reasonable Use Limitations. Property acquired or developed with Program assistance shall be operated and maintained in accordance with standards and guidelines of the Division. In accordance with the applicable program contract, participants may impose reasonable limits on the type and extent of use of areas and facilities acquired or developed with Program assistance as necessary for maintenance or preservation.
- (2) Nondiscrimination. Property acquired or developed with Program assistance will be open to entry and use by all persons who are otherwise eligible regardless of race, color, national origin, sex, sexual preference, age or disability.
- (3) Nondiscrimination on the Basis of Residence.
 - (a) Discrimination on the basis of residence, including preferential reservation, membership or annual permit systems, or user fees is prohibited on the Project site unless this provision is waived by the Secretary.
 - (b) The Secretary will approve or deny all proposed fee or access limiting systems. Waivers will not be granted which are inconsistent with the Federal Land and Water Conservation Fund Act, P.L. 88-578, Section 6(f)(8), 16 U.S.C. § 4601-4. et seq.

Appendix D: Article 97 and M.G.L. c. 132A, 11

Massachusetts Constitution - Article 97

Article XCVII. Article XLIX of the Amendments to the Constitution is hereby annulled and the following is adopted in place thereof: - The people shall have the right to clean air and water, freedom from excessive and unnecessary noise, and the natural, scenic, historic, and esthetic qualities of their environment; and the protection of the people in their right to the conservation, development and utilization of the agricultural, mineral, forest, water, air and other natural resources is hereby declared to be a public purpose.

The general court shall have the power to enact legislation necessary or expedient to protect such rights.

In the furtherance of the foregoing powers, the general court shall have the power to provide for the taking, upon payment of just compensation therefor, or for the acquisition by purchase or otherwise, of lands and easements or such other interests therein as may be deemed necessary to accomplish these purposes.

Lands and easements taken or acquired for such purposes shall not be used for other purposes or otherwise disposed of except by laws enacted by a two thirds vote, taken by yeas and nays, of each branch of the general court.

Massachusetts General Law Chapter 132A

PART I. ADMINISTRATION OF THE GOVERNMENT

TITLE XIX. AGRICULTURE AND CONSERVATION

CHAPTER 132A. STATE RECREATION AREAS OUTSIDE OF THE METROPOLITAN PARKS DISTRICT

Chapter 132A: Section 11. Conservation program for cities and towns; establishment

Section 11. The secretary of environmental affairs shall establish a program to assist the cities and towns, which have established conservation commissions under section eight C of chapter forty, in acquiring lands and in planning or designing suitable public outdoor facilities as described in sections two B and two D. He may, from funds appropriated to carry out the provisions of section three, reimburse any such city or town for any money expended by it in establishing an approved project under said program in such amount as he shall determine to be equitable in consideration of anticipated benefits from such project, but in no event shall the amount of such reimbursement exceed eighty per cent of the cost of such project. No reimbursement shall be made hereunder to a city or town unless a project application is filed by such city or town with the secretary setting forth such plans and information as the secretary may require and approved by him, nor until such city or town shall have appropriated, transferred from available funds or have voted to expend from its conservation fund, under clause fifty-one of section five of chapter forty, an amount equal to the total cost of the project, nor until the project has been completed, to the satisfaction of the secretary, in accordance with said approved plans. Any reimbursement received by a city or town under this section shall be applied to the payment of indebtedness, if any, incurred in acquiring land for such conservation project.

Appendix E: Stewardship Council

The creation, implementation, and updating of this Plan will occur under the joint jurisdiction of the Conservation Commissions of Newburyport and Newbury, as provided in the Deed, recorded December 19, 2005, in the Essex South District Registry of Deeds. (See Appendix B.) The two Conservation Commissions will appoint members to the Coffin's Island Stewardship Council.

The Coffin's Island Stewardship Council's charge shall be:

- □ To develop an initial land use and management plan subject to the approval of the two Conservation Commissions and the Massachusetts EOEA Division of Conservation Services.
- □ To oversee immediate stewardship actions required to secure the property and meet grant requirements.
- □ To provide for further Plan refinement based on additional research.
- □ To respond to new issues as they arise.

The two Conservation Commissions shall appoint members to the Coffin's Island Stewardship Council as follows: At least one member from the Newburyport Conservation Commission, at least one member from the Newburyport Open Space Committee, two members from the Parker River Clean Water Association (one each from Newburyport and Newbury), and additional members from each community to maintain an 11-member council. The two communities will alternate between which is represented by five members and which by six. After the initial appointments, three-year terms will be established on a rotating basis. The chair(s) of the Stewardship Council will request new appointments and re-appointments from the Conservation Commissions, as needed.

The initial Coffin's Island Stewardship Council consists of these members, whose terms run concurrently with their Conservation Commission or Open Space Committee terms, or which have been established to create an orderly three-year rotation schedule for the future.

Co-chairs, with one-year term as officers:

Dave Rimmer (Newbury)

Mary Harbaugh (Newburyport)

Newburyport members with term expiration dates

Conservation Commission: Ellie Stewart, May 2007

Conservation Commission: Joe Teixeira, October 2008

Open Space Committee: Mary Harbaugh, April 2008

Open Space Committee: Tom Horth, April 2007

Open Space Committee: Steve Moore, April 2006

Parker River Clean Water Association: Jack Van Loan, October 2006

Newbury members with term expiration dates

Conservation Commission: Doug Packer, April 2008

Conservation Commission: Geof Walker, October 2006

Parker River Clean Water Association: Marlene Schroeder, April 2007

Resident: Dan Streeter, October 2007

Resident: Dave Rimmer, October 2008

Appendix E: Stewardship Council

In addition, members may invite advisors to participate in discussions. Current advisors include John Norris (Newburyport), Don Bade (Newbury), Rob Stevenson (Newburyport), Geordie Vining (Newburyport), Chris LaPointe (The Trust for Public Land), and additional members of the Newburyport Open Space Committee.

After the initial Plan is approved, the Stewardship Council will meet twice a year, on the third Thursday of January and on the third Thursday of June, and additional meetings may be called if necessary. Research by members, advisors, and other experts may occur between meetings. Members are asked to file a paper copy in <u>both</u> the Newbury Conservation Commission office and the Newburyport Planning Office of field notes and other information intended for consideration in future Plan updates.

Should either or both Conservation Commissions decline to approve the initial Plan or subsequent updates, the issues in contention shall be identified by the Conservation Commission(s). The Stewardship Council will then work to find solutions acceptable to both Conservation Commissions and submit an amended Plan for approval.

If the need arises for a vote by members of the Stewardship Council, a simple majority of a quorum of at least seven members will carry the decision.

The initial Plan was created with the assistance of the Trust for Public Land.

Appendix F: Priority Habitat and High Priority Habitat BioMap Definitions

The Natural Heritage & Endangered Species Program (NHESP) is responsible for the conservation and protection of Massachusetts' biodiversity. The Program is part of the Massachusetts Division of Fisheries and Wildlife. The Program's highest priority is protecting the approximately 190 species of vertebrate and invertebrate animals and 258 species of native plants that are officially listed as Endangered, Threatened or of Special Concern in Massachusetts. Priority Habitats are areas regulated under the Massachusetts Endangered Species Act (MESA), and the rare species within these habitats are protected by that law. All of the Coffin's Island area has been designated as Priority Habitat because of the presence of State and Federally listed species.

The Massachusetts BioMap Program is another part of the Massachusetts Natural Heritage programs. Whereas Priority Habitats and MESA provide a regulatory tool, the BioMap serves as a planning tool to make land use and land protection decisions, as well as to guide land planning for strategic land protection. The BioMap identifies core habitats and supporting natural landscapes that, if protected, would provide suitable habitat over the long term for the maximum number of Massachusetts terrestrial and wetland plant and animal species and natural communities. BioMap provides a tool that can be used to prioritize land protection decisions and to protect biodiversity. The Coffin's Island Conservation Area is shown on the BioMap as a High Priority Core Habitat.

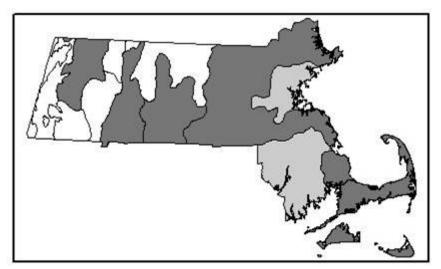
Appendix G: NHESP Oak-Hickory Forest Natural Community Classification

From: Swain, P.C. & J.B. Kearsley. 2001. Classification of the Natural Communities of Massachusetts. Version 1.3. Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife. Westborough, MA.

Community Name: OAK - HICKORY FOREST

Community Code: CT1B2B0000

SRANK: S4



Concept: A hardwood forest dominated by a mixture of oaks with hickories mixed in at a lower density.

Environmental Setting: Well drained sites, such as upper slopes, ridgetops, usually with west and south -facing aspects.

Vegetation Description: A broadly defined, variable, forest type. The canopy is dominated by one or several oaks (Ouercus rubra, O. alba, O. coccinea, and O. velutina). Mixed in are lower densities of one or several hickories (Carva ovata, C. tomentosa, C. glabra, and C. ovalis). Other trees include white ash (Fraxinus americana), black birch (Betula lenta), sassafras (Sassafras albidum), and red maple (Acer rubrum). A subcanopy commonly includes hop hornbeam (Ostrya americana), flowering dogwood (Cornus florida), shadbush (Amelanchier arborea), chestnut (Castanea dentata), and witch-hazel (Hamamelis virginiana). Low shrubs are common and often diverse: maple-leaved viburnum (Viburnum acerifolium), blueberries (Vaccinium angustifolium and V. pallidum), beaked and American hazelnut (Corylus cornuta and C. americana), New Jersey tea (Ceanothus americanus), and gray dogwood (Cornus racemosa) are characteristically present. The herbaceous layer is also richer than in many oak forests. Plants typical of the herbaceous layer include Hepatica (Hepatica nobilis), goldenrod (Solidago bicolor), tick-trefoil (Desmodium glutinosum and D. paniculatum), wild sarsaparilla (Aralia nudicaulis), rattlesnake weed (Hieracium venosum), and false Solomon's seal (Maianthemum racemosa), and Pennsylvania sedge (Carex pensylvanica).

Associations: Part of a continuum of dry, acidic communities that contain a variety of tree oak and pine species. More work is needed to define types. Hickory is seldom dominant enough to warrant being part of the name.

Habitat Values for Wild turkey (Meleagris gallopavo) are found in primarily oak areas. Dry oak forests

Associated Fauna:

support a smaller mix of animal species than are found in moister communities. There are no species known to be restricted to the Oak Hickory Forest community. Common species of dry sites include short-tailed shrew (Blarina brevicauda), red-backed vole (Clethrionomys gapperi), white footed mouse (Peromyscus leucopus), and chipmunks (Tamias striatus). Snakes of dry forest sites include garter snakes (Thamnophis s. sirtalis) and redbelly snakes (Storeria o. occipitomaculata). Birds that nest in oak forests include Eastern Wood-Pewee (Contopus virens), Red-eyed Vireo (Vireo olivaceus), Scarlet Tanager (Piranga olivacea), and Ovenbird (Seiurus aurocapillus).

Associated Rare Plants:

ACER NIGRUM BLACK MAPLE SC CERASTIUM NUTANS NODDING CHICKWEED E ISOTRIA MEDEOLOIDES SMALL WHORLED POGONIA E LESPEDEZA VIOLACEA VIOLET BUSH-CLOVER - WL

Appendix G: NHESP Oak-Hickory Forest Natural Community Classification

LYGODIUM PALMATUM CLIMBING FERN SC

RANUNCULUS FASCICULARIS EARLY BUTTECUP - WL

SPHENOPHOLIS NITIDA SHINING WEDGEGRASS T

Associated Rare Animals:

NONE KNOWN

Examples with Blue Hills Reservation, Milton; Minute Man National Historic Park, Lexington; Stacy Mountain,

Public Access: Gill; East Mountain WMA, Holyoke; Mt. Tekoa WMA, Russell; Mt. Meadow Preserve, Williamstown; Cape Cod Canal, Bourne

Threats:

Management Needs:

Synonyms

USNVC/TNC: Quercus alba- (Quercus rubra, Carya spp.) Forest Alliance -- Quercus (alba, rubra, velutina)/ Cornus florida/ Viburnum acerifolium Forest [CEGL006336].

MA (old name): SNE MESIC CENTRAL HARDWOOD FOREST ON ACIDIC TILL.

ME: Similar to: Red oak - white oak forest.

NH: 1997 - Oak-hickory Forests; 1994 - Dry Appalachian Oak - Hickory Forest; AND Dry Appalachian Oak - Hickory Forest, Appalachian Oak / Herb Variant.

VT: Similar to: Mesic Transition Hardwood Forest (Oak-Hickory-Northern Hardwood Forest). and Dry oak-hickory-hop-hornbeam forest.

NY: Appalachian oak - hickory forest, Coastal oak - hickory forest.

CT: Quercus rubra/ Cornus florida forests; AND Carya glabra - Fraxinus americana forests.

RI: Oak Hickory forest.

Weatherbee: Part of: Dry acidic oak/conifer forest community.

Author: P. Swain Date: 8/5/99

From: A Guide to the Natural Communities of Massachusetts, Manomet Center for Conservation Sciences. 2005. A guide to the natural communities of Massachusetts. Regional Conservation Planning Program. Manomet Center for Conservation Sciences. Manomet, MA.

Oak – Hickory Forest S4

Description/Concept	Hardwood forest dominated by oaks, hickories mixed in at lower density.			
	Broadly defined, variable, forest type.			
	Hickory seldom dominant enough to warrant being part of community name.			
Topography	Upper slopes, ridge tops, usually with west and south facing aspects.			
Soils/Substrate	Well drained sites.			
Canopy	Dominated by one or more oak species (red, white, black, scarlet).			
3000	One or more hickories mixed in at lower densities.			
	Other trees include ash, black birch, sassafras, and red maple.			
Sub-canopy	Hop-hornbeam, flowering dogwood, shadbush, chestnut, and witch-hazel.			
Shrub layer	Low, common, diverse.			
	Maple-leaved viburnum, blueberries, New Jersey tea, hazelnuts, and gray dogwood are			
	characteristic.			
Herb layer	Richer than many oak forests.			
	Typical plants include hepatica, silverrod, tick-trefoil, wild sarsaparilla, rattlesnake weed,			
	false Solomon's seal, and Pennsylvania sedge.			
Leaf litter				

Appendix H: Natural Heritage Checklist (Biodiversity Days) STUDENT AND AMATEUR NATURALIST'S CHECKLIST

Used for Massachusetts Biodiversity Day

This is an **English name** checklist of the more common groups of organisms and **species** likely to be seen in **June in Massachusetts**. The words **genus or family** following a name indicates many similar species are present and may be difficult to distinguish to an exact species. Within groupings below, the English family and species names are sequenced alphabetically and bolded.

This list was created for the Executive Office of Environmental Affairs, 251 Causeway St., Suite 900, Boston, MA 02114-2119.

Many of our species are introduced (accidentally or intentionally) from other continents or states. Most of these non-native species are *italicized*. The status of native versus non-native is not fully worked out in some invertebrates, so only selected introduced species are *italicized*. Some of the introduced species that have become huge problems are termed "*Invasive Aliens*". These species are both italicized and underlined.

In the woody and herbaceous plants the first few letters of the scientific name of its family are listed in parentheses after the species name.

MUSHROOM (FUNGI) KINGDOM FLASK FUNGI Black Knot of Cherry Flask-Fungus GILL FUNGI Yellow-Orange Fly Amanita Fawn/Deer Mushroom Oyster Mushroom Platterful Mushroom JELLY FUNGI (Witches' Butter) Orange Jelly-Fungus Yellow Jelly-Fungus LICHENS Reindeer Lichen/Moss British Soldiers PORE & BRACKET FUNGI Bolete genus Artist's Polypore/Conk Birch Polypore Hemlock Polypore/Varnish-Shelf Sulphur Shelf, Chicken Mushroom Versicolored Turkeytail SLIME MOLDS Wolf's-milk Slime -mold PLANT KINGDOM (Non-Vascular Plants) MOSSES Haircap Moss genus Polytrichum Sphagnum/Peat Moss genus Sphagnum Star Moss genus Mnium White Cushion Moss LIVERWORTS LIVERWORTS LIVERWORTS	□ Christmas Fern □ Cinnamon Fern □ Hay-scented Fern □ Interrupted Fern □ Northern Lady Fern □ Maidenhair Fern □ Marsh Fern □ Massachusetts Fern □ New York Fern □ Ostrich Fern □ Royal Fern □ Sensitive Fern □ Marginal Wood-Fern □ Spinulose Wood-Fern □ HORSETAILS □ Field/Common Horsetail □ River/Water Horsetail □ River/Water Horsetail □ Royal Fern □ Spinulose Wood-Fern □ HORSETAILS □ Field/Common Horsetail □ River/Water Horsetail □ River/Water Horsetail □ River/Water Horsetail □ CONIFERS (GYMNOSPERMS): All are woody □ Eastern Red Cedar/Juniper (Cupr.) □ Atlantic White Cedar (Cupr.) □ Balsam Fir (Pin.) □ Eastern Hemlock (Pin.) □ Common/Pasture Juniper (Cupr.) □ American Larch (Pin.) □ Pine genus Pinus (Pin.) □ Pine genus Pinus (Pin.) □ Pitch Pine (Pin.) □ Red Pine (Pin.) □ Scotch Pine (Pin.) □ Scotch Pine (Pin.) □ Norway Spruce (Pin.) □ Norway Spruce (Pin.) □ Red Spruce (Pin.) □ American/Canada Yew (Tax.) WOODY PLANTS (TREES, SHRUBS & VINES)	Big-toothed Aspen (Salic.) Trembling/Quaking Aspen (Salic.) Swamp Azalea ("honeysuckle") (Eric.) European Barberry (Berb.) Japanese Barberry (Berb.) Basswood (Tili.) Bayberry (Myric.) Bearberry, Kinnikinnik (Eric.) American Beech (Fag.) Black Birch, Sweet Birch (Betul.) Gray Birch (Betul.) Paper Birch, Canoe Birch (Betul.) Yellow Birch (Betul.) American Bittersweet (Cel.) Common/Allegheny Blackberry (Ros.) Blueberry genus Vaccinium (Eric.) Lowbush Blueberry (Eric.) Highbush Blueberry (Eric.) Boxelder, Ash-leaf Maple (Acer.) Common Buckthorn (Rhamn.) Glossy/Alder Buckthorn (Rhamn.) Bunchberry (Corn.) Butternut, White Walnut (Jugl.) Buttonbush (Rubi.) Catalpa genus (Catalpa) (Bign.) Black Cherry (Ros.) Choke Cherry (Ros.) Choke Cherry (Ros.) Eastern Cottonwood (Salic.) Crabapple genus (Malus) (Ros.) Large/American Cranberry (Eric.) Virginia Creeper (Vit.) Currant/Gooseberry genus (Ribes) (Gross.) Bristly/Running Dewberry (Ros.)
(Vascular Plants)	FLOWERING PLANTS (ANGIOSPERMS)	Flowering Dogwood (Corn.) Gray Dogwood (Corn.)
FERNS & FERN ALLIES CLUBMOSSES Staghorn Clubmoss Tree Clubmoss or Ground-pine FERNS (several families) Bracken Fern Chain Fern genus Woodwardia	***Does NOT include horticultural plants*** Speckled Alder (Bet.) Smooth Alder (Bet.) Apple (Ros.) Ash genus (Fra xinus) (Ole.) Black Ash (Ole.) Red/Green Ash (Ole.) White Ash (Ole.)	Pagoda Dogwood (Corn.) Silky Dogwood (Corn.) Black Elderberry (Capr.) American Elm (Ulm.) Slippery/Red Elm (Ulm.) Winged Euonymous , Burning-bush (Cel.) American Filbert , Am. Hazelnut (Betul.)

A	opendix H: Natural Herita	ge (Checklist (Biodiversity Days	s)	
	Sweet Gale (Myric.)		Pasture/Carolina Rose (Ros.)		Carrion-flower (a vine) (Smilac.)
	Grape genus (vines) (Vit.)		Saltspray/Japanese Rose (Ros.)		Broad-leaf Cat-tail (Typh.)
	Fox Grape (a vine) (Vit.)		Swamp Rose (Ros.)		Narrow-leaf Cat-tail (Typh.)
	Common Greenbrier (a vine) (Smil.)		Virginia Rose (Ros.)		Celandine (Papaver.)
	Hackberry (Ulm.)		Sassafras (Laur.)		Chickweed genus Cerastium (Cary.)
	Hawthorn genus Crataegus (Ros.)		Serviceberry/Shadbush genus		Field Chickweed (Cary.)
	Beaked Hazelnut (Ros.)		Amelanchier (Ros.)		Mouse-ear Chickweed (Cary.)
	Hickory genus (Jugl.)		Spicebush (Laur.)		Chickweed genus Stellaria (Cary.)
	Bitternut Hickory (Jugl.)		Steeplebush (Ros.)		Common Chickweed (Cary.)
	Mockernut Hickory (Jugl.)		Sweet-"fern" (Myric.)		Chicory (Aster.)
	Pignut Hickory (Jugl.)		Poison Sumac (Ana.)		Dwarf Cinquefoil (Ros.)
	Shagbark Hickory (Jugl.)		Smooth Sumac (Ana.)		Old Field Cinquefoil (Ros.)
	Sweet Pignut Hickory (Jugl.)		Staghorn Sumac (Ana.)		Rough Cinquefoil (Ros.)
	American Holly (Aq.)		Winged Sumac (Ana.)		Rough-fruited Cinquefoil (Ros.)
	Bush Honeysuckle (Capr.)		Eastern Sycamore (Platan.)		Silvery Cinquefoil (Ros.)
	Honeysuckle genus Lonicera (Capr.)		Tree-of-heaven, Ailanthus (Sima.)		Cleavers (Rubi.)
	Japanese Honeysuckle (Capr.)		Tulip-tree (/Magn.)		Alsike Clover (Fab.)
	Morrow Honeysuckle (Capr.)		Black Tupelo , Sour-gum (Nyss.)		Rabbit's-foot Clover (Fab.)
	Tatarian Honeysuckle (Capr.)		Arrow-wood Viburnum (Capr.)		Red Clover (Fab.)
	Hop Hornbeam, Ironwood (Betul.)		Maple-leaf Viburnum (Capr.)		White Clover (Fab.)
	Black Huckleberry (Eric.)		Nannyberry Viburnum (Capr.)		Bush-Clover genus Lespedeza (Fab.)
	False Indigo (Fab.) Yellow Wild Indigo (Fab.)		Witch-hobble Viburnum (Capr.)		Palmate/Yellow Hop-Clover (Fab.)
			Willow genus Salix (Salic.)		White Sweet-Clover (Fab.)
	Inkberry, Gallberry (Aq.) Ironwood, Hornbeam (Betul.)		Black Willow (Salic.) Large Pussy-Willow (Salic.)		Yellow Sweet-Clover (Fab.) Colt's-foot (Aster.)
	Poison-ivy (Anac.)		Weeping Willow (Salic.)		Wild/Red Columbine (Ran.)
	Mountain Laurel (Eric.)		Wineberry (Ros.)		Pink Corydalis (Fumari.)
	Sheep Laurel (Eric.)		Winterberry, Black "Alder" (Aq.)		Common Cow-wheat (Scro.)
	Leatherleaf, Cassandra (Eric.)		Wintergreen (Eric.)		Water Cress (Brassic.)
	Common Lilac (Ole.)	⊟	Witch-hazel (Ham.)		Winter Cress, Yellow Rocket (Brassic.)
	Black Locust (Fab.)		,		Indian Cucumber-root (Lili.)
	Maleberry (Eric.)	HE	ERBACEOUS PLANTS		Oxeye Daisy (Aster.)
	Norway Maple (Acer.)	/N	ON-WOODY)		Dandelion (Aster.)
	Red Maple (Acer.)	(14	011-110001)		Dayflower (Commelin.)
			OMEDING DI ANTO		
Ш	Silver Maple (Acer.)	FL	OWERING PLANTS	Ш	Curiy/Sour Dock (Polygon.)
	Silver Maple (Acer.) Striped Maple (Acer.)		OWERING PLANTS NGIOSPERMS)		Curly/Sour Dock (Polygon.) Bitter/Red-veined Dock (Polygon.)
	Striped Maple (Acer.)	(Al	NGIOSPERMS)		Bitter/Red-veined Dock (Polygon.)
	Striped Maple (Acer.) Sugar Maple (Acer.)	(Al Inc	NGIOSPERMS) ludes Monocots and Dicots.		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.)
	Striped Maple (Acer.)	(Al Inc ***[NGIOSPERMS) ludes Monocots and Dicots. Does NOT include horticultural plants***		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.)
	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.)	(Al Inc ***[□	NGIOSPERMS) ludes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.)
	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.)	(Al Inc ***[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.)
	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.)	(Al Inc ***[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.)
	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.)	(Al Inc ***[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.)
	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.)	(Al Inc ***[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.)
	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.)	(Al inc ***[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.)
	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.)	***[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.)
000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.)	(Al Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.)	000000000000	Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.)
0000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Red Oak (Fag.)	(Al Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.)	0000000000000	Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.)
00000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Red Oak (Fag.) Scarlet Oak (Fag.)	(Al Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.)	00000000000000	Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.)
	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Red Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.)	(Al Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells)	0000000000000	Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus
0000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Red Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.) Swamp White Oak (Fag.)	(Al Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.)	00000000000000	Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.)
00000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Red Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.) Swamp White Oak (Fag.) White Oak (Fag.)	(Al Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.)
000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Red Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.) Swamp White Oak (Fag.) White Oak (Fag.) Autumn-olive (Elae.)	***[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed
00000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Red Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.) Swamp White Oak (Fag.) White Oak (Fag.) Autumn-olive (Elae.) Red Osier (Corn.)	***[CAN Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.) Common Burdock (Aster.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed Annual Blue-Grass (Poa)
000000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Scrub/Bear Oak (Fag.) Scrub/Bear Oak (Fag.) Swamp White Oak (Fag.) White Oak (Fag.) Autumn-olive (Elae.) Red Osier (Corn.) Sweet Pepperbush (Clethr.)	***[CAN Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.) Common Burdock (Aster.) Bur-reed genus Sparganium (Spar.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed Annual Blue-Grass (Poa) Kentucky Blue-Grass (Poa)
0000000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.) Scrub/Bear Oak (Fag.) White Oak (Fag.) White Oak (Fag.) Red Osier (Corn.) Sweet Pepperbush (Clethr.) Beach Plum (Ros.) C/M	****[(Al Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.) Common Burdock (Aster.) Bur-reed genus Sparganium (Spar.) Butter-and-eggs (Scro.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed Annual Blue-Grass (Poa) Kentucky Blue-Grass (Poa) Little Bluestem-Grass (Schizachyrium)
00000000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Scrub/Bear Oak (Fag.) Scrub/Bear Oak (Fag.) Swamp White Oak (Fag.) White Oak (Fag.) Red Osier (Corn.) Sweet Pepperbush (Clethr.) Beach Plum (Ros.) C/M White Poplar (Salic.)	***[CAN Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.) Common Burdock (Aster.) Bur-reed genus Sparganium (Spar.) Butter-and-eggs (Scro.) Bulbous Buttercup, Crowfoot (Ran.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed Annual Blue-Grass (Poa) Kentucky Blue-Grass (Poa) Little Bluestem-Grass (Schizachyrium) Reed Canary-Grass (Phalaris)
00000000000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Scrub/Bear Oak (Fag.) Scrub/Bear Oak (Fag.) Swamp White Oak (Fag.) White Oak (Fag.) Red Osier (Corn.) Sweet Pepperbush (Clethr.) Beach Plum (Ros.) C/M White Poplar (Salic.) Porcelain-berry (a vine) (Vit.)	****[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.) Common Burdock (Aster.) Bur-reed genus Sparganium (Spar.) Butter-and-eggs (Scro.) Bulbous Buttercup, Crowfoot (Ran.) Creeping Buttercup (Ran.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed Annual Blue-Grass (Poa) Kentucky Blue-Grass (Poa) Little Bluestem-Grass (Schizachyrium) Reed Canary-Grass (Phalaris) Tall Crab-Grass (Digitaria)
000000000000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.) Scrub/Bear Oak (Fag.) White Oak (Fag.) White Oak (Fag.) Red Osier (Corn.) Sweet Pepperbush (Clethr.) Beach Plum (Ros.) C/M White Poplar (Salic.) Porcelain-berry (a vine) (Vit.) Common/Hedge Privet (Ole.)	***[Content of the content of the co	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.) Common Burdock (Aster.) Bur-reed genus Sparganium (Spar.) Butter-and-eggs (Scro.) Bulbous Buttercup, Crowfoot (Ran.) Creeping Buttercup (Ran.) Tall/Meadow Buttercup (Ran.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed Annual Blue-Grass (Poa) Kentucky Blue-Grass (Poa) Little Bluestem-Grass (Schizachyrium) Reed Canary-Grass (Phalaris) Tall Crab-Grass (Digitaria) Deer-tongue Grass (Dichanthelium)
000000000000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.) Scrub/Bear Oak (Fag.) White Oak (Fag.) White Oak (Fag.) Red Osier (Corn.) Sweet Pepperbush (Clethr.) Beach Plum (Ros.) C/M White Poplar (Salic.) Porcelain-berry (a vine) (Vit.) Common/Hedge Privet (Ole.) Wild Raisin, Witherod (/Capr.)	****[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.) Common Burdock (Aster.) Bur-reed genus Sparganium (Spar.) Butter-and-eggs (Scro.) Bulbous Buttercup, Crowfoot (Ran.) Creeping Buttercup (Ran.) Tall/Meadow Buttercup (Ran.) One-flowered Cancer-root (Oro.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed Annual Blue-Grass (Poa) Kentucky Blue-Grass (Poa) Little Bluestem-Grass (Schizachyrium) Reed Canary-Grass (Phalaris) Tall Crab-Grass (Digitaria) Deer-tongue Grass (Dichanthelium) Dune Grass (Ammophila)
00000000000000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.) Scrub/Bear Oak (Fag.) White Oak (Fag.) White Oak (Fag.) Red Osier (Corn.) Sweet Pepperbush (Clethr.) Beach Plum (Ros.) C/M White Poplar (Salic.) Porcelain-berry (a vine) (Vit.) Common/Hedge Privet (Ole.) Wild Raisin, Witherod (/Capr.) Black Raspberry (Ros.)	****[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.) Common Burdock (Aster.) Bur-reed genus Sparganium (Spar.) Butter-and-eggs (Scro.) Bulbous Buttercup, Crowfoot (Ran.) Creeping Buttercup (Ran.) Tall/Meadow Buttercup (Ran.) One-flowered Cancer-root (Oro.) Campion/Catchfly genus Silene		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed Annual Blue-Grass (Poa) Little Bluestem-Grass (Poa) Little Bluestem-Grass (Schizachyrium) Reed Canary-Grass (Phalaris) Tall Crab-Grass (Digitaria) Deer-tongue Grass (Dichanthelium) Dune Grass (Ammophila) Orchard Grass (Dactylis)
0000000000000000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.) Scrub/Bear Oak (Fag.) White Oak (Fag.) Autumn-olive (Elae.) Red Osier (Corn.) Sweet Pepperbush (Clethr.) Beach Plum (Ros.) C/M White Poplar (Salic.) Porcelain-berry (a vine) (Vit.) Common/Hedge Privet (Ole.) Wild Raisin, Witherod (/Capr.) Black Raspberry (Ros.) Purple-flowering Raspberry (Ros.)	****[NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.) Common Burdock (Aster.) Bur-reed genus Sparganium (Spar.) Butter-and-eggs (Scro.) Bulbous Buttercup, Crowfoot (Ran.) Creeping Buttercup (Ran.) Tall/Meadow Buttercup (Ran.) One-flowered Cancer-root (Oro.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed Annual Blue-Grass (Poa) Little Bluestem-Grass (Poa) Little Bluestem-Grass (Schizachyrium) Reed Canary-Grass (Phalaris) Tall Crab-Grass (Digitaria) Deer-tongue Grass (Digitaria) Deer-tongue Grass (Dichanthelium) Dune Grass (Agrostis) Redtop Grass (Agrostis)
00000000000000000000000000000	Striped Maple (Acer.) Sugar Maple (Acer.) Mayflower, Trailing Arbutus (Eric.) Meadowsweet (Ros.) American Mountain-ash (Ros.) European Mountain-ash (Ros.) White Mulberry (Mor.) Enchanter's-"nightshade" (Onagr.) Oak genus Quercus (Fag.) Black Oak (Fag.) Chestnut Oak (Fag.) Pin Oak (Fag.) Scarlet Oak (Fag.) Scrub/Bear Oak (Fag.) Scrub/Bear Oak (Fag.) White Oak (Fag.) White Oak (Fag.) Red Osier (Corn.) Sweet Pepperbush (Clethr.) Beach Plum (Ros.) C/M White Poplar (Salic.) Porcelain-berry (a vine) (Vit.) Common/Hedge Privet (Ole.) Wild Raisin, Witherod (/Capr.) Black Raspberry (Ros.)	(Al Inc	NGIOSPERMS) Iudes Monocots and Dicots. Does NOT include horticultural plants*** Alfalfa (Fab.) Rue-anemone (Ran.) Wood-anemone (Ran.) Broad-leaved Arrowhead (Alis.) Arrow Arum (Ar.) Asparagus (Lili.) Aster genus Aster (Aster.) White Baneberry, Doll's-eyes (/Ran.) Beggar-tick genus Bidens (Aster.) Sessile-leaf Bellwort (Lili.) (Wild "Oats", Little Merrybells) Bladderwort genus Utricularia (Lenti.) Bloodroot (Papaver.) Bluets (Rubi.) Common Burdock (Aster.) Bur-reed genus Sparganium (Spar.) Butter-and-eggs (Scro.) Bulbous Buttercup, Crowfoot (Ran.) Creeping Buttercup (Ran.) Tall/Meadow Buttercup (Ran.) One-flowered Cancer-root (Oro.) Campion/Catchfly genus Silene (Cary.)		Bitter/Red-veined Dock (Polygon.) Dodder genus (a vine) (Cuscut.) Spreading/Pink Dogbane (Apocyn.) Duckweed genus Lemna (Lemn.) Pearly Everlasting (Aster.) Sweet Flag (Acor.) Fleabane genus Erigeron (Aster.) Daisy Fleabane (Aster.) True Forget-me-not (Boragin.) Wild Garlic/Onion (Lili.) Wild Geranium (Gerani.) Gill-over-the-ground (Lami.) Yellow Goat's-beard (Aster.) Goldenrod genus Solidago (Aster.) Flat-topped Goldenrod genus (Euthamia) (Aster.) Goldthread (Ranl.) Grass family (Poaceae) w/genus listed Annual Blue-Grass (Poa) Little Bluestem-Grass (Poa) Little Bluestem-Grass (Schizachyrium) Reed Canary-Grass (Phalaris) Tall Crab-Grass (Digitaria) Deer-tongue Grass (Dichanthelium) Dune Grass (Ammophila) Orchard Grass (Dactylis)

Αj	opendix H: Natural Heritag	ge (s)
	Sweet Vernal-Grass (Anthoxanthum)		() () () () () () () () () ()	ANIMAL KINGDOM
	Blue-eyed Grass-"Iris" genus		Fringed Polygala, Gaywings (Polygal.)	INVERTEBRATES
_	Sisyrinchium (Irid.)		Pondweed genus Potamogeton (Pot.)	_
	Groundnut (a vine) (Fab.)		Common Purslane (Portulac.)	GASTROPODS/ UNIVALVE MOLLUSKS
	Hawkweed genus Hieraceum (Aster.) Meadow Hawkweed, King-devil (Aster.)		Pussytoe genus Antennaria (Aster.) Ragweed (Aster.)	☐ Slug genus Limax I (in part)☐ Rufous Garden Slug
	Mouse-ear Hawkweed (Aster.)	H	Rattlesnake-"plantain" genus	☐ Freshwater Snail
	Orange Hawkweed (Aster.)	_	Goodyera (Orchid.)	☐ Pond Snail
	Heal-all, Self-heal (Lami.)		Ragged " Robin " (Cary.)	
	False Hellebore (Lili.)		Path/Yard Rush (Junc.)	BIVALVE MOLLUSKS
	Herb-Robert (Gerani.)		Soft/Common Rush (Junc.)	☐ Fingernail Clam genus Sphaerium
	Hog-peanut (a vine) (Fab.)		Bristly Sarsaparilla (Arali.)	☐ Eastern Pond Mussel
	Horseweed (Aster.)		Wild Sarsaparilla (Arali.)	SEGMENTED WORMS & LEECHES
	Indian-pipe (Monotrop.)		Sea-lavender (Plumbagin.)	☐ Bloodworm genus Glycera
	Yellow Wild Indigo (Fab.)		Sedge genus Carex (Cyper.)	☐ Earthworm genus Lumbricus
	Northern Blue Flag Iris (Irid.)		Broom Sedge (Cyper.)	☐ Freshwater Leech genus Erpobdella
	Yellow Flag Iris (Irid.)		Fox Sedge (Cyper.)	ODUCTACEANO
	Jack-in-the-pulpit (Ar.)		Pennsylvania Sedge (Cyper.)	CRUSTACEANS
	Orange Jewelweed (Balsamin.)		Tussock Sedge (Cyper.)	Note: usually sequenced after insects
	Joe-Pye-weed genus Eupatorium		Shepherd's Purse (Brassic.)	AMPHIPODS
	(Aster.)		Glossy Shinleaf (Pyrol.)	☐ Freshwater Amphipod (genus unknown
	Spotted Knapweed (Aster.)		Eastern Skunk-cabbage (Ar.) False Solomon's-seal (Lili.)	1 1 (0
	Knotweed genus Polygonum (Polygon.)		Giant Solomon's-seal (Lili.)	ISOPODS & SOWBUGS
	Japanese Knotweed (Polygon.)		Hairy Solomon's-seal (Lili.)	☐ Pillbug genus Armadillidium
	Queen Anne's Lace , Wild Carrot (Apia.)		Sheep/Red Sorrel (Polygon.)	☐ Freshwater Isopod, Water Slater
	Pink Lady's-slipper (Orchid.)		Sow-thistle genus Sonchus (Aster.)	□ owbug genus Oniscus
	Lady's-thumb (Polygon.)		Common Speedwell (Scro.)	WATER-FLEAS
	Lettuce genus (Lactuca) (Aster.)		Cypress Spurge (Euph.)	☐ Water-flea genus Daphnia
	Bluebead Lily (Lili.)		Boreal Starflower (Primul.)	ADTUDODODO
	Canada/Wild Yellow Lily (Lili.)		Star-of-Bethlehem (Lili.)	ARTHROPODS
	Orange Day Lily (Lili.)		Yellow Star-"grass" (Lili.)	LLIPEDES
	Lily-of-the-valley (Lili.)		Common Stichwort (Cary.)	☐ Millipedes (genus unknown)
	Trout Lily (Lili.)		Wild Strawberry (Ros.)	CENTIPEDES
	Purple Loosestrife (Lythr.)		St. John's-wort genus Hypericum	☐ Centipedes (genus unknown)
	Whorled Loosestrife (Primul.)	_	(Clusi.)	· · · · · ·
	Wild Lupine (Fab.)		Common St. John's-wort (Clus.)	SPIDERS, TICKS & ALLIES
	Rose/Swamp Mallow (Malv.) Marsh-" marigold " (Ran.)		Spatulate-leaved Sundew (Droser.) Round-leaved Sundew (Droser.)	DADDY-LONG-LEGS
	Canada Mayflower (Lili.)		Sunflower genus Helianthus (Aster.)	□ Daddy-long-legs (family & genus
	Tall Meadow-rue (Ran.)		Black -eyed Susan (Aster.)	unknown)
			Black Swallow-wort (Ascl.)	SPIDERS
	Common Milkweed (Ascl.)		Thistle genus Cirsium (Aster.)	☐ Goldenrod Crab Spider
	Mint genus Mentha (Lami.)		Blue Toadflax (Scro.)	☐ Black-and-yellow Garden Spider
	Moneywort (Primul.)		Bird's-foot Trefoil (Fab.)	☐ Funnel-web Grass Spider
	Wild Morning-glory (Convol.)		Nodding Trillium (Lili.)	☐ American House Spider
	Mugwort (Aster.)		Painted Trillium (Lili.)	☐ Jumping Spider (genus unknown)
	Common Mullein (Scro.)		Red/Purple Trillium (Lili.)	☐ Wolf Spider (genus unknown)
	Black Mustard (Brassic.)		Vetch genus Vicia (Fab.)	TICKS & MITES
	Garlic Mustard (Brassic.)		Bird/Cow Vetch (Fab.)	
	Stinging Nettle (Urtic.)		Bird's-foot Violet (Viol.)	☐ Red Spider Mite ☐ Velvet Mite genus Trombidium
	Bittersweet Nightshade (Solan.)		Common Blue Violet (Viol.)	☐ Water Mite genus Eylais
	Partridge-berry (Rubi.)		Northern White Violet (Viol.) Sweet White Violet (Viol.)	☐ Brown Dog/Wood Tick
	Poor-man's Pepper (Brassic.) "Periwinkle", Myrtle, Vinca (Apocyn.)		Water-chestnut (Trap.)	☐ Eastern Deer Tick
	Moss Phlox (Polemoni.)		Water-hemlock genus Cicuta (Apia.)	
	Pickerel-weed (Ponte.)		White Water-lily (Nymph.)	INSECTS
	Pigweed, Lamb's Quarters		Yellow Water-lily, Spatterdock (Nymph.)	ANT, BEE & WASP Order
_	(Chenopdi.)		Water-milfoil genus Myriophyllum	
	Pineapple-weed (Aster.)	_	(Halorag.)	Ant family
	Deptford Pink (Cary.)		Water-shield (Cabomb.)	☐ Ant genus Leptothorax
	Pipsissewa (Pyrol.)		Water-willow (Lythr.)	☐ Carpenter Ant genus Camponotus☐ European Pavement Ant
	Purple Pitcher-plant (Sarra.)		Spotted Wintergreen (Pyrol.)	☐ European Pavement Ant☐ Little Black Ant
	Common/Broad-leaf Plantain (Planta.)		Common Yellow Wood-sorrel (Oxalid.)	☐ Red/Crater/Mound Ant genus Formica
	Ribgrass/Narrow-leaf Plantain (Planta.)		Yarrow (Aster.)	- Neu/Orater/Mount Ant genus Forfillea

Αľ	opendix H: Natural Heritag	ge C	mecklist (blourversity Days	5)	
	Red Mound Ant		Common Ringlet		Black Fly family
	Yellow Ant genus Acanthomyops		Little Wood Satyr		Blow/Bottle Fly family
	Bumble Bee genus Bombus		Dusted Skipper		Crane Fly genus_
	Carpenter Bee family		European Skipper		Phantom Crane Fly
	Green Metallic Bee genus Augochlora		Hobomok Skipper		Deer Fly
	Honey Bee		Least Skipper		Fruit Fly genus Drosophila
	Bald-faced Hornet		Peck's Skipper		American Horse Fly
	Ichneumon Wasp family		Silver-spotted Skipper		House Fly
	Oak Apple Gall Wasp		Clouded Sulphur		Hover/Flower Fly family
	Paper Wasp genus Polistes		Orange Sulphur		Robber Fly family
	Thread-waisted Wasp genus		Black Swallowtail		Biting Midge family
	Ammophila Eastern Yellowjacket		Spicebush Swallowtail Eastern Tiger Swallowtail	ш	Mosquito family
	•		Eastern Tailed-Blue	GR	ASSHOPPER Order (Orthopterans)
API	IID, PLANTHOPPER & SCALE Order		Viceroy		Cricket (genus unknown)
	Hemlock Woolly Adelgid		Cabbage White		House Cricket
	Aphid genus Aphis		•		Northern Field Cricket
	Dogday Cicada/Harvestfly		th "Suborder"		Snowy Tree Cricket
	Leafhopper family		Army -worm Moth		Katydid (genus unknown)
	Meadow Spittlebug		Cecropia Moth		Grasshopper/Locust (genus unknown
	Treehopper family		Copper Underwing Moth	MA	YFLY Order
BEE	TLE Order		Eastern Tent Caterpillar Moth Eight-spotted Day Moth	NIE	OVERNING Ouden
	Asparagus Beetle		Fall Webworm Moth		RVEWING Order
	Click Beetle family		Gypsy Moth		Andlian gapus Murmalaan
	Darkling Beetle family		Hummingbird Moth		Antlion genus Myrmeleon
	Dogbane Beetle		lo Moth		Eastern Dobsonfly Green Lacewing
	Flash Beetles (Fire-"fly") family		Large Yellow Underwing Moth		STONEFLY Order
	Ground Beetle family		Luna Moth		TERMITE Order
	Japanese Beetle		Tomato Hornworm Moth		
	Lady Beetle (Lady-"bug") family		Woolly Bear Moth	_	LKING-STICK Order
			•		Northorn Walking stick
	Two-spotted Lady Beetle	CAI	DDICEL V Order		Northern Walking-stick
	May Beetle	CAI	DDISFLY Order		_
	May Beetle Predaceous Diving-Beetle family		DDISFLY Order CKROACH & MANTID Order		ERTEBRATES
	May Beetle Predaceous Diving-Beetle family Rove Beetle family			VE	ERTEBRATES
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle	CO	CKROACH & MANTID Order American Cockroach German Cockroach	VE AN	ERTEBRATES IPHIBIANS
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family	CO	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle	CO	CKROACH & MANTID Order American Cockroach German Cockroach	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft)
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle	CO	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis	VE AN SAL	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle	COC	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates)	AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order	COC	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder	AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family	COC	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder Familiar Bluet	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander DGS & TOADS
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family	COC DR/	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder Familiar Bluet Northern Bluet	AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander DGS & TOADS Bull Frog
0000000000000	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family	COC DR/Dan	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder Familiar Bluet Northern Bluet Variable Dancer	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander DGS & TOADS Bull Frog Green Frog
0000000000000000	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family	COC DR/	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog
00000000000000000	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family	Dan	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog
0000000000000000	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family	COC DR/Dan	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog
0000000000000000	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family	COC DR/Dan	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper
00000000000000000000000000000000000000	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family Water Strider family	COC DR/Dan	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) mselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family Water Strider family TERFLY & MOTH Order terfly & Skipper "Suborder"	COC DR/Dan	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) mselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family Water Strider family TERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral	COC DR/Dan	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) mselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail	VE AN SAI	ERTEBRATES IPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog
But	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family Water Strider family TTERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure	COC DR/Dan	CKROACH & MANTID Order American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family Water Strider family TTERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot	DRA Dan	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer"	VE AN SAI	ERTEBRATES IPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Water Boatman family Water Boatman family TERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot Mourning Cloak	COC Dan DR/	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) Inselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer" Twelve-spotted "Skimmer"	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family Water Strider family TTERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot Mourning Cloak Northern Cloudywing	COC DEN Dan	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) nselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer" Twelve-spotted "Skimmer" Dot-tailed Whiteface	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog EPTILES AKES Racer (Black Racer race) Brown Snake
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Water Boatman family Water Strider family TERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot Mourning Cloak Northern Cloudywing Eastern Comma	COC Dan DR/	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) Inselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer" Twelve-spotted "Skimmer"	VE AN SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog EPTILES AKES Racer (Black Racer race) Brown Snake Common Garter Snake
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family Water Strider family TTERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot Mourning Cloak Northern Cloudywing	DR/Dan	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) Inselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer" Twelve-spotted "Skimmer" Dot-tailed Whiteface Common Whitetail	VE AN SAIDED FROM DECEMBER SINDED	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog EPTILES AKES Racer (Black Racer race) Brown Snake Common Garter Snake Eastern Ribbon Snake
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Water Boatman family Water Strider family TERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot Mourning Cloak Northern Cloudywing Eastern Comma American Copper	DR/Dan	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) Inselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer" Twelve-spotted "Skimmer" Dot-tailed Whiteface Common Whitetail RWIG Order	VE AN SAIDED FROM DECEMBER STATE OF THE SAIDED DECEMBER STATE OF THE SAIDE	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog EPTILES AKES Racer (Black Racer race) Brown Snake Common Garter Snake Eastern Ribbon Snake Milk Snake
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Water Boatman family Water Strider family TERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot Mourning Cloak Northern Cloudywing Eastern Comma American Copper Pearl Crescent	COC DRA Dan Dan DEAF	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) Inselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer" Twelve-spotted "Skimmer" Dot-tailed Whiteface Common Whitetail RWIG Order Earwig (genus unknown)	VE AN SAIDED FROM DECEMBER STATE OF THE SAIDED DECEMBER STATE OF THE SAIDE	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog EPTILES AKES Racer (Black Racer race) Brown Snake Common Garter Snake Eastern Ribbon Snake Milk Snake Northern Water Snake
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Water Boatman family Water Strider family TERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot Mourning Cloak Northern Cloudywing Eastern Comma American Copper Pearl Crescent Long Dash	COC DR/Dan Dan EAF	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) Inselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer" Twelve-spotted "Skimmer" Dot-tailed Whiteface Common Whitetail RWIG Order Earwig (genus unknown) European Earwig	VE AN SAIDED FROM THE RESTRICTION OF THE SAIDED THE SAI	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog EPTILES AKES Racer (Black Racer race) Brown Snake Common Garter Snake Eastern Ribbon Snake Milk Snake Northern Water Snake Ring-necked Snake
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family Water Strider family TERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot Mourning Cloak Northern Cloudywing Eastern Comma American Copper Pearl Crescent Long Dash Juvenal's Duskywing Silver-bordered Fritillary American Lady	COC DR/Dan Dan EAF	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) Inselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer" Twelve-spotted "Skimmer" Dot-tailed Whiteface Common Whitetail RWIG Order Earwig (genus unknown)	VE AN SAIDED FROM DECEMBER STATE OF THE SAIDED DECEMBER STATE OF THE SAIDE	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog EPTILES AKES Racer (Black Racer race) Brown Snake Common Garter Snake Eastern Ribbon Snake Milk Snake Northern Water Snake
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family Water Strider family TERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot Mourning Cloak Northern Cloudywing Eastern Comma American Copper Pearl Crescent Long Dash Juvenal's Duskywing Silver-bordered Fritillary American Lady Painted Lady	COC DRA Dan Dan DRA FLE	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) Inselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer" Twelve-spotted "Skimmer" Dot-tailed Whiteface Common Whitetail RWIG Order Earwig (genus unknown) European Earwig	VE AN SOLO FROM THE PROPERTY OF THE PROPERTY O	ERTEBRATES MPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog EPTILES AKES Racer (Black Racer race) Brown Snake Common Garter Snake Eastern Ribbon Snake Milk Snake Northern Water Snake Ring-necked Snake
	May Beetle Predaceous Diving-Beetle family Rove Beetle family Rose Chafer Beetle Stag Beetle family Brown Tiger Beetle Six-spotted Green Tiger Beetle Weevil/Snout Beetle family Whirligig Beetle family Whirligig Beetle family BUG (TRUE BUG) Order Assasin Bug family Backswimmer family Giant Water Bug family Stink Bug family Water Boatman family Water Strider family TERFLY & MOTH Order terfly & Skipper "Suborder" Red Admiral Spring Azure Baltimore Checkerspot Mourning Cloak Northern Cloudywing Eastern Comma American Copper Pearl Crescent Long Dash Juvenal's Duskywing Silver-bordered Fritillary American Lady	COC DRA Dan Dan DRA FLE	American Cockroach German Cockroach Pennsylvania Wood Roach European Praying Mantis AGONFLY Order (Odonates) Inselfly Suborder Familiar Bluet Northern Bluet Variable Dancer Eastern Forktail Ebony Jewelwing Slender Spreadwing Dragonfly Suborder Common Basket-tail Green Darner Blue Dasher Calico/Elisa Pennant Eastern Pondhawk Spangled "Skimmer" Twelve-spotted "Skimmer" Tot-tailed Whiteface Common Whitetail RWIG Order Earwig (genus unknown) European Earwig EA Order	VE AN SOLO FROND F	ERTEBRATES IPHIBIANS LAMANDERS Eastern/Red-spotted Newt (& Red Eft) Red-backed Salamander Spotted Salamander Two-lined Salamander OGS & TOADS Bull Frog Green Frog Northern Leopard Frog Pickerel Frog Wood Frog Spring Peeper American Toad Fowler's Toad Common Gray Treefrog EPTILES AKES Racer (Black Racer race) Brown Snake Common Garter Snake Eastern Ribbon Snake Milk Snake Northern Water Snake Ring-necked Snake Smooth Green Snake

Ar	pendix H: Natural Heritag	e C	Checklist (Biodiversity Day	s)	
	Common Musk Turtle		Mallard		Yellow Warbler
	Painted Turtle		Eastern Meadowlark		Yellow-rumped/Myrtle Warbler
	Snapping Turtle		Hooded Merganser		Louisiana Waterthrush
	Spotted Turtle		Northern Mockingbird		Northern Waterthrush
	Wood Turtle		Common Nighthawk		Cedar Waxwing
			Red-breasted Nuthatch		Whip-poor-will
BII	RDS		White-breasted Nuthatch		Willet (Sandpiper) C/M
	Red-winged Blackbird		Baltimore/No. Oriole		American Woodcock
	Eastern Bluebird		Osprey		Downy Woodpecker
	Bobolink		Ovenbird/Teacherbird (Warbler)		Hairy Woodpecker
	Northern Bobwhite (se. Mass.)		Barred Owl		Pileated Woodpecker
	Indigo Bunting		Great Horned Owl		Red-bellied Woodpecker
	Northern Cardinal		Eastern Screech-Owl		Eastern Wood-Pewee
	Gray Catbird		Ring-necked Pheasant		Carolina Wren
	Black-capped Chickadee		Eastern Phoebe		House Wren
	Double-crested Cormorant		American Redstart (Warbler)		Winter Wren
	Brown-headed Cowbird		American Robin		Common Yellowthroat (Warbler)
	Brown Creeper		Spotted Sandpiper		AMMALS
	American Crow		Yellow-bellied Sapsucker		
	Black-billed Cuckoo		Chipping Sparrow		Big Brown Bat
	Yellow-billed Cuckoo		Field Sparrow		Little Brown Bat
	Mourning Dove		House Sparrow		Black Bear
	Rock Dove, Park Pigeon		Savannah Sparrow		
	American Black Duck		Song Sparrow		Domestic/Feral Cat
	Wood Duck		Swamp Sparrow		Eastern Chipmunk
	Great Egret		White-throated Sparrow		Eastern Cottontail
	Snowy Egret		European Starling		Coyote
	House Finch		Bank Swallow		White-tailed Deer
	Purple Finch		Barn Swallow		Fisher
	Northern/Peterson's Flicker		No. Rough-winged Swallow		Common Gray Fox
	Great Crested Flycatcher		Tree Swallow		Red Fox
	Least Flycatcher		Mute Swan		Human
	Willow Flycatcher		Chimney Swift		American Mink
	Blue-gray Gnatcatcher		Scarlet Tanager		Hairy-tailed Mole
	American Goldfinch		Common Tern C/M		Star-nosed Mole
	Canada Goose		Least Tern C/M		Moose
	Common/Eastern Grackle		Brown Thrasher		House Mouse
	Rose-breasted Grosbeak		Hermit Thrush	H	White-footed Mouse Common Muskrat
	Ruffed Grouse		Wood Thrush		
	Great Black-backed Gull		Tufted Titmouse	H	Virginia Opossum Northern River Otter
	Herring Gull		Eastern/Rufous-sided Towhee		Common/Canadian Porcupine
	Ring-billed Gull		Wild Turkey	H	Common Raccoon
	Cooper's Hawk		Veery (Thrush)		Brown/Norway Rat
	Broad-winged Hawk		Blue-headed/Solitary Vireo		No. Short-tailed Shrew
	Red-shouldered Hawk		Red-eyed Vireo		Striped Skunk
	Red-tailed Hawk		Warbling Vireo		Eastern Gray Squirrel
	Great Blue Heron		Turkey Vulture (now w/Heron Order)		Red Squirrel
	Green Heron		Black-and-white Warbler		Southern Flying-Squirrel
	Black-crowned Night-Heron		Blackburnian Warbler		Meadow Vole
	Ruby-throated Hummingbird		Black-throated Blue Warbler		Long-tailed Weasel
	Blue Jay		Black-throated Green Warbler		Short-tailed Weasel, Ermine
	American Kestrel		Blue-winged Warbler		Woodchuck/Eastern Marmot
	Killdeer (Plover)		Chestnut-sided Warbler	_	110000110011 Labtolli Mailliot
	Eastern Kingbird		Pine Warbler		
	Belted Kingfisher		Prairie Warbler		

FORM A - AREA

MASSACHUSETTS HISTORICAL COMMISSION MASSACHUSETTS ARCHIVES BUILDING 220 MORRISSEY BOULEVARD BOSTON, MASSACHUSETTS 02125

NWB 85-91	Newbury-	NA	see data sheet
WNB R-19	port		JL
NEW R43-			
44			

Photograph

(3" x 3" or 3-1/2" x 5", black and white only)
Label photos on black with town and addresses for all)
buildings shown. Record film roll and negative numbers
here on the form. Staple 1-2 photos to left side of form
over this space. Attach additional photos to continuation sheets.

roll	negative(s)

Sketch Map

Draw a map of the area indicating properties within it. Circle and number properties for which individual inventory forms have been completed. Label streets including route numbers, if any. Attach a continuation sheet if space is not sufficient here. Indicate north.

See Attached

Assessor's Sheets USGS Quad Area Letter Form Numbers

Town Newbury, Newburyport, West Newbury

Place (neighborhood or village)

Name of Area Common Pasture

Present Use Agriculture, residential, open space

Construction Dates of Period

1635 (land use pattern established)

Overall Condition Good

Major Intrusions and Alterations

Non-agricultural construction including Route 95

Acreage Approximately 1,000 acres

Recorded by Shary Page Berg Gretchen G. Schuler Mary Harbaugh

Organization

Department of Conservation and Recreation Essex National Heritage Commission Heritage Landscape Inventory Program

Date December 2005

Recommended for listing in the National Register of Historic Places.

ARCHITECTURAL DESCRIPTION

Overview

The Common Pasture, located in Newbury, Newburyport and West Newbury, is a remarkable remnant landscape with a history that dates back to 1635. It is one of the few surviving areas in Eastern Massachusetts to retain evidence of the common lands that were the foundation of 17th century Massachusetts land use patterns. The grasslands that characterize portions of the surviving area of the Common Pasture are rare as a historic landscape type in Massachusetts and are visible from multiple public ways. The Common Pasture is noteworthy for its size, unique landscape character and for the retention of large-scale agricultural use. Most of the area is currently not protected by any means, except as the state Wetlands Protection Act and Rivers Protection Act apply. A small part of the land is in Chapter 61A.

The portion of the Common Pasture addressed in this inventory form is a roughly 1,000-acre area that was part of a much larger common that existed in the 17th century; was divided into family farms in the 18th century; and has remained largely in agricultural use ever since. It contains most of the unique grasslands and remaining working farms in the area but is in a prime location that is also vulnerable to development. Key reasons for wishing to preserve the Common Pasture are its historical significance; its value as a working agricultural landscape; and its importance as open space and wildlife habitat.

This Area Form conveys the context, history and general description of the landscape in Essex County known as the Common Pasture, specifically a portion of the area that was known in the 17th century as the lower common. The focus of this form is on the heritage landscape that retains the agricultural character of the Common Pasture and subsequent family farms. The framework used to document and evaluate the Common Pasture is that of a rural historic district as described in National Register Bulletin 30. A rural historic district is a,

"geographic area that historically has been used by people or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings, roads and waterways, and natural features."

The significance of the Common Pasture derives from its early history as common land as well as its continued agricultural use as family-owned farms from the early 18th century to the present. In the context of Massachusetts settlement, the Common Pasture is of statewide significance as a rare surviving area where 17th century land use patterns are still evident in the landscape. The Common Pasture is also one of the largest and most cohesive agricultural areas in Essex County, with regional significance that extends beyond the three communities in which it is located. Ironically while Route 95 is an intrusion into the Common Pasture, it also is a prime location for viewing the landscape, making it visible to thousands of travelers daily. Like most rural historic districts, the Common Pasture was not frozen in time but has evolved over nearly 400 years of continuous agricultural use while retaining its essential agricultural character.

Boundaries

The heritage landscape described in this Area Form includes land on either side of Route 95 in Newbury, Newburyport and West Newbury. East of Route 95 it is bounded on the south by Scotland Road in Newbury; on the east by the Little River; and on the north by Crow Lane in Newburyport. West of Route 95, it is generally bounded on the north by Hale Street, on the west by Turkey Hill Road in Newburyport and Turkey Hill Street in West Newbury, and on the south by residential development (see Maps 7 and 8). (Note: while Turkey Hill Road/Street is generally considered the western boundary of the area, the property at 100 Turkey Hill Road is also included even though it is on the west side of the road because of its strong associations with the Common Pasture.) This boundary includes land that retains the rural character and traditional uses of the historic grazing common, woodlots and farmland while excluding incompatible modern uses. In a few cases modern buildings are included where they are surrounded by rural land and are well screened from public roads.

The description that follows is broken down into three major areas: South Pasture, North Pasture and Turkey Hill. These are modern distinctions that are used here to clarify the descriptions.

South Pasture

The area at the heart of the historic Common Pasture, which is referred to here as South Pasture, is the largest and most cohesive section of the Common Pasture comprising about 640 acres. South Pasture lies in Newbury, Newburyport and West Newbury and is bounded by Route 95 on the west, Scotland Road on the south, the Little River on the east and Hale Street on the north. It is visually distinctive with broad expanses of grassland broken by scattered trees and hedgerows, extensive agricultural use and ownership in large parcels. South Pasture has regionally significant long distance views across the grassland from Route 95 and dramatic rural landscape views along the north side of Scotland Road and the south side of Hale Street. South Pasture has been designated a current priority focus area by conservation groups working to preserve the Common Pasture. The South Pasture area is zoned agricultural/residential and contains the largest concentration of farms remaining in Newburyport. Large parts of it are also designated wetlands. For descriptive purposes, the South Pasture area is presented below into two sections: the north side of Scotland Road and the south side of Hale Street.

North Side of Scotland Road

Scotland Road delineates the southern boundary of the South Pasture. Land along the north side of Scotland Road is considered part of the Common Pasture, while land along the south side of the road has been developed and no longer retains its rural, agricultural character. The area is described from west to east.

The landscape begins on the north side of Scotland Road in Newbury about one half mile east of the intersection with Route 95. The Herrick property (Parcels R44-3 and R44-5 in Newbury and 89-3 in Newburyport, Supplemental Photo 1) is an important 22-acre parcel that contains wetlands and wooded uplands and is a critical part of the Common Pasture viewshed, framing the landscape as one travels east along Scotland Road. Historic maps indicate that buildings never existed on this site. The Herrick land is largely wooded with mixed deciduous second growth forest. The terrain is irregular, with some evidence of recent earth moving and logging. There is a rough gravel road leading into the site over a small stream. The northern edge of the property is delineated by a piled fieldstone wall with a wire fence on top of it. The Trust for Public Land (TPL) has recently reached an agreement to purchase this parcel, which is valued in part because it provides access to the extensive grassland area east of Route 95 (Photo 2 and Supplemental Photo 2).

Traveling east, the next group of fields along the north side of Scotland Road is among the most scenic in the entire Common Pasture. There are three large fields (Parcels R44-6, R44-8 and R44-10, all in Newbury as well as several smaller parcels, Supplemental Photo 3) ranging from 10 to 15 acres each that consist of relatively flat pasture framed by deciduous trees along the hedgerows. The Coffin farm was located here in the 19th century (Capt. C. Coffin on the 1830 map and W. Coffin on the 1872 map (Maps 3 and 4), but no buildings after that). Part of this land is low and wet, with a small stream running through the area. There is a wooded upland north of the open fields, which are still used for grazing cattle as they have been for centuries. There are no buildings associated with these fields but there are several cart paths leading into the area from Scotland Road. East of these three fields is a 25-acre L-shaped field (parcel R44-11, also in Newbury) that is slightly drier but similar in character. Although the four parcels are in different ownerships they are unified by their common use as pasture land with individual fields visually defined by hedgerows and in some cases by piled fieldstone walls. The next property to the east is a deep 71-acre parcel (Parcel R-45-1, Photo 1) that is used for hay. The large size of the field is unusual for present day New England where most fields are much smaller.

Further east at 50 Scotland Road is the 50-acre <u>Colby Farm</u> (Parcel R45-5 in Newbury, Supplemental Photo 4) which grows a small number of crops, brokers hay and also raises pigs. The 19th century name associated with the Colby Farm is S. Thurlow, with the homestead set back from Scotland Road then as it is today (see Maps 3 and 4). There are no buildings on this property shown on the 1884, 1942 or 1952 USGS maps. The 1968 USGS map shows a drive

¹ The parcels in the Common Pasture are complex. Only large parcels are listed in the text. See data sheet for complete list of parcels.

leading into the site of the present house but no buildings. Today the farm fields are visible from the road as is the farmstand, a one-story wooden vernacular shed located adjacent to the road. The circa 1980s one-story Cape house and a cluster of farm buildings are located at the end of a long lane and are not visible from Scotland Road (information on buildings is limited as the owner declined access). The Colby Farm is a popular local institution that is highly valued by local residents. Through the high visibility of its fields and the presence of an active farmstand, it is an important link with the agricultural history of the community. Portions of the farm are in Chapter 61A (Agriculture) and conservation groups are working with the owners to establish an agricultural preservation restriction.

Along the eastern edge of the Colby Farm is a tributary of the Little River that forms the western boundary of a 17.9 acre pasture (Parcel R45-6 in Newbury) that extends north and to the Little River which generally forms the eastern edge of the South Pasture. Land east of the Little River is in mixed industrial/commercial uses and no longer retains the distinctive characteristics of the Common Pasture so it is excluded from this Area Form.

South Side of Hale Street

Hale Street (Photo 3) runs roughly parallel to Scotland Road about one mile to the north. It does not appear on the 1830 map but is shown on the 1872 map as Tappan Street. Today it is a narrow two lane bituminous paved roadway approximately 22' wide with center stripe and no shoulders. It widens slightly as it crosses over Route 95, where it also has curbs and a sidewalk on the north side. Vegetation comes right up to the edge of the road giving it a narrow rural character.

The land along the south side of Hale Street from Route 95 east to the Little River comprises the northern portion of the South Pasture. It is described from west to east. Parcels along Hale Street are all in Newburyport although some extend south to connect with the parcels along Scotland Road in Newbury that are described above.

Running along the eastern edge of Route 95 and south of Hale Street is a large expanse of open fields (Parcels 87, 88 and 89 in Newburyport, portions of which have been divided into smaller lots, Supplemental Photo 5). This important area, which is characterized by open grassland with scattered clumps of trees, is highly visible from the northbound travel lane of Route 95 but has only limited frontage on Hale Street, where it is partly screened by roadside vegetation. From the highway this area initially appears as a vast piece of open land, but closer inspection reveals hedgerows and stone walls that define the historic parcel boundaries. This part of the Common Pasture is still used for grazing cattle, as it has been for nearly 400 years. Much of the area is low and wet, which contributes to its landscape character and has also prevented development to date. Historic maps do not show that any buildings were ever built here and none exist now. Dirt tracks provide some access through the area. The land retains the historic grassland character of the Common Pasture and is one of the most visible and dramatic portions of the South Pasture. It is also of particular interest from a wildlife habitat perspective.

East of the pasture land along Route 95 is the Sweeney/Myette Farm (99 Hale Street, Parcels 84, 85 and 86 in Newburyport, Supplemental Photo 6) with frontage that extends along most of Hale Street between Route 95 and the Little River, totaling about 172 acres. The 1830 map does not show any farmsteads in this area, while the 1872 map shows D. Purrington located somewhat south of Hale Street and J. Smith located slightly further east and much closer to the road (neither is on the site of any existing buildings). No buildings are shown in this area in the 1884 USGS map. The 1942 USGS map shows a building slightly west of the present Myette house and east of where the D. Purrington house was located in 1872. The land, which lies roughly north of the Colby Farm, is actively hayed and offers expansive views of the open fields from Hale Street. There is a wetland area (part of the Little River drainage) at the northwest corner of the property and the Little River runs along the eastern edge of the property. Most of the farm is fairly flat with a low rise near the center where the present house and farm buildings are located.

The current house and farm buildings associated with the Sweeney/Myette Farm are at the end of a long lane and are not visible from Hale Street. Assessors data indicates that there is a Colonial style house (probably mid to late 20th century) as well as a pole barn, a one-story barn, three frame sheds and two garages (information on the buildings is limited because the owner declined to provide access). Also associated with the Sweeney farm is a late 20th century Cape style house with attached barn at 101 Hale Street (parcel 86-3 in Newburyport) which is located close to Hale street.

North Pasture

The area known today as North Pasture is another large and relatively cohesive section of the Common Pasture comprising about 240 acres. North Pasture lies entirely in Newburyport and is bounded by Route 95 on the west, Hale Street on the south, the Little River on the east and Crow Lane on the north. Like the South Pasture it has areas of wetland and grassland broken by scattered trees and hedgerows, changing to shrub lands and woods near Crow Lane. Portions of North Pasture have been designated a focus area by conservation groups working to preserve the Common Pasture.

North Pasture is visible from Route 95 and from Hale Street but is less dramatic than South Pasture because it is more heavily forested with limited areas of grassland and shorter views. Immediately east of Route 95 on the north side of Hale Street is the 1954 road alignment (now a walking trail) that runs parallel to the current Route 95. East of that is the headquarters of the Cabot Corporation, a late 20th century office complex (Parcel 95-2-A, Supplemental Photo 8) that is well-screened from Hale Street by vegetation except at the entrance road. East of that is a 102-acre parcel of mixed woodland and open grassland, part of the former Cooper Farm (Parcel 95-2, Supplemental Photo 7). The Trust for Public Land has recently reached an agreement to purchase this parcel. The North Pasture extends only as far east as the Little River. East of that, the land has largely been subdivided for residential use. Some of the land north of Crow Lane is wooded but the presence of the Newburyport landfill and other industrial uses dominate, therefore land north of Crow Lane is not included in this heritage landscape.

Turkey Hill Area

The Turkey Hill area includes land west of Route 95 that was historically part of the lower common in Newburyport and West Newbury. It is bordered by Hale Street on the north, generally by Turkey Hill Road in Newburyport and Turkey Hill Street in West Newbury on the west, and private property to the south. This area includes a range of landscape types that reflect various aspects of the Common Pasture, including farmland, forest and open grassland. It is also more topographically varied than the area to the east.

While Turkey Hill Road/Street, a narrow winding rural roadway that follows its historic alignment, generally forms the western boundary of the district, the <u>Col. Moses Little House</u> at 100 Turkey Hill Road (Parcel 91-5, Supplemental Photo 9) is also included in this Area Form because of its strong historic associations with the Common Pasture. This Georgian style dwelling with attached barn was constructed in ca. 1750. Also west of Turkey Hill Road/Street (but not included in this area form) is the Artichoke Reservoir (built in the 1930s) and properties associated with 19th century Quakers. The reservoir and properties on the west side of the road associated with the Quakers are excluded because they are not directly related to the Common Pasture. They could be the subject of further study if a National Register nomination is pursued in the future. Land along the southern part of Turkey Hill Street is also excluded because most of it has been developed and no longer retains the distinctive features of the Common Pasture.

In Newburyport's Turkey Hill area, there are several important properties that are part of the Common Pasture. On the south side of Hale Street, which has the character of a narrow rural road, is the 47-acre Newburyport <u>City Forest</u> (Parcel 87-3 in Newburyport), which reflects the use of the Common Pasture for woodlots as well as pasture. The topography is varied and irregular and the area has primarily deciduous second growth forest with areas of evergreens at the southern edge. The forest has trails through it and is a popular walking and nature study area. Immediately south of the City Forest is a 37-acre slice (Parcel 91-2 in Newburyport) of upland farmland owned by the Myette family (owners of the Sweeney-Myette Farm on Hale Street) that is currently used for hay.

The former Hale Farm at 101 Turkey Hill Road (Parcel 91-3 in Newburyport, Photo 4) now owned by the Maskiewicz family, is a long narrow piece of land that extends southeast to Route 95. At its eastern end the farm encompasses the summit of Turkey Hill. From the road, dry laid stone walls line the driveway that leads up the hill to a circa 1860 three-bay, two and one-half story brick house. This imposing structure, which faces south so that its gable end is viewed from the road, has four tall chimneys rising from the slate roof, rests on a granite block foundation and has simple 6/6 sash set in wood frames with granite sills and lintels. The rear ell also is of brick construction and appears to be original to the house. To the east of the house rising up the hill to the fields are multiple one-story barns and sheds, most dating from the 1950s. The farm remains in limited agricultural use, primarily for haying, with other

fields kept open for the views south and west towards the Upper Artichoke Reservoir.

South of the Hale Farm, Turkey Hill Road becomes Turkey Hill Street as it enters West Newbury. On the east side of the road, is a large field (Parcel R-19-3 in West Newbury, Supplemental Photo 10) next to a small modern subdivision on part of Arrowhead Way which once was part of the Common Pasture. South of Rogers Street, open landscapes on the east side of Turkey Hill Street include grasslands and grazing fields with wetlands that extend east to Route 95, part of the Common Pasture historically known as the Birchen Meadow. The 55-acre Ordway Reservation on Turkey Hill Street (Parcel R-19-10 in West Newbury) is a 2003 acquisition of the Essex County Greenbelt Association. It extends along the west side of Route 95 from Turkey Hill Street north of the intersection with Scotland Road to connect with pastureland to the west. This property, located along the edge of the historic Common Pasture, supports a diversity of habitat, including open fields, upland forest and extensive freshwater marshlands. The southern boundary of the Common Pasture runs roughly from the bend in Turkey Hill Street southeast to Route 95 as the land further south along Turkey Hill Street has been developed for residential use.

HISTORICAL NARRATIVE

Common Pasture in the 17th Century

In 1635 English immigrants established the town of Newbury on the Parker River, one of the earliest communities in the Massachusetts Bay Colony. The original land grant extended all the way west to Bradford (now part of Haverhill), encompassing present-day Newbury, Newburyport and West Newbury as well as portions of other communities. The settlers were drawn to the area by the abundance of salt marsh, freshwater meadows, upland grassland and forests, which provided plentiful food, fuel and grazing land. The presence of open land was particularly fortuitous as the English settlers who came to New England were unaccustomed to clearing large forests and ill equipped to do so. The land that became Newbury was also highly desirable because the Parker and Merrimack Rivers provided safe harbors and easy water access to inland areas.

When the first settlement (now Newbury Old Town) was established near the mouth of the Parker River, each family was assigned a small lot where they built a house and a barn and grew crops for personal use. The village also included the meetinghouse and burial ground as well as a small common (which was distinct from the larger common lands and is now known as the Lower Green) and was used as a community gathering place and training ground for the militia.

The village occupied only a fraction of the large area granted to the Newbury proprietors. Most of the land remained in common ownership (see Map 1, 1640 map). The concept had its origins in English law which recognized various rights for use of common land including the right to graze livestock; the right to cut wood for personal use; the right to take soil, stone or gravel for personal use; and the right to fish. The primary purposes of the Newbury common lands were for grazing, fishing and lumbering on the rich meadows, marshes and forests of the Merrimack and Parker River estuary and inland. These agricultural and maritime land use practices have endured for centuries in Essex County and remain an important part of current land use patterns and the local economy.

In the 17th century land owners, who were known as freeholders, were entitled by grant, purchase or inheritance to own shares in the common and undivided lands of Newbury. Freehold rights were frequently sold and purchased. In 1638 the town of Newbury appointed a herdsman for eight months of the year with responsibility for controlling the herd which grazed during the day on the common lands and were brought to the village common at night. He had specific responsibility for keeping the herd on Sundays and making sure that livestock were kept out of the village. Two hay wardens were appointed the same year with special responsibility for impounding pigs, which were considered a particular nuisance. The common lands remained open and unfenced while each family was responsible for fencing their own house lot to keep livestock out.

In 1641 the freeholders voted to divide the common lands closest to the village of Newbury into three separate pasture areas. In compliance with this vote, the cow common, the ox common and the heifer common were laid out and 563 "rights" in each pasture were divided among the freeholders in proportion to the number of shares owned by each. During the fall and winter, horses and cattle were allowed to run at large on Plum Island and in the upper and lower

commons. In the summer they were more strictly regulated.

Keeping the free roaming livestock out of the town remained a major concern. In 1643 one of the town's priorities was to erect fences for the protection of gardens and fields from the intrusion of cattle. The town ordered that owners be responsible for their own livestock and liable for any damage that they did. Pigs were strictly regulated because they could do considerable damage to gardens and field crops. They were required to be yoked so they could not get through narrow gaps in fences and to have a ring in their snout so they could not damage crops by rooting. In 1666, the selectmen imposed strict penalties if the regulations were not obeyed.

Prior to 1665 there were few sheep in Newbury but subsequently large flocks were kept near the center of town. By 1670 the sheep were damaging the lower common so they were required to be under the care of a herdsman. In 1677 the two large flocks were relegated to special areas where they could graze and were required to be locked up at night so that they would do no damage. Sheep from the neighboring towns were expressly prohibited from the Newbury common lands. In 1683, 704 sheep owned by 16 persons were pastured in the third range extending from Henry Jaques pasture near Morse's corner to James Smith's farm near the brickyards to Trotter's Bridge over a branch of the Little River in Floyd's Lane. (This is near the present industrial site that lies immediately east of the South Pasture.)

By the latter part of the 17th century the common lands, which totaled roughly 8,000 acres, were divided into two distinct areas. The lower common, also known as the home common, in the eastern part of town extended from the Artichoke River east to Plum Island. It included pastures set aside for the use of milk cows, oxen, heifers and sheep. The upper common (sometimes referred to as the Artichoke common or the dry herd common) extended west from the Artichoke River to the Bradford line and included nearly all the territory within the present limits of West Newbury. By the 1660s, horses and dry cattle (all cattle except milk cows, working oxen and yearlings) were prohibited from the lower common during the summer season. Livestock in the village area were to be fettered and confined in private enclosures, otherwise they were to be placed in the charge of the herdsman and driven to the upper common. Each freeholder was charged a fee of sixpence for pasturage, with an additional fee if the livestock were driven over a mile.

In 1669 when the duties and responsibilities of the selectmen were defined for the first time several responsibilities were established relative to the common: to "order the business for herds" and to prohibit selling of the town's timber. In 1677 a new rule was added that prohibited inhabitants from allowing any sheep, cattle or horses owned by residents of other towns from using Newbury's common land or taking wood from it.

In 1686 the freeholders and inhabitants of Newbury voted that the upper common, consisting of roughly 6,000 acres, be divided, with each freeholder receiving a share in proportion to the size of his land holdings. The area, which extended from the Artichoke River west to Bradford, was laid out into 112 lots that were distributed by lottery among the freeholders. A road extending from the Artichoke River through present day West Newbury to Bradford was also laid out at this time. Also in 1686, a committee appointed to address issues related to the common recommended that the lower common east of the Artichoke River, which still belonged in common ownership to the freeholders of Newbury, be divided into five general pastures and the rest of the lower common into woodlots, which were to remain undivided for "feeding, burning and carting." (Currier 213)

Common Pasture in the 18th Century

By the early 1700s Newbury was divided into five parishes: Second and Fourth Parishes (now West Newbury), Third and Fifth Parishes (now Newburyport) and Byfield. Agriculture was the mainstay of the economy with thousands of acres used for grazing livestock. There were also small-scale industries such as saw, grist and fulling mills, tanneries and shoe-making, as well as various maritime related activities, but agriculture remained critical in supporting not only the food needs of the residents, but also the development of other industries.

In January 1701 the freeholders voted to divide the majority of the lower common, comprising 1,800 acres, while reserving pasturage for the town's ministers and free school as well as for the benefit of the town's poor. The wood remaining on the common land was measured and divided among the freeholders and inhabitants in 1701 and again in 1708. In July 1708 a committee appointed for the purpose reported in favor of dividing the woodlots into two general pastures to be held by persons to whom they were assigned for their sole use and benefit. This is the first indication of

private use of the lower common. In 1714-15, the town granted several residents permission to build a pound by the country road (High Street) near John Hale's house to impound cattle trespassing on the general pasture. In 1727 the selectmen became responsible for keeping the town pound where stray livestock were corralled until they were claimed by their owners. (Currier 113)

In 1764 Newburyport broke off from Newbury to become a separate community. In the petition requesting the separation considerable emphasis was placed on the fact that residents of the port were involved with shipbuilding, maritime trade and commerce while the rest of the community was primarily agricultural. The initial land division allocated a relatively small area along the Merrimack River to the new community, which was later expanded to include additional land extending west to the Artichoke River and south along the Little River.

Common Pasture in the 19th Century

The area west of the Artichoke River that was initially known as the upper common separated from Newbury in 1818 and became West Newbury. It was incorporated as "Parsons" in 1819 and called West Newbury in 1820. It remained largely agricultural well into the 20th century but only a small portion of the area still retains the distinctive character of the Common Pasture.

The 1830 map of Newbury (Map 3) reveals a substantial community along the Merrimack in Newburyport with tightly drawn municipal boundaries extending only between North and South Streets with a portion of Newburyport extending south into the Common Pasture near where Newbury, Newburyport and West Newbury presently meet. The area along the Little River was still labeled "Common Pasture" even though it was no longer literally common land. Several farms were located along Scotland Road, including those of Captain R. Coffin and S. Thurlow. The Thurlow farm appears to be roughly where the Colby farm is presently. Roads also appeared on the 1830 map in the location of Turkey Hill Road and Crow Lane. Otherwise the area encompassed by this Area Form (north of Scotland Road, west of the Little River, south of Cross Street and east of Turkey Hill Road) was largely undeveloped, with portions of it shown as wetlands.

In 1872 (see Map 4) the Coffin (by this time William Coffin) and Thurlow farms still existed along Scotland Road (no buildings remain from either of these farms). Samuel Thurlow had 130 acres where he raised milking cows that produced nearly 3,000 gallons of milk in 1870. His was one of the larger farms with substantial dairy production according to the 1870 Agricultural Census. Coffin's farm was nearly as large as Thurlow's at 120 acres. The higher elevations in this area, including some of the Herrick property and some land nearby presently owned by Myette, were called "Coffin's Ledges" and still are, by a few oldtimers. By 1872 most of the Newbury, Newburyport, West Newbury area had become more densely settled but the area north of Scotland Road remained more rural than other portions of the three communities. There were two homesteads located south of Hale Street, D. Purington and J. Smith (neither of which exists today).

The Turkey Hill area was first settled in the mid 1700s when Col. Moses Little built his farmhouse (100 Turkey Hill Road, Newburyport, Supplemental Photo 9) in ca. 1748. He was reported to have fought in the Revolutionary War. This same farm remained in the Little family and by the late 1800s, John Gardner Little had 115 acres along Turkey Hill Road on which he grazed his dairy herd which produced one of the largest quantities of milk, locally – 3,650 gallons in 1870 according to the Agricultural Census of that year. The Little farmstead, although located on the west side of Turkey Hill Road, is included within the geographic boundaries of this Area Form because of its close associations to the Common Pasture. By 1830 A. Atkinson had a house in the approximate location of the Hale property (now owned by the Maskiewicz family). Just before the Civil War the imposing brick J.H. Hale house (Photo 4) was built overlooking the Artichoke River. Additional research is necessary to determine the type of farming done by the Hales, the Littles and subsequent owners of the Turkey Hill Road properties.

At least two farmsteads on the east side of Turkey Hill Street in Newbury belonged to Browns in the mid to late 19th century, accounting for over 100 acres. In the 1870s both Robert L and Stephen Brown had substantial farms extending east from Turkey Hill Street in West Newbury. Between the two there were a number of cows on 105 acres that produced 500 pounds of butter and over 400 gallons of milk in 1870. Members of the Ordway and Rogers families also had substantial tracts of land on which cattle were raised in this southeasterly corner of West Newbury, which is the same as the southwest corner of the Common Pasture area.

Of the homesteads shown on the 1884 map of Newburyport (Map 5), only the Little and Hale houses remain. The R. Brown house on Turkey Hill Street in Newbury also existed by this time and is still extant.

Common Pasture in 20th Century

From the early 19th century through the mid-20th century land use changed relatively little in the area that originally comprised the lower common. What had previously been common land became family farms where mixed husbandry and market farming predominated, initially for local use and later to feed urban markets in Essex County and as far away as Boston. Over the years the Common Pasture became a regional attraction, used for duck hunting, bird watching and as the subject of paintings.

Early 20th century changes included the acquisition of land for a city forest along Hale Street north of Turkey Hill Road in 1941. The most dramatic change of the 20th century was the construction of Route 95 through the center of the Common Pasture in 1954 (see Map 6, 1952 USGS map). At that time a tunnel was built under the highway to facilitate travel of cattle from the present Maskiewicz farm on Turkey Hill Road to pastures east of the new highway. The road was relocated slightly to the west in the 1970s and widened. Ironically while Route 95 is an intrusion into the Common Pasture, it also is a prime location for viewing the landscape, making it accessible to thousands of travelers daily. The farm most impacted by construction of the road is the Maskiewicz farm which was separated from much of its historic pasture land by the highway.

In the Turkey Hill area of West Newbury some of the former Brown and Ordway land was recently developed into modern subdivisions, accounting for the loss of approximately 35 acres of farmland. There remain approximately 250 acres of pasture and woodland in the Turkey Hill area bounded generally by Turkey Hill Road/Street on the west and Route 95 on the east.

Current Status

The Common Pasture has long been recognized for its environmental and open space values. Recently it has garnered much attention and interest in its protection due to the uniqueness and significance of the landscape as well as the incremental losses at its edges and the intense development pressures that it faces.

The Common Pasture was identified as an important regional landscape in the Department of Environmental Management's (DEM – now DCR) 1982 *Massachusetts Landscape Inventory*. It was also identified by Newbury and Newburyport in 2004 as a Priority Landscape in the Essex County Heritage Landscape Inventory program (West Newbury did not participate in the program) and was selected by the Department of Conservation and Recreation as one of ten Essex County landscapes to receive further documentation on an MHC inventory form.

The Massachusetts Natural Heritage and Endangered Species Program has designated the Common Pasture as a Priority Habitat. Rare species such as the upland sandpiper, American bittern, northern harrier, Long's bulrush, spotted turtle, barn owl and blue-spotted salamander have been documented in the area. The Common Pasture also supports a wide variety of both wetland and upland plants and animals. For many years the Common Pasture has been an important eastern Massachusetts location for grassland birds and other wildlife requiring moist open space.

In 2004 the Common Pasture was listed as one of the "Ten Most Endangered Historic Resources of Massachusetts" by Preservation Mass, a statewide preservation advocacy group. The citation said in part,

"As is the case for many existing open spaces, development is a constant threat. With its extremely large expanse, the pasture is especially challenged since it is controlled by three different sets of municipal zoning regulations representing each community through which it spreads. Residents have expressed concern for the pasture's future at town meetings and encouraged town officials to work with appropriate agencies to secure formal protections for the entire Common Pasture area. The imminent threat is evidenced in that permitting processes are already underway for proposed development on a wooded section near the south end of the pasture. The land represents a feeling of "home" to the community and preserves our working heritage."

The Common Pasture was also a central focus of the 2004 Newburyport Strategic Land Use Plan which recommended protecting the South Pasture as well as a portion of the North Pasture. The plan combines protection of an extensive open space corridor in the upper watershed of the Little River with infill development in the city's existing industrial park, train station, and Route 1 traffic circle which lie east of the area covered in this area form. Implementation will require the adoption of innovative zoning mechanisms as well as open space acquisition by public and private partners. Among the tools recommended for doing so is a transfer-of-development-rights bank with a receiving area that is recommended to become a transit-oriented-development district.

Most recently the City of Newburyport, the Town of Newbury, the Trust for Public Land, Essex County Greenbelt Association and the Parker River Clean Water Association have been working together to protect key portions of the Common Pasture. The project involves multiple strategies including land acquisition and agricultural preservation restrictions. Agreements are currently in place to acquire the Herrick property, a critical 22-acre parcel along Scotland Road in the South Pasture as well as 102 acres of the former Cooper Farm in the North Pasture, and to protect 50 acres of working farmland through an agricultural preservation restriction. Future efforts will involve negotiating with additional landowners and acquiring land for conservation and working farmland purposes.

BIBLIOGRAPHY and/or REFERENCES

Books

Cronon, William. *Changes in the Land, Indians, Colonists and the Ecology of New England*. New York: Hill and Wang, 1983.

Currier, John J. *History of Newbury, Massachusetts* 1635 – 1902. Originally published Newbury, MA: Damrell and Upham, 1912. Reprinted Newbury 350th Committee, circa 1985.

Fleming, Ronald Lee and Lauri A. Halderman. *On Common Ground, Caring for Shared Land from Town Common to Urban Park*. Harvard, MA: Harvard Common Press, 1982.

Russell, Howard. A Long Deep Furrow, Three Centuries of Farming in New England. Hanover, NH: University Press of New England, 1976.

Stilgoe, John R. Common Landscape of America, 1580 to 1845. New Haven: Yale University Press, 1982.

Maps

- 1830 *Map of the Original Town of Newbury* drawn by Philan. Anderson.
- 1850 Map of Newburyport by Philander Anderson.
- 1872 Atlas Essex County, Beers.
- 1884 Atlas Essex County, The Old Maps of Northeastern Essex County, Mass in 1884.
- 1952 USGS map.
- 2005 Trust for Public Lands, various GIS maps and aerial photographs.

Other

Federal Agricultural Census: 1850, 1870, 1880 – Essex County: Newbury, Newburyport, West Newbury.

"Preservation Mass 2004 Ten Most Endangered Historic Resources Nomination Form." Prepared by Mary Harbaugh,

Summer 2004.

Note Regarding Photographs

This Area Form include four photographs printed on archival paper (Photos 1-4) as well as 10 photographs (Supplemental Photos 1-10) that have been printed on a color laser printer. This was done by special arrangement with the Massachusetts Historical Commission to experiment with use of new photo technology for inventory forms.

Appendix I: Massachusetts Historical Commission Inventory Form National Register of Historic Places Criteria Statement Form

Check all that apply:
☐ Individually eligible ☐ Eligible only in a historic district

Criteria: A B C D
Criteria Considerations: A B C D E F G
Statement of Significance by Shary Page Berg/Gretchen G. Schuler

Overview

The Common Pasture addressed in this Area Form is a roughly 1,000-acre remnant of a much larger area established as common land in the Colonial period. While much of the original common has been converted to other uses, this core area has remained largely rural and agricultural. It is noteworthy for its size, landscape character and for the continuation of traditional uses. The grasslands, woodlands, wetlands and farmsteads that characterize this area are an evocative reminder of nearly four centuries of agricultural use, initially as common land and later as family farms. The landscape itself is extraordinary, particularly the grasslands -- a rare landscape type in New England that has long been recognized for its agricultural, environmental and scenic values.

The concept of common grazing land was central to the settlement and early development of Massachusetts communities but is rarely reflected in the New England landscape today. English colonists who arrived in Essex County in the 1630s placed high value on the grasslands because they were easy to settle, offering clearings where houses could easily be built as well as land for grazing and abundance of game. The early history of Newbury contains frequent references to the Common Pasture, which was originally undifferentiated land and was gradually regulated over time. As the number and types of livestock grew, the Common Pasture was divided into the lower common (east of the Artichoke River) and the upper common (west of the Artichoke in present day West Newbury). The area addressed here is part of the historic lower common. After the common lands were divided among the proprietors of Newbury in the early 1700s, family farms were established with a tradition of mixed husbandry and later, as transportation improved, market gardening. That agricultural tradition continues today.

The land addressed in this Area Form is historically significant and is eligible for listing in the National Register as a rural historic district with statewide significance. The period of significance extends from settlement of the area in 1635 through the 1950s, reflecting National Register policy of using a 50-year cut off date unless events of unusual significance have occurred within the past 50 years.

The grasslands represent remnants of the 17th century landscape character. Land divisions and land use patterns established by the early 18th century are still reflected in the overall landscape patterns and spatial organization which changed relatively little from the mid-19th century through the mid-20th. Most local roads were in place by the mid 19th century and the pattern of family farms of roughly 100-acres that was established by mid-19th century continues today. Land use, in the form of mixed husbandry with extensive hay and grazing land, also continues to reflect traditional agricultural use. There were approximately 10 homesteads in the area in the mid-19th century and of these three remain. There are some modern farm buildings, including residences and agricultural structures, but most are not visible from public roads. The primary intrusion is Route 95, built through the Common Pasture in 1954, which divides the area in two parts. Another intrusion is the late 20th century Cabot Corporation headquarters, which is surrounded on three sides by Common Pasture and is well-screened from the road. Despite these changes, the landscape would be easily recognizable to anyone who lived here from the 18th century on, which is an important test

of integrity for a historic landscape.

Historic Boundaries

The early boundaries of the Common Pasture extended roughly from Plum Island to Haverhill encompassing nearly 8,000 acres. Land to the east of the Artichoke River was called the lower common and was used for milking cattle and other livestock in active use, while the upper common, which was west of the Artichoke River, was used for livestock that were not needed on a regular basis. This area form addresses roughly 1,000 acres of the lower common that remain as a clearly defined landscape entity.

The area east of Route 95 is the best-preserved and most evocative portion of the Common Pasture. For descriptive purposes this area is further divided by Hale Street into two areas -- the South Pasture and the North Pasture. The boundary for the South Pasture used in this form is similar to that of the conservation groups working to preserve the area except that a portion of the West Newbury wetland along the eastern edge of Route 95 has also been included here. The boundary for the North Pasture used in this Area Form is the same as that of the conservation groups.

The Turkey Hill area west of Route 95 was closely linked with South and North Pastures until construction of Route 95 in the 1950s. In fact the three areas were not historically differentiated but are called out here to clarify the description of a large and complex landscape. Turkey Hill Road is used as the western boundary in this Area Form because the properties on the east side of Turkey Hill Road that are mostly closely associated with the Common Pasture. The Moses Little farmstead on the west side of Turkey Hill Road is included in this Area Form because of its strong association with 19th century agricultural use of the area.

The Newburyport City Forest reflects the importance of woodlots as part of the continuum of land use history, initially as common land, later as private wood lots and most recently as a public resource whose function is as much for conservation and recreation as for lumber production. South of the forest is the former J. L. Hale farm, now known as the Maskiewicz farm, on the east side of Turkey Hill Road which originally extended east of Route 95. The current owner is elderly and is the last surviving member of her family. Conservation groups are working with her to preserve the farm. The Myette family, owners of the Sweeney farm on the east side of Route 95, owns land on both sides of Route 95. Thus the historic link continues despite the highway. Fields on the east side of Turkey Hill Road south of the Maskiewicz farm continue to be used for grazing cattle, just as they have been for almost 400 years. Essex County Greenbelt Association's Ordway Reservation, established in 2003, was the first conservation parcel established in the Common Pasture. It preserves an important 55-acre landscape that extends from Turkey Hill Street in West Newbury east to Route 95.

The area west of Turkey Hill Road/Street is generally excluded from this Area Form as it is less closely associated with the rest of the Common Pasture. Sites associated with an 18th and 19th century Quaker community located on the west side of Turkey Hill Street in Newbury could also be considered as possible be additions to the area. Another boundary modification that might be considered in a National Register nomination would be elimination of the Cabot Corporation property in the north side of Hale Street, which is included here because it is well-screened and is surrounded on three sides by farms and woodlands.

Rural Historic District

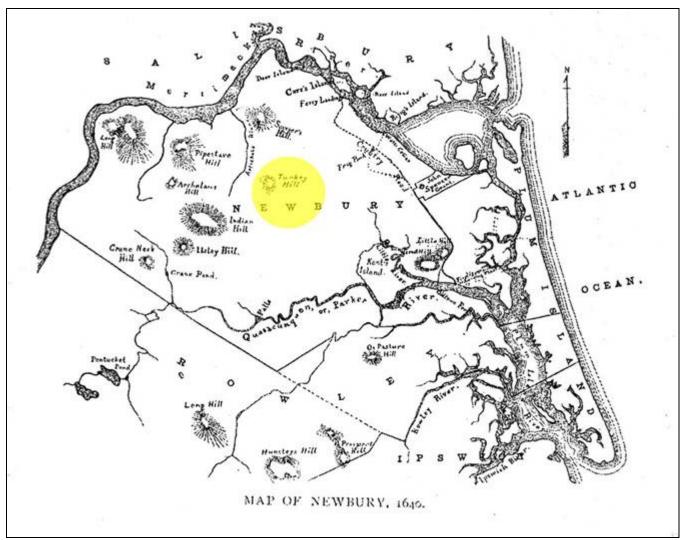
The framework that used to document and evaluate the Common Pasture is that of a rural historic district as described in National Register Bulletin 30. A rural historic district is a,

"geographic area that historically has been used by people or shaped or modified by human activity. occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings, roads and waterways, and natural features."

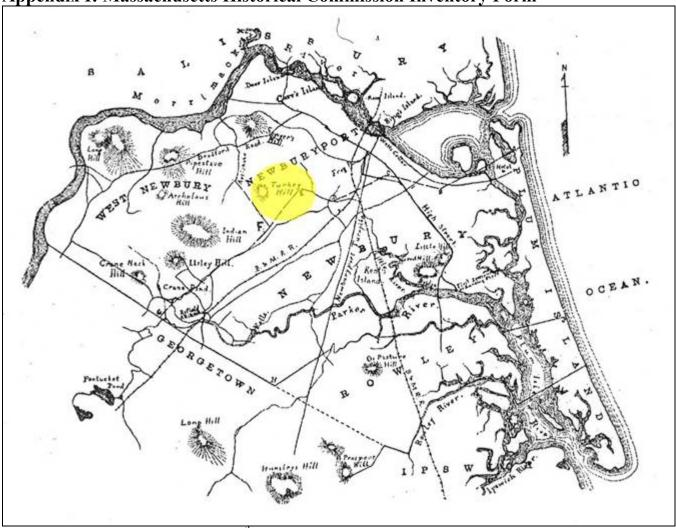
The Common Pasture is the quintessential rural historic district. Like most rural historic districts, it was not frozen in time but has evolved over nearly 400 years of continuous agricultural use while retaining its essential landscape character. The emphasis is on the overall landforms and land use patterns, in other words the landscape that has endured over time, rather than on specific buildings or features which are more transient and ephemeral.

The significance of the Common Pasture derives from its early history as common land as well as its continued agricultural use as private farms from the early 18th century to the present. In the context of Massachusetts settlement, the Common Pasture is of statewide significance as a rare surviving area where land use patterns such as grazing and woodlots, which were established in the 17th century are still reflected in current land uses and the general appearance of the landscape. The Common Pasture is also one of the largest and most cohesive agricultural areas in Essex County, with regional significance that extends beyond the three communities in which it is located.

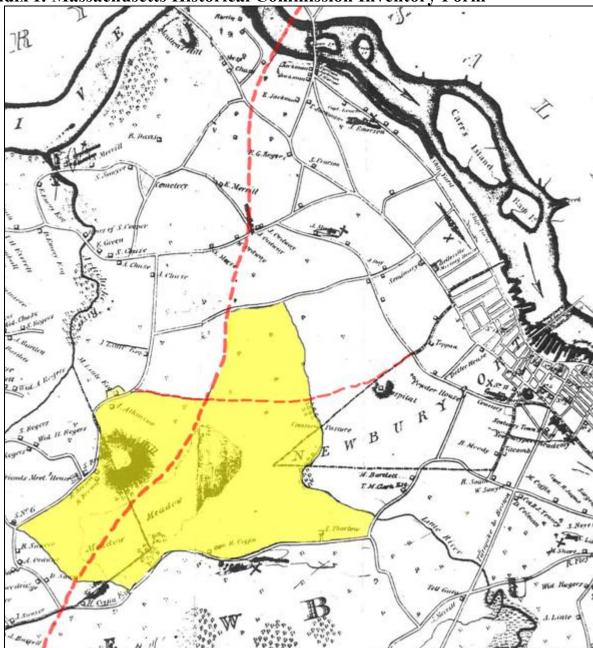
Conservation groups working to preserve the Common Pasture have focused their attention on land east of Route 95, notably the areas referred to here as South Pasture and North Pasture. These two areas are visually linked, with only the narrow Hale Street between them, and have the highest integrity as rural, agricultural landscapes that reflect both the early common lands and subsequent privately owned farms.



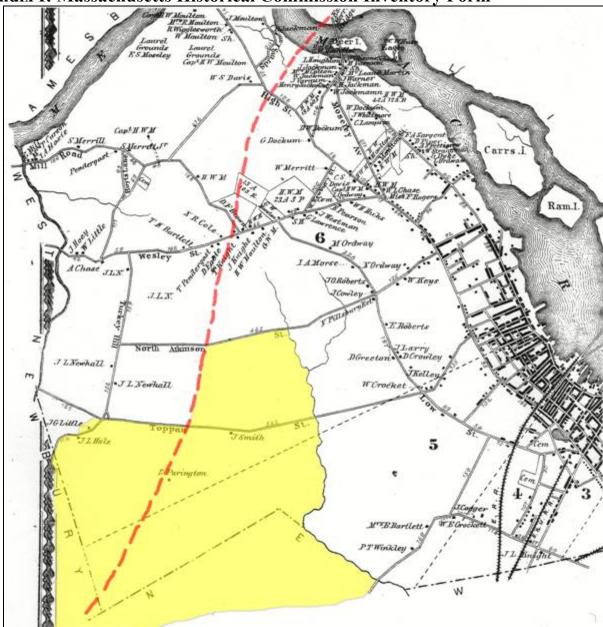
Map 1 – Map of Newbury in 1640. Yellow indicates approximate area addressed in this Area Form.



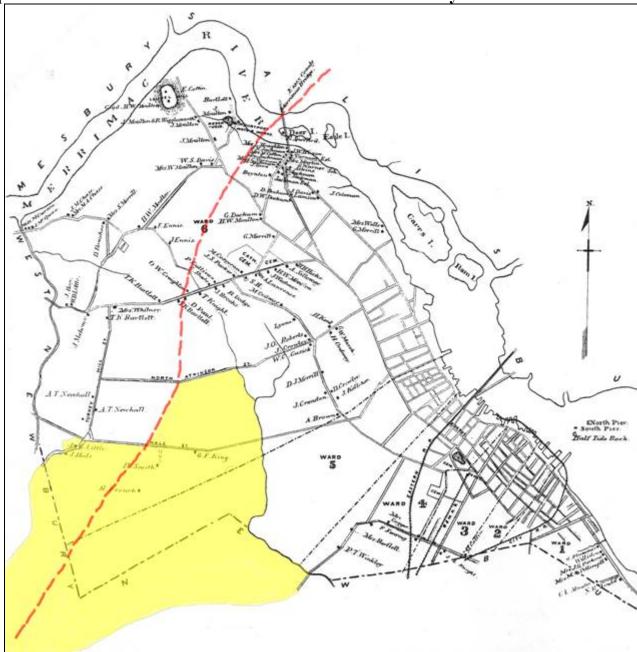
Map 2 - 1640 map with overlay of 19^{th} century transportation routes. Yellow indicates approximate area addressed in this Area Form.



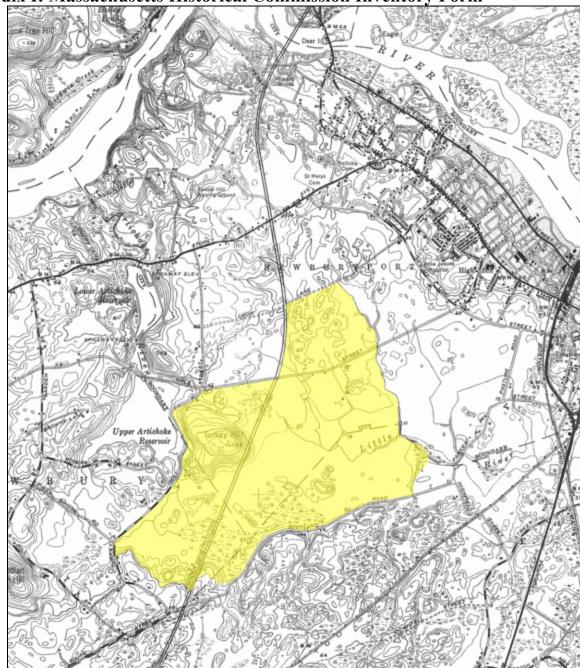
Map 3 – Detail of 1830 map. Yellow represents the approximate area covered by this Area Form. Scotland Road runs along the southern edge; the Little River forms the eastern edge; Crow Lane forms the northern edge and Turkey Hill Road generally forms the western edge. The wide red line represents the approximate location of Route 95. The narrow red line represents the approximate location of Hale Street. (Note: the boundaries of Newburyport were later expanded.)



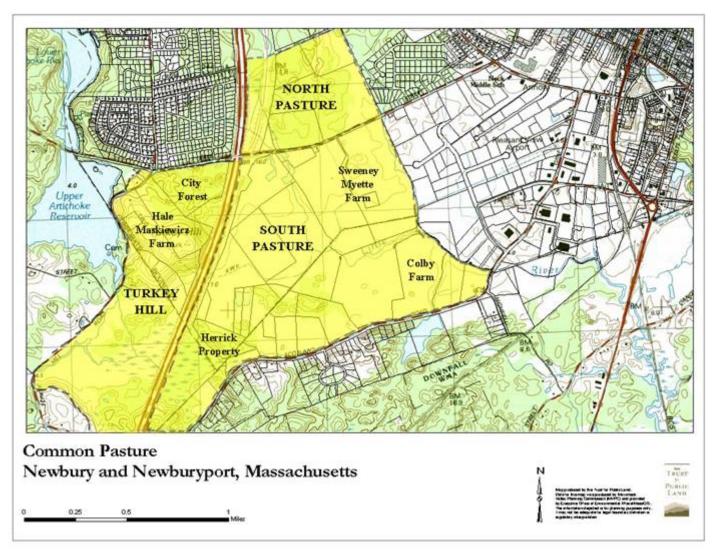
Map 4 – Detail of 1872 map of Newburyport. Yellow represents the approximate area covered by this Area Form although it is not precise for Newbury and West Newbury. The red line represents the approximate location of Route 95. Toppan Street is present day Hale Street and North Atkinson Street is now Crow Lane. The J. Smith farm is located roughly where the Sweeney/Myette farm is currently although the buildings are not in the location of the present Myette house. The J. L. Hale house is now 101 Turkey Hill Road (the present Maskiewicz farm) and the J.G. Little house is now 100 Turkey Hill Road.



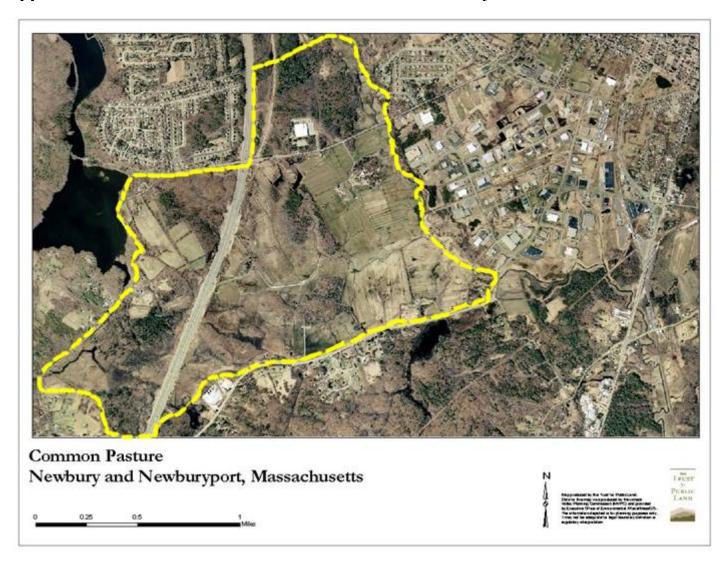
Map 5 – Detail of 1884 map of Newburyport. Yellow represents the approximate area of this Area Form although it is not precise for Newbury and West Newbury. The red line represents the approximate location of Route 95. The G.F King farm corresponds roughly with the current Sweeney/Myette farm. The J. Hale and J.G. Little houses on Turkey Hill Road are still extant.



Map 6 - 1952 USGS map showing the Common Pasture around the time that Route 95 was constructed. At that time the area was far more rural than it is today. Yellow represents the approximate area covered by this Area Form.

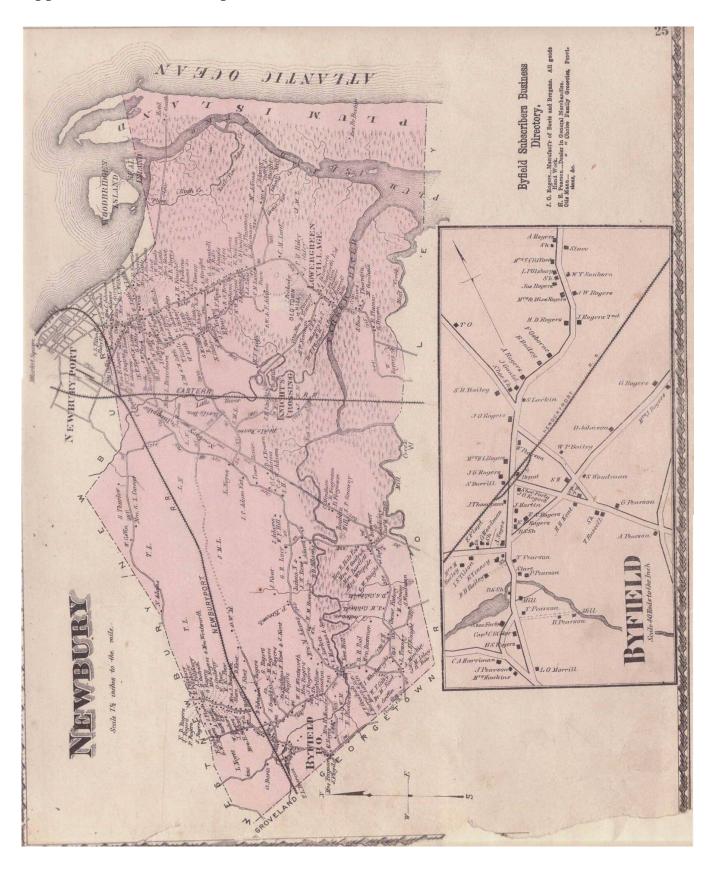


Map 7-2005 Trust for Public Land Map showing the major areas and properties addressed in this Area Form.



Map 8 – Recent aerial photo of Common Pasture area. Courtesy of TPL. Yellow line represents the approximate boundary of this Area Form.

Appendix J: Historic Maps



Appendix J: Historic Maps



COFFIN'S ISLAND CONSERVATION AREA

A Cooperative Project for Conservation and Recreation

Newbury Conservation Commission
Newburyport Conservation Commission
Commonwealth of Massachusetts - Self-Help Program
City of Newburyport Community Preservation Fund
The Trust for Public Land
Parker River Clean Water Association
Essex County Greenbelt Association













Public Use Guidelines

Welcome to Coffin's Island Conservation Area, a property jointly managed by the Conservation Commissions of the Town of Newbury and the City of Newburyport. Please enjoy your visit subject to the following rules:

- No motorized vehicles (including snowmobiles), hunting, or fires
- No alcohol use, overnight camping, or removal of vegetation
- Dogs must be under owner's control
- Animal waste must be removed by owner
- Leave no Trace No littering or disposal of trash
- Trail use on designated paths only
- Access to resource protection areas prohibited as posted
- ➤ Report illicit activity to: Newbury Police 978-462-4440

Newburyport Police 978-462-4411

Emergency 911