

DESIGNATION of the
KARNER BROOK WATERSHED
AREA OF CRITICAL ENVIRONMENTAL CONCERN

located in portions of the

TOWNS OF EGREMONT AND MOUNT WASHINGTON

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 Karner Brook Watershed, located in portions of the Towns of Egremont and Mount Washington, 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 Karner Brook Watershed ACEC are significant to the protection of groundwater supply and public 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.

In addition, with regard to the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, I make the following findings and recommendations: 1) Karner Brook currently is designated as Class A, Outstanding Resource Water; 2) all other waters located within the Karner Brook Watershed ACEC currently are designated as Class B, High Quality Waters; and 3) because Fenton Brook is a potential back-up public water supply for Karner Brook, and because high concentrations of state-listed rare species are located within the Karner Brook watershed, I recommend that the Class A designation be applied to Fenton Brook, and that the Outstanding Resource Water classification be applied to all tributaries of Karner Brook upstream of Smiley's (Mill) Pond.

I. Procedures Leading to ACEC Designation

On November 7, 1991, I received a letter of nomination signed by ten citizens of the Commonwealth pursuant to 301 CMR 12.05(1)(a). I acknowledged receipt of the nomination in correspondence dated November 12, 1991. I accepted the nomination for full review in correspondence dated December 13, 1991. Copies of the acceptance letter and a summary of the nomination were sent to the boards of selectmen, planning boards and conservation commissions of Egremont and Mount Washington, the two towns included in the nominated area, and of Sheffield, located adjacent to the nominated area; state legislators representing the area; regional and state agencies; environmental organizations; and other interested parties.

Public information meetings were held on February 7, 1992 in Egremont; February 13, 1992 in Mount Washington; and May 14, 1992 in Egremont. Public notice of the May 14 information meeting, the May 18 public hearing, and a ten-day written comment period following the hearing was sent to the above parties in correspondence dated April 15, 1992. Public notice was also published in the April 7, 1992 edition of the Berkshire Eagle, and the April 15 issue of the 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 May 18, 1992. Forty-seven persons representing individual residents and a variety of groups and organizations presented oral testimony. A ten-day period for the submission of additional written comment followed the public hearing.

Written and oral testimony was received from numerous individuals, state legislators, private organizations and public agencies. Copies are on file at the offices of the DEM Division of Resource Conservation in Boston. Approximately 130 comments, plus a petition of approximately 60 signatures, were received in the course of the public participation and review process. Additional information regarding these comments is described below in section IV, Discussion of the Criteria for Designation, Supporting Factors.

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. These factors are: "(1) threat to the public health through inappropriate use; (2) the quality of the natural characteristics; (3) productivity; (4) uniqueness of area; (5) irreversibility of impact; (6) imminence of threat to the resource; (7) magnitude of impact; (8) economic benefits; and (9) supporting factors." Further explanation of these factors in relation to the Karner Brook Watershed ACEC is described below in section IV, Discussion of the Criteria for Designation.

II. Description of the Resources of the Karner Brook Watershed ACEC

The initial November 7, 1991 letter of nomination of the Karner Brook Watershed as an ACEC started the review process for the nomination. Extensive additional information, comment and testimony was submitted in the course of the public review. A summary and overview of the resources and their critical interrelationships are provided here. Information, comments and materials submitted for the review of the nomination, some of which are specifically referenced in this document, are on file with the Department of Environmental Management. The nomination itself contains a valuable description and summary of the resources of the ACEC. All nine of the features applicable to inland nominations listed under 301 CMR 12.06 are contained within the Karner Brook Watershed ACEC.

Surface Waters

The heart of the Karner Brook Watershed ACEC is the surface waters of Karner Brook and its tributaries that rise from the Southern Berkshire Taconic Mountains and adjacent uplands. From its source in the Town of Mount Washington, Karner Brook flows north and east into a system of

wetlands, floodplains and fens to Smiley's Pond (identified as Mill Pond on the USGS topographic map). From Smiley's Pond, near the eastern boundary of the ACEC, Karner Brook flows into Hubbard Brook, which in turn flows into the Housatonic River. Fenton Brook, flanked by two high ridges, flows north from these uplands and joins Karner Brook in the floodplain and wetland area north of Mount Washington Road. The other major tributary of Karner Brook, the streams that flow south into and from Marsh Pond, also joins Karner Brook in this floodplain and wetland area. Karner Brook is classified as a Class A, Outstanding Resource Water by the Department of Environmental Protection. The Class A category refers to public drinking water supplies.

According to the nomination, Smiley's Pond was formed by a dam constructed across Karner Brook nearly sixty years ago. Marsh Pond is the other sizable pond within the ACEC. It is a Great Pond whose size varies over time due to the activities of beavers.

It is important to note here that numerous minor and seasonal streams and springs are found throughout the watershed and are an integral part of the hydrology of the area. This hydrology is similar to that of the adjacent Schenob Brook ACEC, influenced by the flow of surface water and groundwater over and through the calcium-rich geology of the area.

Wetlands

The largest and most significant wetland areas of the ACEC are located in the Mount Washington Road floodplain area, approximately bounded by Mount Washington Road, Routes 41 and 23, and Jug End Road; and in the Marsh Pond area, located between Route 23, Phillips Road, Baldwin Hill Road East-West, and Blunt Road. These wetlands, also referred to as calcareous fens, are extremely rare natural communities, and provide important rare species habitat.

Because of the hydrology of the ACEC noted above, all of the surface waters and wetlands located within the ACEC watershed are important to preserving and maintaining the high quality and integrity of the ACEC. According to the Geographic Information System (GIS) mapping prepared for the review of the nomination, which used the United States Fish and Wildlife Service National Wetlands Inventory maps as a source of wetlands data, there are approximately 400 acres of wetlands located within the ACEC.

Habitat Resources

Rare species habitat

According to the Natural Heritage and Endangered Species Program, over twenty state-listed rare species, pursuant to the Massachusetts Endangered Species Act, have been documented as occurring within the Karner Brook Watershed ACEC. Four additional species on the Programs's unofficial Watch Lists also occur in the area. In addition, three natural communities have been documented. The concentration and number of rare species and significant natural communities found within this ACEC are exceptional.

One of the natural communities noted above is referred to by the Natural Heritage Program as a "southern New England calcareous sloping fen." It is located in the Mount Washington Road

floodplain and wetland area. Calcareous fens are peatlands saturated by cold calcium-rich groundwater, and depend on the uninterrupted flow of water over and through carbonate bedrock and sand and gravel deposits. In Massachusetts, this combination is only found in the southwestern region of the state. Some species of plants and animals, including many rare species, are indigenous only in this type of fen. Calcareous fens are among the most threatened natural communities in the state. The Nature Conservancy and the American Museum of Natural History have ongoing programs to research and monitor the habitat and status of rare species in this and other areas of the watershed. According to written comments submitted by Dr. Michael Klemens of the American Museum of Natural History, the Karner Brook watershed contains the second most important calcareous wetland in the southern Berkshires, surpassed only by the adjacent Schenob Brook watershed.

Important rare species and natural communities are also located outside of the wetland areas. Another natural community documented by the Natural Heritage Program, a "southern New England acidic rocky summit community," is located along the ridge concurrent with the Appalachian Trail from Jug End south to Mount Bushnell in Sheffield. This community is composed largely of pitch pine, scrub and black oaks and is uncommon in this part of the state. It adds to local biological diversity by supporting these dry pine barren species which in turn harbor rufous-sided towhees and other birds of pine barren habitats.

Habitats of other individual rare plant and animal species are located throughout the area. The GIS mapping prepared for the review of the nomination shows general locations for many but not all of the rare species locations documented by the Natural Heritage Program, nor does the list of documented rare species provided for the review of the nomination include all of the species documented. These omissions are due to the sensitivity of this information. The Natural Heritage Program can be contacted for more specific information.

Other wildlife habitat

In addition to the rare species and natural communities and habitats described above, the Karner Brook watershed provides crucial fishery habitat and diverse and significant habitat for native Massachusetts wildlife. Karner Brook is listed by the state Division of Fisheries and Wildlife as a "Critical Fisheries Habitat," providing habitat for rare fish species or native brook trout. Also, appendices B-F of the nomination provide extensive listings of plants, mammals, birds, amphibians, reptiles, and fish species that occur in the watershed.

Water Supply Areas

Karner Brook is a source of public water supply, providing high- quality drinking water to the South Egremont Water Company and over 200 residences and businesses located in South Egremont and Great Barrington. The surface waters of Karner Brook provide a flow of over 100,000 gallons per day, piped directly and with minimal treatment from the Water Company's 25,000-gallon storage tank off Mount Washington Road. Fenton Brook is a back-up supply. Karner Brook is designated by the Department of Environmental Protection (DEP) as Class A water for use as a public water supply. According to the Water Company, recent testing for the DEP shows extremely high water

quality. Fenton Brook is classified as Class B, High Quality Water. The rest of the households within the Karner Brook watershed depend on water obtained from private wells and springs.

Natural Hazard Areas

Natural hazard areas located within the ACEC include floodplains and high erosion areas. The Mount Washington Road floodplain, located in the valley along Karner Brook, is the most extensive floodplain in the designated area. According to GIS mapping, based on Federal Emergency Management Agency (FEMA) flood boundary maps, approximately 375 acres of floodplain are located within the ACEC. Erosion hazard areas are defined here as soils with slopes of over 15 percent, identified by the US Department of Agriculture Soil Conservation Service (SCS) Soil Survey of Berkshire County. These areas are located predominantly on the mountain ridges above Karner and Fenton Brooks, and according to the GIS mapping, based on the SCS soils maps, include approximately 3,500 acres. Natural hazard areas of floodplains and high erosion zones together total approximately 3,875 acres or 55 percent of the area of the ACEC.

Agricultural Areas

The final boundary of the Karner Brook Watershed ACEC modifies the original boundaries proposed in the nomination, and does not include over 500 acres of farm land associated with the two dairy farms located in the Baldwin Hill area of South Egremont (see below, section III, Boundary of the Karner Brook Watershed ACEC, Baldwin Hill). However, agricultural areas still remain an important and valuable resource of the ACEC. Working farm land, some located on prime agricultural soils, is located in several areas of the ACEC, as described in the nomination and in comments submitted by the Department of Food and Agriculture (DFA). As mentioned in DFA comments described in the boundary discussion below, these farm lands are compatible with the fragile ecosystems, rare species, and surface water supplies of the Karner Brook watershed, and contribute greatly to the scenic resources and unique character of the area. According to GIS mapping of land uses within the ACEC, crop and pasture land total approximately 800 acres. Also, as mentioned in the nomination, forest land is another aspect of the agricultural resources of the watershed.

Historical/Archaeological Resources

Appendix G of the nomination is an essay by James Parrish which describes the historical and archaeological resources of the Karner Brook watershed. According to the nomination, these resources reflect three successive waves of settlers: Native Americans, small groups of Hudson River Mahicans; late 17th and early 18th century Palatine and Dutch settlers; and later, English settlers from the Massachusetts Bay Colony. All of these inhabitants were drawn to the abundant wildlife, vegetation and water quality of the Karner Brook area. Colonial settlers also utilized the water for mills and manufacturing, and the land for agriculture. According to written comments submitted by the Massachusetts Historical Commission, Mr. Parrish's description (which is summarized in the text of the nomination) "indicates that many significant historic and archaeological resources are located within the proposed ACEC."

A total of thirty historic houses, three historic burial grounds, and over twenty archaeological sites are located within the proposed boundaries of the nomination. One highly significant historic site,

the Westover-Bacon-Potts property on Route 41 in Egremont (now known as April Hill), is listed on the National Register of Historic Places. This property, and the historic sites located throughout the ACEC, are part of the complex of cultural (including agricultural and scenic) and natural resources that create the unique character of Mount Washington, South Egremont and the Karner Brook Watershed ACEC.

Special Use Areas

The ACEC regulations cite "undeveloped or natural areas, public recreational areas, or significant scenic sites" as examples of "special use areas." The Karner Brook Watershed ACEC contains significant features from all three categories. The text of the nomination describes these features powerfully and succinctly: "the Karner Brook and adjacent Schenob Brook areas remain relatively untouched. This special natural habitat, so important to biologists and scientists, is equally important to the thousands of visitors who come every year to enjoy the region even though they may not understand the source of its beauty. Within a small area, the Karner Brook Watershed contains a variety of landscapes: hills, pastures and fields of corn; low-lying marshes backed by mountains; and the mountains themselves, covered with forests interrupted with rock outcroppings."

Several "famous lookout points" include April Hill, the 'Hundred-Acre Field' high on Mount Washington Road, Jug End along the Appalachian Trail, and Prospect Hill and Mount Fray along the South Taconic Trail. Areas within the ACEC are identified as noteworthy in the Department of Environmental Management Massachusetts Landscape Inventory. As stated in the nomination, "some of the most significant and beautiful landscapes in the Commonwealth lie within the Karner Brook area."

Public recreational areas include the South Taconic Trail, which traverses part of the ACEC from New York State and Mount Washington State Forest northerly to Route 23 in Egremont; the Appalachian National Scenic Trail, which follows the Mount Bushnell-Jug End ridge northerly from Sheffield and then descends easterly to April Hill and Route 41; and approximately 700 acres of the Mount Washington State Forest.

An additional significant natural area is the Jug End Karst, located on a lower plateau of Mount Bushnell in Egremont. This area is characterized by a series of limestone caves which attract spelunkers from all over the northeast United States.

The Department of Environmental Management, in the course of administering the review of the nomination, gathered and prepared a series of maps illustrating several categories of environmental data regarding the nominated area. This information has been mapped using the GIS of the Executive Office of Environmental Affairs (EOEA). This mapped information, which was used to assist in the evaluation of the nomination and determination of the final boundaries, is part of the public record of the Karner Brook Watershed 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: public water

supplies; wetlands; floodplains; erosion hazard areas; rare and endangered species; and protected open space (federal, state, municipal and nonprofit conservation and recreation lands). Not all of the resource and land use information reviewed and evaluated was included in the GIS mapping; this additional information includes geological information; prime agricultural soils and soils of local and statewide significance; Chapter 61B and other agricultural land use data; historic and archaeological resources; fishery and wildlife habitat; and scenic areas identified by the Massachusetts Landscape Inventory.

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

III. Boundary of the Karner Brook Watershed 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 modifies the original proposed boundary in three general locations. The final boundary delineation of the ACEC is intended to create greater consistency in the use of roads, state and municipal boundary lines, and drainage basin boundaries as guidelines for setting boundaries, as well as to achieve a closer approximation of the Karner Brook watershed boundary.

Several important issues regarding the proposed boundaries of the nomination were raised in the public and agency review process; these issues, the final boundary revisions, and recommendations for future actions are described below.

Baldwin Hill

The most significant boundary revision involves the Baldwin Hill area of Egremont. The Baldwin Hill area includes highly productive agricultural land on both sides of Baldwin Hill Road North-South. Two family dairy farms are the predominant land use of this area. The scenic vistas from Baldwin Hill, as well as the scenic quality of this area, are some of the most distinctive landscapes in Massachusetts, and are identified as such in the Massachusetts Landscape Inventory. An important calcareous fen, providing habitat for state-listed rare species, is also located in the vicinity of Baldwin Hill.

The boundary originally proposed for this portion of the nominated area utilized property lines and Baldwin Hill Road North-South in an attempt to approximate the Karner Brook drainage basin boundary (which runs in a northwest-southeast direction along the northeast side of Phillips Road) and to include some of the highly significant farm land and other important resources of Baldwin and Townhouse Hills. However, it also bisected the Baldwin Hill area, including some important resources while excluding others.

I find that the entire Baldwin Hill area, bounded approximately by Phillips Road, Baldwin Hill Road East-West, Blunt Road, North Egremont-Hillsdale Road, Route 71, Creamery Road, and

Route 23 includes unique resources of high quality and significance, and merits ACEC designation. However, I also find that additional public discussion of this alternative is essential before expanding the boundary of the Karner Brook Watershed ACEC to include the Baldwin Hill area. Therefore, the final boundary of the ACEC utilizes Phillips Road, Baldwin Hill Road East-West and Blunt Road. This boundary more closely approximates the drainage basin divide of the Karner Brook watershed; eliminates the use of private property lines as a boundary; and avoids dividing the Baldwin Hill area and the important resources associated with it.

I recommend that actions to protect and preserve the highly significant resources of the Baldwin Hill area be initiated, including efforts by the DFA's Agricultural Preservation Restriction (APR) Program. According to the April 23, 1992 memo from the DFA supporting the Karner Brook nomination, "The proximity of fragile ecosystems, rare species, surface water supplies, and important dairy farms in this watershed provides a lesson in co-existence between land uses which are often considered incompatible."

Furthermore, I recommend that Egremont citizens and municipal boards and commissions consider a potential, future boundary amendment to include the Baldwin Hill area as part of the Karner Brook Watershed ACEC. This action should be carefully considered and thoroughly discussed by residents before any such action is taken. As part of these deliberations, I also recommend that the Board of Health, the South Egremont Water Company, The Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife, and The Nature Conservancy collaborate, if possible, to determine the relationship of surface and groundwater flows to the water quality of Karner Brook and its tributaries and to the rare species habitats of the area. The calcarous fen and rare species habitat located south of Townhouse Hill Road also should be monitored carefully. According to the ACEC Regulations (301 CMR 12.13), an ACEC designation may be amended at any time after an ACEC has been designated for one year.

South Taconic Trail

The next boundary modification involves a segment of the South Taconic Trail in the vicinity of the Catamount Ski Area. The original, proposed boundary utilized a segment of the South Taconic Trail from the Massachusetts-New York state line to Route 23. This trail is located close to the Karner Brook drainage basin divide; from this divide surface water flows either north and west to New York State or south and east to Karner Brook.

This location of the South Taconic Trail is not secured through a permanent trail easement. Therefore, the boundary proposed in the nomination might shift if the trail were relocated at some time in the future. Efforts are currently underway to secure a permanent location and trail easement for this segment of the trail. However, until such time that a permanent trail easement, located along this drainage divide, is acquired by a public or nonprofit agency, this segment of the Karner Brook Watershed ACEC boundary shall be defined by the drainage divide described in the above paragraph, from its intersection with the Massachusetts-New York state line north of Mount Fray northerly to Route 23 in Egremont.

Mount Washington

The third boundary modification involves reducing the proposed boundary area in Mount Washington to more closely approximate the Karner Brook drainage basin through the use of a section of the drainage basin divide and part of the Mount Washington State Forest boundary line as segments of the final boundary. There are no roads, rights-of-way, or permanent easements that approximate the drainage basin divide in this hilly, forested area of Mount Washington. Therefore the final ACEC boundary utilizes the drainage basin divide from the Egremont-Mount Washington town line to the Mount Washington State Forest boundary line, and the State Forest boundary line to East Street. This delineation excludes from the ACEC: a) Yagar Pond and another small pond located outside of the Karner Brook drainage basin; b) private land located southwest of Mount Darby; and c) a portion of the Van Der Smitten Memorial Park located east of East Street and south of the DEM state forest.

Appalachian Trail/Black Rock

The final boundary of the Karner Brook Watershed ACEC follows the original proposal along the Egremont-Sheffield town line. However, based on a thorough review of the resources of the nominated area, I believe that the area of the Appalachian Trail and Black Rock, located in Sheffield, would also merit ACEC designation. This area is bounded approximately by the Egremont-Sheffield town line to the west and north, Route 41 to the east, and the Schenob Brook Drainage Basin ACEC to the south. Before I can make a finding to include this area as part of the ACEC, additional public discussion of this alternative is essential. I would be pleased to accept a nomination to modify and expand the boundary of the Karner Brook Watershed ACEC to include this area, if groups in the affected communities similarly believe that such a boundary change is appropriate and submit such a nomination to me.

Features including a small portion of the Karner Brook watershed, the Appalachian Trail, the "acidic rocky summit" natural community (described in section II, Habitat Resources above), and highly significant rare species are located in this wooded, scenic and steeply sloped area, adjacent to the Schenob Brook ACEC. Indeed, as mentioned in written testimony regarding the nomination, the Karner Brook watershed is part of the same unique geological land form that is shared by the Schenob Brook ACEC.

My recommendations for the Appalachian Trail and Black Rock area parallel those described above regarding the Baldwin Hill area. I recommend that efforts to protect and preserve the resources of this area be undertaken by municipal and nonprofit groups and organizations. As I mention previously, these efforts could include consideration of formally modifying the boundary of the Karner Brook Watershed ACEC and/or the Schenob Brook Drainage Basin ACEC to include this area.

Final Boundary Description

The final boundary is shown on the attached map taken from the 1987 Great Barrington, Mass.-N.Y. and the 1987 Ashley Falls, Mass.-Conn.-N.Y. United States Geological Survey (USGS),

1:25,000-scale metric topographic maps. An official map is on file at the offices of the DEM, Division of Resource Conservation.

The boundary generally follows streets and roads, portions of state and town boundaries, portions of state-owned property boundaries, and drainage basin boundaries. Specifically, the boundary is defined as follows:

Beginning at the intersection of Route 23 and Route 41 in Egremont, the ACEC boundary proceeds southerly along Route 41 to the Egremont-Sheffield town line; thence westerly and then southeasterly along the Egremont-Sheffield town line to the intersection of the Egremont, Mount Washington and Sheffield municipal boundaries; thence southwesterly and then northwesterly along the Egremont-Mount Washington town line to the intersection of the town line and the Karner Brook drainage basin divide, as indicated on the USGS topographic map; thence westerly and then northerly into Mount Washington along the drainage basin divide - over an unnamed peak northwest of Yager Pond at elevation 604.5 meters, then over another unnamed peak to the northwest at elevation 562 meters, and then over Mount Darby - to the intersection of the drainage basin divide and the Mount Washington State Forest boundary line; thence southwesterly along the State Forest boundary line to East Street; thence southeasterly along East Street to Hatch Hill Road to West Street; thence westerly along Hatch Hill Road to West Street; thence northerly and westerly along West Street to the Massachusetts-New York state line; thence northerly along the state line, over the Mount Washington-Egremont town line, to the intersection of the state line and the Karner Brook drainage basin divide, north of Mount Fray, as shown on the USGS topographic map; thence along the drainage basin divide northeasterly to an unnamed peak at elevation 460 meters, then northerly and northwesterly to the intersection of the drainage basin divide with Route 23; thence westerly along Route 23 to the Massachusetts-New York state line; thence northerly along the state line to Oxbow Road (North Egremont-Hillsdale Road); thence easterly along Oxbow Road to Blunt Road; thence southeasterly along Blunt Road to Baldwin Hill Road East-West; thence easterly along Baldwin Hill Road East-West to Phillips Road; thence southeasterly along Phillips Road to Route 23; thence southeasterly along Route 23 to the beginning point at the intersection of Route 23 and Route 41.

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 Karner Brook Watershed ACEC, according to GIS data, is approximately 7,000 acres. The approximate acreage located in each municipality is as follows:

Egremont - 5,700 acres

Mount Washington - 1,300 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) Threat to the Public Health Through Inappropriate Use

Karner Brook is the sole supply of drinking water to the South Egremont Water Company, which provides high-quality water to over 200 residential and business connections in Egremont and Great Barrington. As stated in the nomination, this water supply is "dependent on the continued integrity and abundance of water that flows through the Karner Brook watershed and into the brook itself." In addition, the remainder of households and businesses 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. There is no public sewer, nor are there feasible alternative sources of water; a delicate balance of resource preservation and development must be sustained. Inappropriate development or use would be a severe threat to the public health.

(2) Quality of the Natural Characteristics

The exceptional quality of the natural resources of the Karner Brook Watershed ACEC is described in the nomination and summarized earlier in this designation document. This factor alone could support designation. All nine resource categories applicable to inland areas of critical environmental concern are present within this ACEC, and each category contains resource features of high quality. Most notable are the surface waters, the wildlife habitat and natural communities, and the exceptional scenic beauty of the region. The high quality of the natural characteristics of the ACEC is also indicated by the number of scientists and organizations engaged in studies of the area (see below, Uniqueness of Area).

(3) Productivity

The high diversity of wildlife found within the ACEC is described in the nomination and strongly supports designation. The variety of habitats, from field to agricultural lands to wetlands to forest, and the unpolluted environment support a rich fauna and flora. The number of ongoing scientific and educational projects of the area attest to this.

(4) Uniqueness of Area

As with Criteria 2 above, the factor of "uniqueness of area" alone could support designation. What is striking is that although the Karner Brook watershed area shares many similarities and natural resource characteristics with the adjacent Schenob Brook Drainage Basin ACEC, the Karner Brook Watershed ACEC is altogether distinctive. The geology, topography, history, and natural resources of this area combine to create an area unique to the southern Berkshires.

This uniqueness can be experienced from a variety of perspectives. For example, the scenic views from and of Jug End and Baldwin Hill span most of the ACEC and include views of the the two remaining family dairy farms in Egremont. Views from Mount Washington State Forest are also exceptional. Scientists and naturalists find the natural communities and ecosystems of the area (including many rare species), as well as the geologic attraction of the Jug End Karst, to be unique study areas of regional, possibly national, significance. According to the nomination, "Scientists, staff and students from the American Museum of Natural History, Science Museum of Connecticut, Museum of Comparative Zoology, The Nature Conservancy, Massachusetts Natural Heritage Program, Massachusetts Audubon Society, and Simon Rock College have participated in the ongoing studies of this ecosystem."

Furthermore, the history of the area, as chronicled in the historical narratives of local resident James Parrish of the South Egremont Water Company, provides impetus for further historical and archaeological research and preservation.

(5) Irreversibility and Magnitude of Impact, and Imminence of Threat to the Resource

The quality, significance and uniqueness of the resources of the Karner Brook Watershed ACEC depend upon maintaining an essential ecological balance. Irreversibility of impact is based on this interdependence of ecosystems and such factors as the dependence of certain rare species on calcareous wetlands as well as on unpolluted water. The rare species habitats, natural communities, scenic values, private and public drinking water supplies, and other resources of the area are all dependent upon our recognizing and maintaining these interdependent relationships. Long-term regional development pressures and inappropriate development could result in irreversible and highly significant adverse impacts.

(6) Economic Benefits

As stated in the nomination and emphasized by many of the speakers at the public hearing, the economies of Egremont and Mount Washington are dependent on the natural beauty and resources of the area. The economic importance of maintaining high-quality public surface water supplies is obvious, especially to the residents and businesses of South Egremont Village. The local and regional economy is dependent upon income from recreation, tourism, and second-home industries, and these industries in turn are all dependent upon the resources and values described in the nomination and summarized in this document. Maintaining and supporting the viability of farming

and agricultural resources are other important economic factors and benefits here, and ACEC designation is intended to encourage the preservation and health of these resources.

(7) Supporting Factors

Approximately 130 comments plus a petition with approximately 60 signatures were received regarding the nomination. Testimony submitted at the public hearing reflected strong support for designation. Of the 47 parties that presented oral and written testimony, 35 supported designation and 8 opposed. Some of the testimony and written comment submitted opposed some of the boundaries proposed for the nominated area, and not necessarily the nomination itself. In addition to the written comments described below, approximately 40 letters of support from individuals and families were received; almost all were from the communities affected. The petition with approximately 60 signatures (almost all from the communities affected) supported designation. Seven letters opposing designation were received.

Written or oral testimony supporting designation was received from 8 municipal boards and commissions; from both state legislators representing the area (Senator Jane Swift and Representative Christopher Hodgkins); 11 nonprofit and business organizations; and from 7 regional, state and federal agencies.

The municipal boards and commissions included the Egremont Board of Selectmen, Conservation Commission, Planning Board, Board of Appeals and Board of Health; and the Mount Washington Board of Selectmen, Conservation Commission and Planning Board.

Nonprofit and business organizations included the American Museum of Natural History, Appalachian Mountain Club, Appalachian Trail Conference and Trust for Appalachian Lands, Berkshire-Litchfield Environmental Council, Berkshire Natural Resources Council, Berkshire School (Science Department), Egremont Environmental Action and Land Trust, Massachusetts Audubon Society, National Speleological Society, South Egremont Water Company, and The Nature Conservancy.

Oral testimony opposing designation was submitted by a representative of the Alliance for America.

Regional, state and federal agencies supporting designation included the Berkshire County Regional Planning Commission; DEP Divisions of Water Supply, and of Wetlands and Waterways; Department of Food and Agriculture; Natural Heritage and Endangered Species Program, Division of Fisheries and Wildlife, Department of Fisheries, Wildlife and Environmental Law Enforcement; Massachusetts Historical Commission; and the National Park Service, Appalachian National Scenic Trail Office. The DEM Office of Water Resources and DEP Division of Water Pollution Control provided information for the review of the nomination.

To summarize supporting factors regarding designation, the review of the nomination demonstrated strong public consensus on the intrinsic 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 among municipalities, as well as between municipalities, state agencies, and nonprofit organizations regarding actions to protect and preserve the resources of the area; and finally, portions of the area are owned by state and federal agencies, reflecting an important public interest in preserving, restoring and enhancing 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 Karner Brook Watershed 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) Susan F. Tierney July 16, 1992
Secretary of Environmental Affairs

[Original document reformatted for ACEC Program website, January, 2005]