

DESIGNATION
of the
CENTRAL NASHUA RIVER VALLEY

AREA OF CRITICAL ENVIRONMENTAL CONCERN

located in portions of the
MUNICIPALITIES OF BOLTON, HARVARD, LANCASTER and LEOMINSTER

WITH SUPPORTING FINDINGS

Following an extensive formal review required by the regulations of the Executive Office of Environmental Affairs (301 CMR 12.00) including nomination, review, on-site visits, research, public information meetings, a public hearing and written comment period, and evaluation of all public comment and assembled data, I, the Secretary of Environmental Affairs, hereby designate the Central Nashua River Valley, located in portions of the municipalities of Bolton, Harvard, Lancaster and Leominster, as an Area of Critical Environmental Concern (ACEC). I take this action pursuant to the authority granted me under Massachusetts General Laws Chapter 21A, Section 2(7).

I also hereby find that the wetland resource areas included in the Central Nashua River Valley ACEC are significant to the protection of groundwater supply and private water supplies, the prevention of pollution, flood control, the prevention of storm damage, the protection of fisheries, and the protection of wildlife habitat - all of which are public interests defined in the Wetlands Protection Act and regulations promulgated thereunder.

I. Procedures Leading to ACEC Designation

On December 23, 1993 I received a letter of nomination from the Lancaster Board of Selectmen pursuant to the ACEC Regulations at 301 CMR 12.05. I acknowledged receipt of the nomination in correspondence to the nominators dated December 28, 1993. In correspondence dated February 7, 1994, I informed the nominators that I was extending the 45-day initial review period pending consultation with the Attorney General's Office regarding procedural questions about the nomination.

In correspondence dated August 29, 1994 I informed the nominators that I had received a satisfactory response from the Attorney General's office, and accepted the nomination for full review. I also notified the nominators and interested parties on the nomination distribution list that I would schedule public information meetings after January, 1995. Copies of the acceptance letter and a summary of the nomination were sent to the boards of selectmen or mayor's office, planning boards and conservation commissions of Bolton, Harvard, Lancaster and Leominster; state legislators representing the area; regional and state agencies; environmental organizations; and other interested parties.

In correspondence dated March 13, 1995 I asked the nominators to help schedule public information meetings for April and May. Subsequently, in correspondence dated April 25, 1995 I confirmed the scheduling of two public information meetings. These meetings were scheduled, and subsequently

held, on May 16 in Harvard and May 24 in Lancaster.

In correspondence dated August 26, 1995 ten citizens of the Commonwealth, residents of Bolton, Harvard, Lancaster and Leominster, wrote to me to become co-nominators with the Lancaster Board of Selectmen. In correspondence dated August 28 the Lancaster Selectmen informed me that they welcomed the addition of ten citizens as co-sponsors or nominators. In correspondence dated September 20, 1995 I informed the Lancaster Selectmen and the ten citizens that I accepted the ten citizens as co-nominators. At this time I also scheduled a series of public information meetings in October and November to be held in each of the four communities where the nominated area was located, and established a tentative date of November 29 for the public hearing.

As scheduled, public information meetings were held on October 11 in Lancaster, October 18 in Harvard, and October 23 in Bolton. The November 9 meeting scheduled for Leominster was not held; this meeting was subsequently rescheduled and held in Leominster on November 21. In addition to the meetings described above, numerous meetings were held by the nominators and others to inform the community, organizations, residents and property owners about the nomination.

In correspondence dated October 26, 1995 I confirmed the scheduling of the November 29 public hearing. Copies of the public notice for the hearing were enclosed and sent to the boards of selectmen or mayor's office, conservation commissions, planning boards of Bolton, Harvard, Lancaster and Leominster and the ACEC nomination distribution list. Public notice of the hearing was published in the October 27, 1995 editions of the Clinton Daily Item, The Harvard Post, and the Worcester Telegram & Gazette; and the October 23, 1995 issue of the Massachusetts Environmental Monitor.

A public hearing regarding the nomination was conducted on my behalf by Peter Webber, Commissioner of the Department of Environmental Management (DEM), on November 29, 1995. Oral and written testimony was received from 39 persons representing individual residents and a variety of groups and organizations. A ten-day period for the submission of additional written comment, until December 11, 1995, followed the public hearing.

Written and oral testimony was received from numerous individuals, private organizations and public agencies. Copies are on file at the offices of the DEM Division of Resource Conservation in Boston. Approximately 115 comments, plus two petitions (one petition with approximately 280 signatures, another with approximately 4,000 signatures) were received in the course of the public participation and review process. Additional information regarding these comments is described below in the Discussion of the Criteria for Designation, Supporting Factors.

II. Description of the Resources of the Central Nashua River Valley ACEC

Resource Overview

The heart of the Central Nashua River Valley ACEC is the 20-mile riparian corridor of the North Nashua and Nashua Rivers situated south of Route 2 in Leominster, Lancaster, Bolton and Harvard. Associated with this corridor are extensive surface waters, wetlands, floodplains and aquifers, as well as interrelated riparian and upland wildlife and rare species habitat, forest, farmlands, and

publicly and privately owned open space. Portions of the ACEC are included in the statewide Scenic Landscape Inventory, and reflect the unique cultural history and natural beauty of this area, with its hills, farmlands and forests gently contrasting with the Nashua River and the adjacent floodplains, streams and wetlands.

In addition to the diversity of the natural and cultural resources of the area, another highly distinctive and significant feature of the ACEC is the extensive network of publicly and privately owned open space along the river and the adjacent uplands. These lands include the 711-acre Oxbow National Wildlife Refuge, the 923-acre Bolton Flats Wildlife Management Area, and over 1,000 acres of other state, municipal and privately owned conservation and recreation lands. Approximately 370 acres north of Route 2 located within the ACEC are planned to be an addition to the Oxbow National Wildlife Refuge. The 4,830 acres of the South Post of Fort Devens provide additional open space resources (not open to the public). In total then, the amount of open space within the ACEC is approximately 7,900 acres, or approximately 61% of the 12,900 acres of the Central Nashua River Valley ACEC.

Only a brief summary of the resources of the ACEC is provided in this designation document. Additional useful information regarding these resources is provided in the Central Nashua River Valley Resource Area ACEC Nomination (December, 1993), the Fort Devens Disposal and Reuse Environmental Impact Statement (May, 1995), the studies and reports referenced in these two documents, and other materials and correspondence assembled as part of the nomination review.

Because of the diversity of the resources of the ACEC and the significance of the variously owned and managed open space areas, it is especially important following this ACEC designation to continue to gather and synthesize resource information. It is also important that federal, state, municipal and private agencies and organizations work together, coordinate and plan for the management and stewardship of the resources of this ACEC. The Nashua River Watershed Association, which has played an instrumental and nationally recognized role in the clean-up and stewardship of the Nashua River, is one of many key potential partners in this effort. The ACEC designation, and the GIS mapping and environmental analysis provided as part of the nomination review, is only a starting point for achieving the long-term goals of designation.

Surface Waters

The North Nashua and Nashua River corridor is the principal water resource feature of the ACEC. The North Nashua River flows southeasterly from Fitchburg and Leominster into the ACEC under the Mechanic Street bridge in Leominster toward South Lancaster. The Nashua River, flowing northerly into South Lancaster from Clinton, joins the North Nashua at the Meeting of the Waters in South Lancaster, and then flows northeasterly and northerly through Bolton and Harvard. The Nashua River intersects the northern boundary of the ACEC just south of Route 2, and continues its northerly passage to the Merrimack River.

As described in the ACEC nomination document, the 20-mile corridor of the Nashua River within the ACEC is characterized by extensive floodplains, brushy swamps, oxbows and sedge marshes providing diverse habitats and a riparian corridor for wildlife. The Nashua River valley "is carved out of a slate formation" and "is part of the remains of glacial Lake Nashua and has many glacial

artifacts: dry kettleholes, wet kettlehole ponds with fluctuating water levels, spruce bogs, kame terraces and eskers, and a sandy outwash soil." (page 1)

Tributary streams of the Nashua flowing within the ACEC include Fall Brook in Leominster; McGovern, Spectacle, Ponakin, Slate Rock and Cranberry Brooks in Lancaster; Dead River and Still River in Bolton and Harvard; and several unnamed streams and brooks. Ponds include Little Spectacle and Spectacle, Oak Hill, Slate Rock, Cranberry and Clear Ponds. The nomination states that there are 30 small brooks throughout the area, and almost 100 oxbow ponds along the floodplains of the Nashua River. (page 18)

Wetlands

There is an extensive system of wetlands located within the ACEC.

According to data compiled using the Geographic Information System (GIS) of the Executive Office of Environmental Affairs (EOEA), wetlands and surface waters comprise 2,200 acres or 17% of the ACEC. The location and extent of these wetlands are shown on the GIS mapping prepared for the review of the nomination.

Principal wetland areas are located along the North Nashua River in Leominster; north of the North Nashua in the vicinity of the Cook Conservation Area and Lancaster State Forest; along Ponakin and Cranberry Brooks; and along the Nashua River floodplain in Bolton and Harvard, in the vicinity of Bolton Flats Wildlife Management Area and the Oxbow National Wildlife Refuge.

The wetlands of the Nashua River and tributaries have been identified as priority wetlands by both the North American Waterfowl Management Plan and the Emergency Wetlands Resources Act of 1986, due to their critical importance in supporting waterfowl of the Atlantic Flyway, and are also listed in the Environmental Protection Agency's Priority Wetlands of New England. A wide variety of wetland types are found within the ACEC, including shrub and wooded swamps, bogs, marshes and wet meadows, open water, and vernal pools.

Natural Hazard Areas

Natural hazard areas, according to the ACEC regulations, include floodplain areas. Almost one third of the Central Nashua River Valley ACEC contains floodplains, located along the North Nashua and Nashua Rivers and stream and wetland corridors. Floodplains are shown on the Central Nashua River Valley GIS ACEC mapping, and according to GIS data, cover approximately 4,081 acres, or 32% of the ACEC.

Habitat Resources

The Massachusetts Natural Heritage and Endangered Species Program, Division of Fisheries and Wildlife, describes the Central Nashua River Valley as a natural wildlife corridor and focal point for wildlife concentrations in central Massachusetts. According to correspondence from the Program concerning the nomination, "The river valley provides significant linkages between important wildlife areas. The relatively undeveloped nature of this area is critical to preserving thriving rare species populations." Both the riparian corridor and the adjacent uplands provide important habitat.

According to records of the Natural Heritage Program, 19-state listed species occur within the ACEC. These species include 4 plant species and 15 animal species. Six of the species are listed as "Endangered," 5 are listed as "Threatened", and 8 are listed as species of "Special Concern" pursuant to the Massachusetts Endangered Species Act. These figures do not include several federal or state listed bird species that are known to utilize the area, but are not listed on the State's rare species database because they are not known to breed within the area. These latter species include the Bald Eagle, Peregrine Falcon, Northern Harrier, Cooper's Hawk and the Sharp-shinned Hawk. State-listed bird species include the Pied-billed Grebe, American Bittern, Least Bittern, Upland Sandpiper, Vesper Sparrow and Grasshopper Sparrow.

According to the Natural Heritage Program's comment letter, three very important wildlife areas, the South Post of Fort Devens, the Oxbow National Wildlife Refuge (NWR) and the Bolton Flats Wildlife Management Area (WMA) provide critical habitat for rare species.

Regarding the South Post, the Natural Heritage Program states, "The South Post of Fort Devens supports an unusually large number of rare species due to the variety of habitat types that occur there and the relatively undisturbed nature of the area." The South Post supports rare grassland, pitch pine barrens and wetlands species. Two Threatened bird species and 1 Endangered bird species inhabit the extensive grassland area on the South Post. The pitch pine barrens on the South Post provide important habitat for 3 state-listed species of moths. Wetlands and adjacent uplands on the South Post support 3 species of aquatic turtles. According to the Program, "a very significant population (possibly the largest in New England) of Blanding's Turtle, a Threatened species, inhabits the South Post, Oxbow National Wildlife Refuge, and the adjoining Bolton Flats Wildlife Management Area." Two vernal pools, habitat for the Blue-spotted Salamander, have been certified by the Natural Heritage Program, although, according to the Fort Devens Disposal and Reuse Environmental Impact Statement (EIS), over 30 areas (most within wetland resource area protection zones) meeting Program criteria for vernal pools have been identified. (Vol 1, p 4-215)

The Oxbow National Wildlife Refuge, adjacent to the South Post, provides extensive habitat for the Blanding's Turtle and Pied-billed Grebe, as well as the Blue-spotted Salamander and Climbing Fern. In addition, the Refuge is heavily used by migratory landbirds and waterfowl.

Bolton Flats, south of the Oxbow Refuge along the Nashua River, supports 3 Endangered bird species, as well as the "meta-population" of Blanding's Turtle. The Natural Heritage Program goes on to state that "Bolton Flats also supports a large number of other nongame bird species and is a prime area for nesting and migratory waterfowl. This area is significant in that few areas similar to Bolton Flats, with extensive emergent wetlands, remain intact in central Massachusetts."

These three wildlife areas are part of the overall riparian corridor along the Nashua and North Nashua Rivers. Also, according to the Fort Devens EIS, the Cook Conservation Area and Lancaster State Forest lands contribute to a wildlife corridor extending west of the South Post to the North Nashua River in Lancaster and Leominster.

In terms of fisheries, the Fort Devens EIS states that, "Although, as recently as the 1970s, the Nashua River was highly degraded by industrial and sanitary (sewage) effluent, water quality has improved considerably in recent years. Improved water quality has resulted in increased fish

diversity and abundance in the Fort Devens vicinity." (Volume 1, page 4-189) The EIS describes the warm-water fishery of the river, and adds that some of the South Post streams also support native cold-water fisheries.

The diversity of unique habitats located within the ACEC is extraordinary. According to the Fort Devens EIS, "The entire South Post has been identified as an important example of diverse, unfragmented natural habitats." (Volume 1, page 4-213) Examples of these habitats include riparian communities, grasslands, pitch pine barrens, extensive forests, spruce bogs and calcareous fens.

Additional information regarding wildlife and fisheries is provided in the nomination document and the Fort Devens EIS referenced above. The extensive wildlife habitat of the ACEC illustrates the close ecological interdependence of the various natural and cultural resource features of the ACEC, including surface waters, wetlands, floodplains, open fields and farmlands, and forest.

The GIS mapping prepared for the review of the nomination shows the general location and extent of rare species habitat within the ACEC. Both estimated habitats for rare wetlands wildlife and priority habitats for state-listed species are shown. Rare wetlands wildlife habitat mapping is used with the regulations of the Wetlands Protection Act, concerning wetland resource areas as defined by these regulations. Priority habitat mapping indicates the approximate extent of the most important sites for rare species in the Commonwealth, and includes sites that represent upland as well as wetland habitats for rare plant and animal species and significant natural communities. According to GIS data, estimated wetland habitat covers approximately 3,925 acres, or 30% of the ACEC. Priority habitat covers approximately 4,375 acres, or 34% of the ACEC. Together, with considerable overlapping, wetland and priority habitat cover approximately 4,975 acres, or 39% of the ACEC.

Agricultural Areas

According to a comment letter provided by the Massachusetts Department of Food and Agriculture (DFA) supporting ACEC designation, the designated area includes agricultural resources of importance to the Commonwealth. DFA states that, "Prime farmland within the Bolton Flats WMA, coupled with adjacent private lands to the south and west in Lancaster and to the north along the Nashua River in Harvard, compose a substantial agricultural block. They also provide a critical connection to Lancaster, Lunenburg, and Sterling farmlands beyond the proposed ACEC." DFA adds, "The South Post possesses large areas of prime agricultural soils and forest resources. The designation of this area would help ensure the continuation of the agricultural use which is an integral part of the significant natural resource systems and historic landscape in the Central Nashua River Valley."

Water Supply Areas

The Central Nashua River Valley ACEC contains portions of several aquifers, as shown on the GIS mapping prepared for the review of the nomination, and according to comments provided by the Department of Environmental Protection's Division of Water Supply (DEP/DWS). The aquifers include the high and medium yield Wekepeke and Still River Aquifers, and additional medium yield

aquifers also lying in a north to south orientation.

According to DEP/DWS, public water supplies and wellhead protection areas are located within the ACEC. The North Main Street well in Lancaster is presently in the "New Source Approval" process and is not currently in active use; the South Post has a non-community public water system which will be registered by DEP in the future; there is a portion of a Zone II area of a Leominster wellfield (in the Wekepeke aquifer) extending into Lancaster and beneath the North Nashua River and adjacent wetlands in the vicinity of the Cook Conservation Area; there are interim wellhead protection areas for the Shebokin well at Fort Devens and wells at MCI Shirley. In addition, GIS mapping shows an interim wellhead protection area extending into Lancaster from a public water supply in Bolton (from the Still River aquifer).

According to DEP, the medium yield aquifers are untapped resources at this point, and there is a need for long-range water supply plans to substantiate future potential use. In light of the importance of the Still River aquifer, DEP suggests a potential expansion of the ACEC boundary in Bolton and Lancaster to include more of this aquifer.

Historical/Archaeological Resources

According to the Fort Devens EIS, the Nashaway, the local subgroup of the New England Algonquin Nipmuck subgroup, inhabited the Central Nashua River Valley prior to European settlement. According to the nomination, Nipmuck means "fresh water people," and Nashaway means "river with the pebbled bottom." The area of Lancaster, especially at the confluence of the North Nashua and Nashua Rivers, was used for its anadromous fish runs and the horticultural potential of the river's large floodplains. The river, and tributary streams and ponds in the area, were also used for hunting and fishing. Archaeological resources have been identified dating back several thousand years.

There are abundant historical resources located within the ACEC. These resources include the North Village Historic District, with 22 buildings, and the Center Village Historic District, with 88 buildings, both in Lancaster. The Bullfinch Church in the Center Village Historic District was designated a National Historic Landmark in 1971. The Fruitlands Museum on Prospect Hill in Harvard is a Massachusetts and National Historic Landmark. The cultural and historic value and integrity of these areas is a contributing factor to the inclusion of these areas in the statewide Scenic Landscape Inventory.

John Chapman, also known as Johnny Appleseed, and Luther Burbank, were both born in the area. Chapman, a practical nurseryman and legendary sower of apple seeds, and Burbank, a famed plant breeder of vegetables, grains, and fruits and founder of Burpee Seeds, are part of the agricultural and historic legacy of the area.

Special Use Areas

The ACEC regulations cite "undeveloped or natural areas, public recreational areas, or significant scenic sites" as examples of "special use areas."

As mentioned in the Resource Overview above, portions of the ACEC are included in the statewide Scenic Landscape Inventory. "Distinctive" landscapes, ranked statewide in the top 5% for landscape quality and value, are generally located along Prospect Hill Road in Harvard, on either side of Route 117 as it crosses the Still River and Nashua River in Lancaster, and between Langen Road and North Main Street in Lancaster. "Noteworthy" landscapes are generally found adjacent to these distinctive areas in Harvard, Bolton and Lancaster. One of the most famous scenic vistas in central Massachusetts is observable from Prospect Hill Road in the vicinity of the Fruitlands Museum. Many other scenic landscapes and vistas not identified as part of the statewide inventory are also located within the ACEC.

As also mentioned in the Resource Overview, there is an extensive and highly significant network of public recreational areas and undeveloped or natural areas within the ACEC. These lands include the 711-acre Oxbow National Wildlife Refuge (plus the 370 acres just north of Route 2 that will be added to the Oxbow Wildlife Refuge within the ACEC), the 923-acre Bolton Flats Wildlife Management Area, and over 1,000 acres of other state, municipal and privately owned conservation and recreation lands. Additional major state properties include the Lancaster State Forest and the Lane Commerford Conservation Area (also known as Leominster State Forest), owned by the Massachusetts Department of Environmental Management. Municipal lands include the Cook Conservation Area and additional properties along the Nashua River.

Although the 4,830 acres of the South Post of Fort Devens, and other institutional lands such the Atlantic Union College are not public recreation or conservation areas, nevertheless they provide highly significant undeveloped or natural areas to the network of open space within the ACEC.

The GIS mapping provided for the nomination review shows the location and extent of federal, state, municipal and privately owned open space. Corrections to this mapping and the GIS data may be needed, but the mapping and data show that approximately 2,700 acres of open space land, or 21%, are located within the ACEC, as follows: federal, 725 acres, or 6%; state, 1,175 acres, or 9%; municipal, 500 acres, or 2%; and private, 300 acres or 2%. By adding the 4,830 acres of open space of the South Post (not open to the public) and the 370 acres that will be transferred to the Oxbow NWR to the above total, the overall open space total is increased to approximately 7,900 acres, or 61% of the ACEC.

Resource Analysis and Mapping

The Department of Environmental Management, in the course of administering the review of the nomination, worked with the Department of Environmental Protection, to prepare a series of maps of several categories of environmental data regarding the nominated area. This information has been mapped using the Geographic Information System (GIS) of the Executive Office of Environmental Affairs (EOEA). This mapped information, which was used to assist in the evaluation of the nomination and the determination of final boundaries, is part of the public record of the Central Nashua River Valley Resource Area ACEC designation, and is on file at the office of the DEM, Division of Resource Conservation.

The EOEA GIS was used to map and evaluate several categories of information: surface waters and

drainage basins; wetlands; aquifers; floodplains; rare and endangered species habitat; land use; and protected open space, conservation and recreation lands owned by federal, state, and municipal governments and nonprofit organizations.

Additional information regarding the resources of the area is described below in the Discussion of the Criteria for Designation. Also, as mentioned in the Resource Overview above, there are several additional sources of more detailed information.

III. Boundary of the Central Nashua River Valley Resource Area ACEC

Upon review of the boundary as recommended in the nomination letter, oral testimony presented at the public hearing, correspondence submitted to the Secretary, and information gathered in the course of EOEА agency review, the final boundary of the ACEC is somewhat reduced as compared to the boundary proposed in the nomination. According to GIS data, the proposed boundary included approximately 13,430 acres. According to GIS data, the final ACEC boundary includes approximately 12,900 acres.

Discussion of Final ACEC Boundary

There are three general areas where the final ACEC boundary is different from the boundary proposed in the nomination. The final boundary reduces the area of the ACEC in South Lancaster, Leominster, and along Route 2 in Lancaster and Harvard.

In South Lancaster, the final boundary follows the Boston & Maine Railroad right-of-way northerly from Mill Street to the Middle Cemetery, and thence westerly to Main Street and southerly along Main Street to George Hill Road. This boundary modification excludes a residential area of South Lancaster that does not contain resources important to the ACEC. This boundary modification was recommended to me by the EOEА interagency review team for this ACEC nomination, based upon an environmental analysis of the nomination and the proposed boundary.

In Leominster, the final boundary includes only publicly owned open space lands owned by the Department of Environmental Management, the Massachusetts Highway Department, and the Leominster Conservation Commission. This boundary modification includes an important portion of the North Nashua River and adjacent wetlands, floodplains, wildlife habitat, and recreational areas. This boundary modification was made in response to recommendations made by Mayor Dean Mazzearella of Leominster and State Representative Mary Jane Simmons to exclude privately owned land in Leominster from the ACEC. The public information meeting originally scheduled for November 9, 1995 in Leominster was not held. Although the re-scheduled meeting held on November 21 was well attended, it did not provide adequate time for residents to learn about the nomination prior to the November 29, 1995 public hearing. The final boundary in Leominster addresses the concerns represented by Representative Simmons and Mayor Mazzearella, and at the same time includes the most important resource areas along the North Nashua River corridor in Leominster from Mechanic Street south to Lancaster.

In Lancaster and Harvard, the final boundary of the northern section of the ACEC follows Old Union Turnpike easterly from Lunenburg Road to Shirley Road and then follows the southern edge

of the Route 2 right-of-way, except for the land directly north of Route 2 in Harvard that will be transferred to the United States Fish and Wildlife Service to expand the Oxbow National Wildlife Refuge. This boundary modification was made in response to recommendations made by the Massachusetts Highway Department and Massachusetts Government Land Bank to avoid potential planning conflicts regarding the Route 2/Jackson Road interchange and roadway improvements required for and essential to the redevelopment of the Main and North Posts of Fort Devens. These projects have been addressed in the Environmental Impact Report prepared for the Fort Devens Redevelopment, and the Land Bank is committed to maximum avoidance of and mitigation of environmental impacts for these public transportation projects that will provide important public benefits and contribute to public safety. The final ACEC boundary area includes the section of Route 2 that bisects the USFWS Oxbow National Wildlife Refuge east of the Jackson Road interchange.

The final ACEC boundary includes the South Post of Fort Devens. The South Post contains highly significant environmental resources, and is an integral part of the overall ecological system of the Central Nashua River Valley Resource Area ACEC. Concerns of the United States Army at Fort Devens regarding the effects of ACEC designation that were communicated to me and EOE staff in correspondence, meetings and testimony presented at the November 29, 1995 public hearing are addressed in separate correspondence.

Recommendations submitted to me by the Clinton Area Chamber of Commerce, Northern Massachusetts Chamber of Commerce, and Leominster Materials Corporation to reduce the final boundary are not incorporated in the final ACEC boundary, and are addressed in separate correspondence.

The Department of Environmental Protection suggested considering the expansion of proposed ACEC boundary to include a highly significant aquifer in Bolton and Lancaster. This suggestion has merit and deserves further examination, but not within the scope or time frame of the nomination review just completed.

Final Boundary Description

The final boundary is shown on the attached map taken from the Ayer, Massachusetts (1988) and Hudson, Massachusetts (1988), United States Geological Survey (USGS), 1:25,000-scale metric topographic maps. An official map and supplemental maps are on file at the offices of the DEM, Division of Resource Conservation.

The USGS map is supplemented by the following maps:

- Town of Lancaster Assessors Maps Sheets 8, 13, 14, 18, 38 and 42 (updated to January 18, 1996);
- City of Leominster Assessors Maps 377, 450, 376, 374A, 448, and 300 (updated to January 19, 1996);
- United States Department of the Interior, Fish and Wildlife Service, Oxbow National Wildlife Refuge, Fort Devens Expansion Area, Proposed Tract Boundary, Draft Map, dated October 25, 1995;

- Vanasse Hangen Brustlin, Inc., Conceptual Plan-Interchange Improvements-Route 2 at Jackson Road, dated August 25, 1995, prepared for the Massachusetts Government Land Bank's Environmental Impact Report for the Redevelopment of Fort Devens.

The ACEC boundary generally follows streets, roads, and railroad rights-of-way, except in the vicinity of Leominster (where portions of the boundary follow a municipal boundary, property lines of publicly owned lands, and a small section of the bank of the North Nashua River), north of Route 2 in Harvard (where the boundary follows the property line of publicly owned land), and South Lancaster (where a portion of the boundary follows the property line of publicly owned land).

Specifically, the boundary is defined as follows (moving in a clockwise direction from the south):

Beginning in the Town of Lancaster, at the intersection of George Hill Road and Main Street (Route 70), the ACEC boundary proceeds westerly along George Hill Road to the intersection of George Hill Road and Langen Road; thence northerly along Langen Road to the intersection of Langen Road and North Main Street (Route 117); thence northwesterly along North Main Street to its terminus in Lancaster, as shown on the Lancaster Assessors Map #18; thence northwesterly in a direct line across the right-of-way of I-190 to the northeast corner of the right-of way of Lancaster Street and the southeast corner Lot 300-16 in the City of Leominster, as shown on the Leominster Assessors Map #300;

Thence along the property line of Lot 300-16 in Leominster in a northwesterly and then northeasterly direction to the intersection of this property line with the bank of the North Nashua River; thence along the bank of the North Nashua River to the intersection of the bank with Lot 376-2, owned by the Massachusetts Department of Environmental Management (DEM), as shown on Leominster Assessors Maps #448 and #376;

Thence along the outside perimeter of property owned by the DEM along the North Nashua River as shown on Leominster Assessors Maps #376 and #374 (northwesterly to Mechanic Street, easterly across the North Nashua River and along the southern edge of the right-of-way of Mechanic Street, and thence southerly) to the intersection of the westerly edge of the DEM property with the southern corner of Lot 448-16 at the edge of the right-of-way of I-190, as shown on Leominster Assessors Map #450;

Thence easterly in a straight line to the municipal boundary of Leominster and Lancaster, as shown on Leominster Assessors Map #450; thence northerly along the municipal boundary to the intersection of Johnny Appleseed Lane in Leominster and Lancaster Road in Lancaster, as shown on Leominster Assessors Map #377 and Lancaster Assessors Map #8;

Thence easterly and southeasterly along the right-of-way of Lancaster Road in the Town of Lancaster, as shown on Lancaster Assessors Maps #8, #13, and #14; thence southeasterly across the right-of-way of Lancaster Road and along Lancaster Road to the intersection of Lancaster Road and Old Lunenburg Road, as shown on Lancaster Assessors Map #14; thence northerly along Old Lunenburg Road to the intersection of Old Lunenburg Road and Lunenburg Road (Route 70), as shown on Lancaster Assessors Map #14;

Thence northerly along Lunenburg Road to the intersection of Lunenburg Road and Old Union Turnpike; thence easterly along Old Union Turnpike to the intersection of Old Union Turnpike and Shirley Road; thence northerly along Shirley Road to the intersection of Shirley Road with the southern edge of the Route 2 right-of-way; thence easterly along the southern edge of the Route 2 right-of-way and continuing southeasterly and then northeasterly around and to the south of the interchange of Route 2 and Jackson Road, as shown on the map by Vanasse Hangen Brustlin Inc. (VHB), "Conceptual Plan Interchange Improvements/Route 2 at Jackson Road;"

Thence continuing northeasterly along the southern edge of the Route 2 right-of-way, across the Nashua River and into the Town of Harvard, as shown on the VHB "Conceptual Plan;" thence continuing easterly along the southern edge of the Route 2 right-of-way to a point directly south of a monument numbered 1272, as shown on a draft map, United States Fish and Wildlife Service (USFWS), "Oxbow National Wildlife Refuge Fort Devens Expansion Area," dated October 25, 1995;

Thence directly north across Route 2 to monument 1272; thence northwesterly, northeasterly, easterly and southeasterly around the perimeter of "Parcel A" to a monument numbered 214, as shown on the USFWS "Oxbow National Wildlife Refuge Fort Devens Expansion Area" draft map; thence directly south across Route 2 to the southern edge of the Route 2 right-of-way;

Thence easterly along the southern edge of the right-of-way of Route 2 to the intersection of Route 2 and Depot Road; thence southerly along Depot Road to the intersection of Depot Road and Prospect Hill Road; thence southwesterly along Prospect Hill Road to the intersection of Prospect Hill Road and Still River Road (Route 110); thence southerly and southwesterly along Still River Road into the Town of Bolton;

Thence continuing southwesterly along Still River Road in Bolton into the Town of Lancaster to the Five Corners intersection; thence southwesterly along High Street to the intersection of High Street and Mill Street; thence northwesterly along Mill Street to the intersection of Mill Street and the Boston and Maine Railroad (B&M RR) right-of-way, as shown on Lancaster Assessors Map #42;

Thence northeasterly along the Boston and Maine Railroad right-of-way to the intersection of the railroad right-of-way and the southerly corner of Middle Cemetery, Lot 38-2, as shown on the Town of Lancaster Assessors Map #38; thence northwesterly along the property line dividing Lot 38-2 and Lot 38-3, as shown on Map #38, to the intersection of this property line with Main Street;

Thence southwesterly along Main Street to the beginning of the boundary description, at the intersection of Main Street and George Hill Road.

Unless otherwise specified, the boundary described above extends to and includes the entire width of the rights-of-way of public and private streets, roads and highways, and other rights-of-way such as railroads and utility easements.

If, in the future, additional property is transferred to the Massachusetts Highway Department (MHD) for the Route 2/Jackson Road interchange, the ACEC boundary shall reflect this change and

continue along the southerly edge of the MHD right-of-way.

If, in the future, changes are made to the final configuration of "Parcel A" to be transferred to the U.S. Fish and Wildlife Service for the Oxbow National Wildlife Refuge Fort Devens Expansion Area, the ACEC boundary shall reflect this change and include all of "Parcel A."

If, in the future, additional property is acquired by the Department of Environmental Management, or other state or local agencies, for conservation or recreation purposes, and these lands are adjacent to current DEM property or other conservation and recreation land along the North Nashua River within the ACEC in Leominster, the ACEC boundary shall expand to include this additional property.

The size of the Central Nashua River Valley ACEC, according to GIS data, is approximately 12,900 acres. The approximate acreage located in each municipality is as follows:

Bolton	700 acres
Harvard	1,850 acres
Lancaster	10,100 acres
Leominster	250 acres

IV. Discussion of the Criteria for Designation

In the review process leading to the designation of a nominated area, the Secretary must consider the factors specified in section 12.09 of the ACEC Regulations regarding the designation of Areas of Critical Environmental Concern. As stated in the regulations, the factors need not be weighed equally, nor must all of these factors be present for an area to be designated. The strong presence of a single factor may be sufficient for designation.

Based on the information presented in the letter of nomination, at the public hearing, in written comments received throughout the public review process, and in agency research and review, I find the following factors relevant to the designated ACEC.

(1) Quality of the Natural Characteristics

The quality of the natural characteristics of the Central Nashua River Valley alone supports ACEC designation. Undeveloped land, in combination with the surface water and associated wetland resources of the area, provide both highly significant wildlife habitat and public recreation opportunities, as described in the Description of the Resources of the Central Nashua River Valley ACEC.

(2) Productivity

The area provides a rich environment for a wide diversity of waterfowl and other wildlife, as summarized in the Description of the Resources, emphasized by the inclusion of the area in the North American Waterfowl Management Plan and the Emergency Wetlands Resources Act, and evidenced by the state and federal wildlife management areas.

(3) Uniqueness of Area

The uniqueness of the area also strongly supports designation. As described in the Description of the Resources, at least 19 state-listed rare species are located within the ACEC, and several more rare species are known to use the habitat resources of the ACEC in migration. A large percentage of the ACEC, approximately 39%, contains rare species habitat. The extent and diversity of habitats emphasize the unique significance of these resources. Archaeological and historic resources of state significance, described above, also attest to the unique quality of the area.

(4) Irreversibility and Magnitude of Impact

The nomination document and the Description of the Resources portray the high degree of interdependence of the ecosystems of the ACEC. The loss of the opportunity to preserve and manage the rich diversity and quality of these resources for present and future generations would be a highly significant loss to the Commonwealth.

(5) Threat to the Public Health Through Inappropriate Use

Inappropriate development in the extensive floodplains of the ACEC constitutes a threat to public health. Future development must also avoid any threat to the aquifers of the area. State agency comments characterize some of these aquifers as untapped resources, and point out a need for long-range water supply plans.

(6) Economic Benefits

The intrinsic natural, cultural and historic values of the area currently draw visitors for tourism and recreation, and the wise preservation and management of these resources can only provide additional economic benefits over time. There is additional opportunity to highlight the natural resource and recreational values of the area as a complement to the reuse and redevelopment of the Main and North Posts of Fort Devens. Protection of aquifers within the ACEC and regional water supply planning will yield long-term economic benefits.

(7) Supporting Factors

Summary of Testimony Submitted

Approximately 115 oral and written comments plus two petitions were received regarding the nomination. About 95 of those comments and a letter of support with a petition submitted by Citizens for the Oxbow Refuge Expansion supported ACEC designation (see below). Testimony submitted at the public hearing also reflected strong support for designation. Of the 39 parties that presented oral and written testimony at the hearing, 33 supported designation. Some of the testimony and written comments suggested changes to the boundaries proposed for the nominated area. About 10 letters opposing designation were received, in addition to a petition with approximately 280 signatures directed to the Lancaster Board of Selectmen to postpone the designation or reduce the proposed ACEC boundary.

Written or oral testimony supporting designation was received from 3 state legislators; 9 municipal boards and commissions; 7 environmental and community organizations; and 3 state agencies. Written testimony regarding the proposed boundary was also submitted by 3 commercial or business interests or organizations.

State legislators supporting designation include Senator Robert A. Durand, and Representatives Geoffrey Hall and Patricia A. Walrath. Representative Mary Jane Simmons initially supported designation, and then recommended that additional time be provided for public information and education for Leominster residents.

The municipal boards and commissions supporting designation include the Bolton Board of Selectmen and Conservation Commission; the Harvard Board of Selectmen, Conservation Commission and Planning Board; the Lancaster Board of Selectmen, Conservation Commission, and Historical Society; and the Leominster Conservation Commission. The Lancaster Board of Public Works opposed designation; the Lancaster Planning Board first supported, then opposed designation. The Mayor of Leominster objected to ACEC designation in Leominster, except for publicly owned lands.

Environmental and community organizations supporting designation include the Citizens for the Oxbow Refuge Expansion, Citizens to Protect Residential Harvard, Harvard League of Women Voters, Massachusetts Association of Conservation Commissions, Massachusetts Audubon Society, Nashua River Watershed Association, and the National Wildlife Refuge Association. The Citizens for the Oxbow Refuge Expansion also included a petition with approximately 4,000 signatures directed to the U.S. Secretary of the Interior to include the South Post of Fort Devens in the Oxbow National Wildlife Refuge.

Commercial or business interests or organizations suggesting changes in the proposed ACEC were the Clinton Area Chamber of Commerce, Northern Massachusetts Chamber of Commerce and the Leominster Materials Corporation.

State and regional agencies supporting designation included the Department of Environmental Protection; Department of Food and Agriculture; and the Natural Heritage and Endangered Species Program (part of the Department of Fisheries and Wildlife and Environmental Law Enforcement's Division of Fisheries and Wildlife). The Department of Environmental Protection suggested considering the expansion of the proposed ACEC boundary to include a highly significant aquifer in Bolton and Lancaster. The Massachusetts Highway Department and Massachusetts Government Land Bank suggested changes in the proposed boundary regarding the Route 2 corridor.

The United States Army at Fort Devens raised concerns regarding the inclusion of federal lands within the proposed ACEC and the potential effects of ACEC designation. The Army's Fort Devens Office of Staff Judge Advocate wrote on May 18, 1995 to oppose the designation. Mr. John Harms, Esq., from that office also testified regarding Army concerns at the public hearing on November 29, 1995.

In summary, supporting factors regarding designation include the following: the review of the nomination demonstrated strong public consensus on the intrinsic resource value of the area, and public awareness of the importance of the area; the area is contained in more than one municipality, and designation will encourage better coordination between municipalities as well as between the municipalities, state agencies, and nonprofit organizations regarding actions to protect and preserve the resources of the area; and large portions of the area are publicly owned, reflecting an important

public interest in protecting and preserving the resources of the area.

As stated above, approximately 61% of the ACEC contains publicly and privately owned open space lands, representing an extraordinary amount of open land in central Massachusetts, and a powerful challenge and opportunity for long-term collaboration and stewardship.

In addition, the Central Nashua River Valley ACEC can provide a regional planning framework for environmental resource and open space preservation and management to complement the goals and work of the Devens Enterprise Commission for the economic redevelopment of the Main and North Posts of Fort Devens, located directly north of Route 2 and adjacent to the ACEC.

Conclusion

Therefore, I am pleased to exercise the authority granted to me pursuant to M.G.L. Chapter 21A, Section 2(7), to designate the Central Nashua River Valley Resource Area as an Area of Critical Environmental Concern. The significance of this ACEC requires that the highest standards of environmental review and protection be applied to actions that may affect its resources.

(signed) Trudy Coxe
Secretary of Environmental Affairs

January 29, 1996

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