**DESIGNATION** of the

**KAMPOOSA BOG DRAINAGE BASIN**

**AREA OF CRITICAL ENVIRONMENTAL CONCERN**

located in portions of the
TOWNS OF LEE AND STOCKBRIDGE

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 Kampoosa Bog Drainage Basin, located in portions of the Towns of Lee and Stockbridge, as an Area of Critical Environmental Concern (ACEC). I take this action pursuant to the authority granted me under Massachusetts General Law Chapter 21A, Section 2(7).

I also hereby find that the wetland resource areas included in the Kampoosa Bog Drainage Basin 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 July 5, 1994, I received a letter of nomination signed by ten citizens of the Commonwealth pursuant to 301 CMR 12.05(1)(a). Receipt of the nomination was acknowledged in correspondence dated July 20, 1994. The nomination was accepted for full review in correspondence dated August 15, 1994, at which time the nominators were informed that public information meetings would be scheduled for the spring of 1995. Copies of the acceptance letter and a summary of the nomination were sent to the boards of selectmen, planning boards and conservation commissions of Lee and Stockbridge; state legislators representing the area; regional and state agencies; environmental organizations; and other interested parties.

In correspondence dated March 27, 1995 I notified the nominators that I would begin the public review process for the nomination, and confirmed the scheduling of two public information meetings for April 20 in Stockbridge and April 26 in Lee, and included tentative dates of June 7 for another public information meeting and June 15 for a public hearing. In correspondence dated May 8, 1995 I confirmed the scheduling of the June 7 meeting in Stockbridge, subsequently held on that date, and the June 15 public hearing in Stockbridge. Public notice of the June 7 information meeting, the June 15 public hearing, and a ten-day written comment period following the hearing was sent to the above parties with the May 8, 1995 correspondence. Public notice was also published in the May 10, 1995 edition of the Advocate, the May 10, 1995 edition of the Berkshire

Record, the May 12, 1995 edition of the Berkshire Eagle, and the May 9 and 23, 1995 issues of the Environmental Monitor.

In addition to the meetings described above, both prior and subsequent to the formal submission of the nomination, numerous meetings were organized by the sponsors of the nomination to inform the community, residents and property owners about the nomination.

A public hearing regarding the nomination was conducted on my behalf by Peter Webber, Commissioner of the Department of Environmental Management (DEM), on June 15, 1995. Oral testimony was received from 37 persons representing individual residents and a variety of groups and organizations. A ten-day period for the submission of additional written comment 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 65 comments, plus a petition of approximately 180 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 Kampoosa Bog Drainage Basin ACEC

A summary and overview of the resources and their critical interrelationships are provided here. In addition, the nomination submitted for review and circulation is an exceptionally well-prepared document that describes the environmental resources of the Kampoosa Bog Drainage Basin. The nomination should be considered as an appendix to this designation document.

### Resource Overview

The heart of the Kampoosa Bog Drainage Basin ACEC is Kampoosa Bog and its associated surface waters, wetlands, groundwater, and rare species habitat. Scientifically and technically speaking, Kampoosa Bog is a not a bog but a calcareous fen. According to the nomination, "The special plant communities found here and the formation of the fen, situated in a contained basin with an inflow of calcareous cold groundwater, lead scientists to call the wetland a Lake Basin Graminoid (grass-like) Calcareous Fen." (pp.1-2)

The nomination states that "this fen has a floating mat of vegetation ... an inflow of mineral-rich alkaline water, a sedge mat, and calcium-loving plants." (p.2) The pond at the center of the fen is a remainder of the glacial lake that once filled the bowl-like basin. The pond and fen are surrounded by a zone of shrubs and then swampy woods, forming the outer edge of Kampoosa Bog. The fen and other areas within the ACEC provide habitat for at least 19 state-listed rare species.

The image of a "contained basin", or bowl, with tributary streams, springs, and groundwater flowing down into the fen and Kampoosa Brook, and thence downstream to the Housatonic River, is important to understanding the ecological relationships of the area, as described below under the specific resource categories.

In addition to the resources described above, historical and archaeological resources contribute to the significance of the ACEC. Resource features contributing to the overall quality of the area also include open farmland and fields, woodlands, a rich ecosystem supporting a great variety of wildlife, and scenic sites and vistas located throughout the ACEC.

Surface Waters

According to the nomination, "In this small watershed there are no large water bodies or rivers but innumerable seepages, springs and brooks. Marsh Brook rises at the west base of Rattlesnake Mountain, which seems to be the source of many springs and seepage areas that coalesce to form Marsh Brook. The brook flows under Rattlesnake Mountain Road and then through a beautiful water-carved channel in the marble bedrock, often disappearing and reappearing, and eventually flows into Kampoosa.... Another stream that flows into Kampoosa Brook rises in the beaver swamp just south of the Turnpike, goes under Route 7 and joins Kampoosa Brook, which then flows under Route 7." (p.5) Below Route 7 Kampoosa Brook flows southerly, beyond the bowl-like basin, into the Housatonic River.

Small ponds within the ACEC include Kampoosa Pond, located at the center of the calcareous fen; a small pond in the center of the marsh at the north end of the Marsh Brook wetlands; and a marshy pond south of Devon Road in Lee. Other small ponds formed by beaver dams are located just north of Rattlesnake Mountain Road where Marsh Brook flows beneath the road and just south of the Massachusetts Turnpike in Lee where the unnamed tributary brook mentioned above flows southward toward Kampoosa Brook.

Wetlands

According to the nomination, "There are many types of wetlands in the nomination area. They range from forested swamps, shrub swamps, cattail marshes, seepages from springs, peatlands including the floating mat of grasses and sedges, to open grass and sedge marshes. Kampoosa Fen itself encompasses 160 acres of mostly wetlands, with a small central pond. The wetland around Marsh Brook is 26.6 acres. The beaver swamp and other small wetlands east of Route 7, mostly in Lee, cover 34 acres." (pp.2-3) According to data complied using the Geographic Information System (GIS) of the Executive Office of Environmental Affairs (EOEA), wetlands and surface waters comprise 215 acres or 16% of the ACEC's total 1,350 acres.

Hydric soils, defined in New England as very poorly drained and poorly drained soils (Tiner and Veneman, Hydric Soils of New England), and mapped by the U.S.D.A. Soil Conservation Service for Berkshire County, are located throughout the drainage basin, as shown on the Kampoosa Bog ACEC GIS map prepared for the review of the nomination. The locations of these soils coincide generally with the streams, tributaries and wetlands identified above. According to GIS data, these hydric soils comprise approximately 475 acres or 35% of the total ACEC.

Kampoosa fen is the primary location for the high concentrations of rare species located within the ACEC. As described above, Kampoosa Bog is a Lake Basin Graminoid fen, a calcareous fen sustained by cold alkaline groundwater flowing through it. A floating mat of sedges and grasses

surround the central pond, with a zone of shrubs and then swampy woods extending beyond the sedges and grasses.

According to the nomination, the peat layer of the fen is at least 11.5 feet deep, with glacial deposits extending to an unknown depth beneath them. Scientific studies indicate that the same type of vegetation has occurred here with little change, for perhaps thousands of years.

The relationships between wetlands, surface waters and groundwater within the Kampoosa Bog drainage area are highly complex. Calcareous fens generally are groundwater dominated areas but may have surface inputs as well. That is, the fens are maintained by flows of both groundwater and surface water. Random channels and cracks in the calcareous bedrock, subsurface variations of soil composition and deposits of gravel, layers of peat noted above, and roadway construction and other development add complexity to the hydrology of the wetlands and the rare species communities they support. To complicate further an understanding of this hydrology, Kampoosa fen is characterized by mineral-rich alkaline water flowing through the bedrock, gravels and soils. However, according to correspondence from The Nature Conservancy, Kampoosa "displays remarkable populations of pitcher plants (Sarracenia purpurascens). Pitcher plants are an acid-loving species. One can assume that Kampoosa has a different water chemistry signature than many other fens in our area but baseline data and monitoring would be particularly helpful in this regard."

Habitat Resources

The Massachusetts Natural Heritage and Endangered Species Program, Division of Fisheries and Wildlife, has identified Kampoosa Bog as one of the state's most outstanding Lake Basin Calcareous Fens. According to correspondence from the Program, "The nominators ... have done an excellent job in describing the unique and outstanding characteristics of this calcareous fen community in their nomination report." The Natural Heritage Program also states in their comment letter:

> Kampoosa Bog supports a very high number of state-listed rare species. Our program records indicate that a total of 18 rare plant species and one rare animal species occur in this area.... Five of the 18 rare plant species found in Kampoosa bog are listed as "endangered," seven are listed as "threatened" and six are "species of special concern" pursuant to the Massachusetts Endangered Species Act .... The American Bittern (Botaurus lentiginosus) is currently listed as a "species of special concern" but has been recommended this year for changing to "endangered" status.
>
> Kampoosa Bog not only supports a high concentration of state-listed rare-species, it also provides habitat for several rare species that are found at very few other sites in Massachusetts. In fact Kampoosa is the sole known location for two of the rare plant species, the few-flowered spikesedge and whorled water-milfoil. Two other rare plant species, the pink pyrola and the small dropseed, are known from only one other location than Kampoosa Bog.... Thus, preserving the integrity of this calcareous fen is critical to maintaining one of the premier rare species sites in Massachusetts.

The likelihood of discovering additional rare species in this area is strong. According to the nomination, the Spotted Turtle, a "species of special concern," has been found within the Kampoosa Bog. This data has not yet been conveyed to the Natural Heritage Program, verified and incorporated into the state's database. Thomas Tyning, Master Naturalist for the Massachusetts Audubon Society, in correspondence included with the nomination states that the area has an impressive herpetofauna, and with more searching he is quite certain that several additional state-listed species will be found at Kampoosa. Also, the nomination states, "studies of the moths and butterflies have revealed distinctly northern species and at least one rare species." (p.12)

In addition to the Massachusetts Natural Heritage Program, The Nature Conservancy (TNC) has also recognized the significance of the habitat resources of the Kampoosa Bog area. TNC has a ranking system that compares rare plant and animal communities and sites. According to the nomination, the Lake Basin Calcareous Fens have a global rank of G2, meaning that globally it is "imperiled throughout its range due to rarity or highly vulnerable to extinction due to biological factors." Within the state, there are 2-3 sites of comparable value, and it is ranked S1 by TNC, "the highest priority for protection."

According to information provided by the Natural Heritage Program, and shown on GIS mapping, rare species habitats occur in the immediate vicinity of Kampoosa Bog and in other wetland corridors of the drainage basin.

Water Supply Areas

The nomination states that the Kampoosa Bog drainage basin is not a prime area for groundwater supply. However, many springs are found in the area, and several years ago the Hill Water Company supplied several households with spring water from the west side of Rattlesnake Mountain. Currently all households within the Kampoosa Bog ACEC receive water from private wells.

Natural Hazard Areas

Natural hazard areas, according the ACEC regulations, include floodplain and erosion areas. Floodplains are located along the wetlands and tributaries to Kampoosa Brook. Erosion hazard areas, using data provided by the U.S.D.A. Soil Conservation Service (SCS) and SCS Soil Survey for Berkshire County, are located principally on the slopes of Rattlesnake Mountain, but also occur in some areas south of the Massachusetts Turnpike. These erosion hazard areas include slopes over 15% with severe limitations due to erosion hazard or rocks and steep slope. Floodplains and erosion hazard areas are shown on the Kampoosa Bog GIS map. Floodplains cover approximately 225 acres, or 17% of the ACEC. Erosion hazard areas cover 200 acres, or 15% of the ACEC.

Historical/Archaeological Resources

Historical and archaeological resources are an important component of the Kampoosa Bog area. According to correspondence from the Massachusetts Historical Commission (MHC), a major archaeological investigation conducted by the University of Massachusetts Archaeological Services was recently completed within the boundaries of the ACEC. This study was required as part of the

Environmental Impact Report for the Tennessee Valley Pipeline project that traversed the Kampoosa Bog drainage basin area. MHC has stated that the archaeological sites investigated have been determined to be eligible for listing in the National Register of Historic Places, and that they are highly significant.

As stated in the nomination, a small band of Mahican Native Americans lived in the area when the first European settlers arrived around 1730. The territory of the Mahicans extended to the Hudson River Valley in New York and the Housatonic River Valley in Massachusetts.

According to MHC, the recent investigation provides significant new information concerning the early human occupation and environmental history of this portion of Massachusetts. Native peoples were using the Kampoosa Bog area as early as 6,000 years ago. The investigation included taking two pollen cores from the vicinity of Kampoosa Bog, providing data on the early climate and vegetation of the area. The cores contain sediments that date from the glacial period to the present. MHC states that the public report on the results of the studies at these sites "will afford many opportunities to educate the public in the archaeological and ecological importance of Kampoosa Bog." The investigation documents the interplay of human habitation and natural resources over thousands of years.

Special-Use Areas

The ACEC regulations cite "undeveloped or natural areas, public recreational areas, or significant scenic sites" as examples of "special-use areas." A large portion of the ACEC is undeveloped, and indeed the habitat resources located within and adjacent to Kampoosa Bog depend to a great extent on the existing natural character of the area. Conservation restrictions that have been placed on over 200 acres of the fen and adjacent upland areas by the Congregation of the Marians and private landowners are an important step to preserving the natural character of the area. Also, over 70 acres owned by the Massachusetts Division of Fisheries and Wildlife adjacent to the fen contribute to both the long-term stewardship and the undeveloped character of the area. The conservation restrictions do not provide public access, and public access and use of the Fisheries and Wildlife land is limited.

Scenic sites and vistas are located throughout the ACEC, especially the special views of Kampoosa from Eden Hill and the scenic vistas of Rattlesnake Mountain from various vantage points within the ACEC.

Resource Analysis and Mapping

The Department of Environmental Management, in the course of administering the review of the nomination, gathered and prepared 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 Kampoosa Bog Drainage Basin 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; floodplains; erosion hazard areas; hydric soils; rare and endangered species; and protected open space (state, municipal and nonprofit-owned conservation and recreation lands).

Additional information regarding the resources of the area is described below in the Discussion of the Criteria for Designation.

III. Boundary of the Kampoosa Bog Drainage Basin 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 EOEA agency review, the final boundary of the ACEC is the same as that proposed in the nomination, with one minor modification. The ACEC boundary using property lines between Yale Hill Road and Route 7 was adjusted to reflect a more accurate approximation of surface water contributing to the drainage basin of the wetlands surrounding Kampoosa Bog.

Several proposals to reduce or enlarge the proposed boundary were submitted during the course of the public review. These included suggestions to reduce the proposed boundary to include only the 115 acres of Kampoosa Bog owned by the Marians of the Immaculate Conception under a conservation restriction, reduce the boundary to include only a smaller area west of Route 7, reduce the boundary to exclude some properties located on Prospect Hill, exclude residential properties located in various locations within the proposed boundary, and reduce the boundary to more accurately reflect drainage patterns along the southern property line boundary between Yale Hill Road and Route 7. A proposal to enlarge the boundary to include property east of Yale Hill Road, portions of which drain into the wetland areas surrounding Kampoosa Bog, was also submitted.

The environmental information available for the review of the nomination, summarized above in the Description of the Resources of the Kampoosa Bog Drainage Basin ACEC, supports the basic approach for delineating the boundary described in the nomination. The flow of ground water and surface water throughout and within the Kampoosa Bog drainage basin cannot be separated ecologically from the health and integrity of Kampoosa Bog and the rare species habitats located within the overall basin. The use of roads is a reasonable approximation of the drainage area, except a) along the northern boundary between Prospect Hill Road and Route 7, where no roads or other right-of-ways or easily identifiable landmarks are located and therefore the drainage divide is used as a boundary; and b) along portions of the southern boundary, where no roads or other right-of-ways or easily identifiable landmarks are located, and property lines are used as an approximation of drainage patterns to delineate the boundary.

As stated above, the final ACEC boundary using property lines between Yale Hill Road and Route 7 moved the proposed boundary line slightly north to reflect a more accurate approximation of surface water contributing to the drainage basin of the wetlands surrounding Kampoosa Bog. An old, slightly elevated roadbed runs east from Route 7 along these property lines. This old roadbed crosses Kampoosa Brook and divides the adjacent red maple swamp to the north from the brook as it begins its descent to the Housatonic River to the south. The red maple swamp is associated with the wetlands to the west of Route 7, and is part of the "bowl" that forms the Kampoosa Bog

Drainage Basin. East of the swamp, brook and elevated roadbed the boundary follows property lines that continue easterly and uphill to Yale Hill Road.

Final Boundary Description

The final boundary is shown on the attached map taken from the 1987 Stockbridge, Massachusetts-New York, United States Geological Survey (USGS), 1:25,000-scale metric topographic map. 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 Town of Stockbridge Assessors Maps 20 and 26, dated August 31, 1960.

The boundary generally follows streets and roads. A drainage basin divide and property lines are used where streets and roads are not available as reasonable approximations of the resource area.

Specifically, the boundary is defined as follows:

Beginning at the intersection of Prospect Hill Road and the Massachusetts Turnpike (I-90) in Stockbridge, the ACEC boundary proceeds northerly along Prospect Hill Road approximately 2900 feet north of Rattlesnake Mountain Road to the intersection of Prospect Hill Road and the drainage basin divide of Kampoosa Brook and its tributaries;

Thence easterly along the drainage divide to a point on Rattlesnake Hill below elevation 474.5, as shown on the USGS topographical map; thence southerly and southeasterly along the drainage divide to the intersection of the drainage divide and Route 7, north of the intersection of Route 7 and Rattlesnake Mountain/Devon Road;

Thence southerly along Route 7 to the intersection of Route 7 and Rattlesnake Mountain/Devon Road; thence easterly along Devon Road across the town line into the Town of Lee to the intersection of Devon Road and West Road; thence southerly along West Road to the intersection of West Road and Stockbridge Road; thence west and southwesterly along Stockbridge Road across the town line into the Town of Stockbridge, and along Yale Hill Road to the intersection of Yale Hill Road and Lots 52 and 48, as shown on the Town of Stockbridge Assessors Map 26;

Thence westerly along the northern boundary of Lot 48 to the intersection of Lot 48 and Lot 49, as shown on the Town of Stockbridge Assessors Map 26; thence westerly along the southern boundary of Lot 49 to the intersection of Lot 49 and Route 7 (East Street);

Thence southerly along Route 7 to the intersection of Route 7 and Lots 3 and 4, as shown on the Town of Stockbridge Assessors Map 26;

Thence westerly along the southern boundary of Lot 3 to the intersection of Lots 3, 4 and 2, as shown on the Town of Stockbridge Assessors Map 26; thence westerly in a straight line across Lot 2 to the intersection of Lot 2 and the southeast corner of Lot 1, as shown on the Town of Stockbridge Assessors Map 26; thence southwesterly, northerly, and northwesterly along the

southern boundary of Lot 1 to the intersection of the west corner of Lot 1 and Lot 2; thence westerly across Lot 2 in a straight line to the intersection of Prospect Hill Road and Lots 2 and 32, as shown of the Town of Stockbridge Assessors Map 20;

Thence northerly along Prospect Hill Road to the beginning of the boundary description, at the intersection of Prospect Hill Road and the Massachusetts Turnpike.

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 utility easements.

The size of the Kampoosa Bog Drainage Basin ACEC, according to GIS data, is approximately 1,350 acres. The approximate acreage located in each municipality is as follows:

| | |
|---|---|
| Lee | 225 acres |
| Stockbridge | 1,125 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 exceptional quality of the resources of the Kampoosa Bog Drainage Basin ACEC is described in the nomination and summarized earlier in this designation document. This factor alone supports designation. As stated in the Description of the Resources, the Massachusetts Natural Heritage and Endangered Species Program has identified Kampoosa Bog as one of the state's most outstanding Lake Basin Calcareous Fens. The Stewardship Plan for Kampoosa Bog prepared by The Nature Conservancy in 1984, refers to Kampoosa Bog as "the largest, most diverse and most pristine calcareous fen in Massachusetts." The nomination cites a 1993 study by G. Motzkin, calling Kampoosa "an excellent example of a peatland fen," and goes on to say:

> His study shows that the fen has survived for thousands of years in much the same state. It is because of this pristine state that so many unusual species have survived. For a comparatively small area, 1,400 acres, to have 20 rare species is proof of this unaltered condition. (p.10)

The quality of the natural characteristics of the area is underscored by the potential of identifying additional rare species within the ACEC.

(2) Uniqueness of Area

The Kampoosa Bog drainage basin is unique in the state. The concentration and number of rare species, the pristine condition of the central bog, the formation of the Lake Basin Graminoid Fen, the special geology and hydrology of the area, the apparent stability of plant communities over thousands of years, and the importance of the archaeological discoveries all contribute to the acknowledged uniqueness of the area. And as stated above, this type of calcareous fen natural community is given a ranking of global significance by The Nature Conservancy (TNC).

In addition to these features, the uniqueness of Kampoosa Bog can be felt or understood in the special character or feeling of the area. According to the TNC 1984 Stewardship Plan, "Kampoosa is a Stockbridge Indian name meaning 'dangerous place', referring to the treacherous quaking mat of sphagnum moss along the water's edge." This quality of place also connotes mystery, special beauty and the unknown. Berkshire County botanist Pamela Weatherbee, speaking from personal experience, states, "To enter this place is to be immediately in another world; self-contained and very different from the ordinary."

The uniqueness of Kampoosa Bog can also be expressed in terms of the interdependence that characterizes the area. Kampoosa Bog and its special natural communities appear to be self-contained but are dependent upon forces outside of the immediate bog for their viability, and their apparent stability over thousands of years is dependent upon highly complex and vulnerable conditions of hydrology.

(3) Irreversibility and Magnitude of Impact

A delicate balance and interaction of environmental factors sustains the Kampoosa Bog area. As stated in the nomination, very specific conditions - the cold, calcareous groundwater - create this Lake Basin Graminoid Fen, and:

> Any change in pH, concentration of calcium and addition of other nutrients would affect the type of vegetation (Siegal 1988). Increase in nutrients would help certain species overwhelm others. Increase in salinity encourages certain alien weeds, such as phragmites, which can displace all other vegetation.... Disturbance of the soil allows other alien aggressive weeds to move in, such as purple loosestrife. Once the delicate balance is broken, and certain plants, probably the most rare, disappear, they will never return, even if conditions reverted, because they have no other populations within hundreds of miles.... Once an area is taken over by weedy growth, it will never return to its original form. (p.12)

The Nature Conservancy, commenting on the hydrobiology of fens and Kampoosa Bog, points out that "very small changes in water chemistry can have profound effects on fen dynamics, and these effects will be expressed by plant communities." The nomination adds that "groundwater, once altered, requires a long time to return to its pristine quality." (p.12)
The Conservancy summarizes the magnitude of threat to the resources of Kampoosa, in saying that,

"The combination of seed source, water quality alteration, and soil disturbance in the vicinity of a natural area such as Kampoosa can spell disaster."

(4) Imminence of Threat to the Resource

Although the natural community of Kampoosa Bog has been stable for several thousand years, various development activities pose imminent threats to the resources of the ACEC. According to The Nature Conservancy, "The impacts of soil disturbances at Marian Fathers, Tennessee Gas Pipeline Company and Massachusetts Turnpike properties are beginning to have negative consequences for Kampoosa, especially displayed by invasion of Phragmites and loosestrife." Other threats identified in the nomination review process include surface water runoff from the Massachusetts Turnpike and Route 7.

The positive response on the part of several individuals and organizations to participate in an ACEC coordinating group following designation indicates a sense of the uniqueness and importance of the Kampoosa bog area. This response also may reflect a strong consensus regarding threats to the resources of the area, and the need for people to work together to understand, preserve and manage its resources. Written commitments to participate in this coordinating group, if the ACEC were designated, were submitted from a wide range of public and private groups, including The Nature Conservancy, Berkshire Natural Resources Council, Massachusetts Audubon Society, Lee Land Trust, Stockbridge Land Trust, Massachusetts Division of Fisheries and Wildlife, the Natural Heritage and Endangered Species Program, Massachusetts Historical Commission, Massachusetts Turnpike Authority, and Tennessee Gas Pipeline Company. The coordinating group is discussed further under Supporting Factors.

(5) Threat to the Public Health Through Inappropriate Use

As stated above in the Description of the Resources of the Kampoosa Bog Drainage Basin ACEC, all of the households within the ACEC depend on water obtained from private wells and springs. Water quality and supply are vulnerable due to the steep terrain of the uplands, and to the geology and soil characteristics of the area. Inappropriate development or use could be a threat to these private water supplies.

(6) Economic Benefits

Threats to public health, safety, and welfare, as well as the provision of economic benefits, are difficult to quantify in relation to the preservation of natural communities and rare species. However, our growing understanding and awareness of the connectedness of life, including rare species and special areas like Kampoosa Bog, hint that we as a society will derive long-term benefits to our quality of life, including economic benefits, from careful stewardship of these resources.

(7) Supporting Factors

Summary of Testimony Submitted

Approximately 65 oral and written comments plus a petition with approximately 180 signatures were received regarding the nomination. Over 50 of those comments and the petition supported designation. Testimony submitted at the public hearing also reflected strong support for designation. Of the 37 parties that presented oral and written testimony at the hearing, 32 supported designation. Some of the testimony and written comment submitted suggested changes to the boundaries proposed for the nominated area. Twelve letters opposing designation were received.

Written or oral testimony supporting designation was received from 5 municipal boards and commissions; 13 nonprofit and business organizations; and from 6 state and regional agencies.

The municipal boards and commissions supporting designation include the Lee Board of Selectmen and Conservation Commission; and the Stockbridge Board of Selectmen, Conservation Commission and Planning Board.

Nonprofit and business organizations supporting designation include the Berkshire Museum, Berkshire Natural Resources Council, Housatonic River Initiative, Housatonic Valley Association, Laurel Hill Association, Lee Land Trust, Lenox Garden Club, Massachusetts Audubon Society, The Nature Conservancy, Stockbridge Land Trust, The Trustees of Reservations, and the Tennessee Gas Pipeline Company. The Marians of the Immaculate Conception suggested ACEC designation for only that area of Kampoosa Bog currently under conservation restriction.

State and regional agencies supporting designation included the Department of Environmental Protection, Western Regional Office; Division of Fisheries and Wildlife, Western Regional Office; Natural Heritage and Endangered Species Program, Division of Fisheries and Wildlife; Massachusetts Historical Commission; and the Executive Office of Transportation and Construction. The DEM Office of Water Resources provided information for the review of the nomination. While supporting designation, the Berkshire County Regional Planning Commission suggested a smaller area for ACEC designation compared to that proposed by the nominators.

In addition to comments received regarding the merits of ACEC designation and final ACEC boundaries, in a June 2, 1995 memo to interested parties Commissioner Peter Webber asked for commitments to participate in a Kampoosa Bog ACEC coordinating group if the nominated area were designated an ACEC. In this memo he described the general purpose of such a group - "The activities of such a group might include, but would not be limited to, developing priorities and actions for ongoing and long-term preservation and management of the ACEC; updating the previous plan for the Bog prepared by the Nature Conservancy; encouraging water quality testing and monitoring, and scientific research regarding the resources of the ACEC; and addressing public education and other information needs." To date I have received ten commitments from state agencies, organizations, and citizens to participate in this group, a positive first step to improved cooperation to help achieve the purposes of ACEC designation. The Department of Environmental Management and other EOEA agencies will help organize the formation of a Kampoosa Bog

ACEC coordinating group to follow-up this ACEC designation within the first three months following designation.

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 portions of the area are publicly owned, reflecting an important public interest in protecting and preserving the resources of the area.

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 Kampoosa Bog Drainage Basin 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 August 10, 1995
Secretary of Environmental Affairs

*[Original document reformatted for ACEC Program website, October, 2003]*