

DESIGNATION OF THE WEYMOUTH BACK RIVER  
as an AREA OF CRITICAL ENVIRONMENTAL CONCERN  
with supporting findings

Following the extensive formal review required by the regulations of the Massachusetts Coastal Zone Management program (301 CMR 20.00 et seq) and the Massachusetts Environmental Policy Act (301 CMR 10.00 et seq), including nomination review, research, meetings, and evaluation of all public comments, I, the Secretary of Environmental Affairs, hereby designate a portion of the Weymouth Back River and surrounding lands in the towns of Hingham and Weymouth as an Area of Critical Environmental Concern (ACEC). This action is taken pursuant to the authority granted to me under Massachusetts G.L. c. 21A, s. 2(7).

I also hereby find that the coastal resource areas included in the Back River ACEC are significant to flood control, the prevention of storm damage, the protection of land containing shellfish, and fisheries; public interests defined in the Wetlands Protection Act (G.L. c. 131, s.40; 310 CMR 10.00 et seq.).

I. Boundary of the Back River ACEC.

The area generally includes the Weymouth Back River estuary and certain surrounding lands and watershed areas. All elevations referred to are NGVD datum as indicated on USGS topo sheet of the Weymouth Quadrangle dated 1971, photorevised 1979. A map showing the ACEC boundaries is available in the Massachusetts Coastal Zone Management office at 100 Cambridge Street, Boston.

Specifically, the boundary is defined as follows:

Beginning at the point just south of the Route 3A bridge where the northern boundary of Weymouth's Great Esker Park meets the western bank of the Back River, and moving west, south and finally east to encompass all lands included in Great Esker Park (Town of Weymouth Assessor Plans 5,8,11; Block 14; Lot 1) to the intersection of the 10' contour on the line between the Park and the town owned property surrounding the Weymouth compacting station. In two instances the ACEC boundary extends westward beyond the Park bounds; in an area generally surrounded by Irving Road, Call Road, Seabury Street, and Fairfax Street, the ACEC boundary follows the 10' contour around the salt marsh; in an area generally bounded by Puritan Road and Calhoun Street, the ACEC boundary is again the 10' contour surrounding the marsh.

From the southern edge of the Park referred to in the previous paragraph, the boundary follows the 10' contour generally southward to the culvert under the Conrail tracks. This boundary includes the stream and its banks to the height of the annual flood elevation to the point of intersection with the culvert under Wharf Street and latterally to the height of the annual flood elevation.

The boundary includes Herring Brook in Weymouth from the south of the railroad

culvert to a point in Whitmans Pond 25 feet above the upper end of the highest fish ladder, using a bank elevation of the annual highwater mark in the fresh waters and the 10-year flood elevation (10.5') in the tidal portions.

From the east side of the railroad culvert on Herring Brook, the boundary is coincident with the 10' contour until reaching the south bank of Fresh River where it passes under Fort Hill Street in Hingham (extension of Commercial Street in Weymouth).

The boundary follows the course of the Fresh River, at its annual flood elevation, under Fort Hill Street and the Conrail tracks and up the eastward branch of the Fresh River under French Street. The lands under the management of the Hingham Conservation Commission known as Brewer-More Park and generally bounded by the Conrail tracks, New Bridge Street, the so-called Wilmon Brewer Estate, and Hobart Street are entirely included (see plan entitled "Sub-division Plan for New Bridge and Hobart Streets" prepared by Perkins Engineering Inc., 10 Industrial Pond Road, Hingham dated 15 December 1980, 4 sheets, as filed with the Hingham Conservation Commission, for surveyed bounds). Also included are the lands under the control of the Hingham Conservation Commission located around Bouve Pond (see Town of Hingham Assessors sheet 106, Lots 8,31,32.)

From the north bank of the Fresh River as it passes under Fort Hill Street, the boundary moves generally northwest along the 10' contour to the Bare Cove Park boundary line. With one exception, all of Bare Cove Park is included in the ACEC. That one exception is the land to the east of the road between the music conservatory and the Tucker Swamp well field, which is excluded.

Three additional areas adjacent to Bare Cove Park are within the boundaries of the ACEC. The first includes a section of Tuckers Swamp on land owned by the Hingham School Department. It is generally bounded by the beds of unnamed roads and railroad lines from the former naval installation. Beginning at the junction of the roadbed and the Park boundary just south of the Tucker Swamp well field and extending northeast to the railroad bed, northwest and northeast to the first intersecting roadway, northwest along the west side of that roadbed to a point 50' to the south of the brook, in a northeast direction to north side of the first roadbed, thence southeast along the north side of the road to the west side of the first intersecting road, north along the west side of that roadbed to the first intersection, west along the south side of the road to the intersection with the railroad bed, southeast along the north side of the railroad to the intersection with the 20' contour line, south and west along this contour line and extending west to the railroad bed and northwest to the Park boundary.

The second area surrounds the Great Blue Heron pond to the northeast of Beal Cove. The bounds are defined on a "Plan of Land at Beal Street and Hockley Drive, Hingham", prepared for the Ships Cove Co. by Perkins Engineering Inc., dated 27 March 1980, revised 7 May 1980 and endorsed by the Hingham Planning Board 27 May 1980 as not requiring approval under the sub-division law. This plan is on file with the Hingham Planning Office.

The third area includes the eskers, salt marshes and salt ponds on the so-called Salah property at the northern end of Bare Cove Park. The line surrounding this section begins at the junction of the Park boundary and the 10' contour to the east of a small wetland and just to the west of former Naval Depot warehouse #142, and extends northeast and then northwest to the northernmost point on that contour line, extends directly north to the 30' contour, moves west and north to a point north of the salt marsh, directly west to the 20' contour on the west side of the esker, then moves south in a straight line down the esker slope to the 10' contour, across a level area to the nearest point of the 10' contour of the next esker, west along the 10' contour to the Bare Cove Park boundary at a point approximately 25' north of former Naval Depot warehouse #54 which lies partly within Bare Cove Park and partly within the Salah property.

From the northern juncture of the Bare Cove Park boundary and the eastern bank of the river, the boundary extends directly across to the starting point at the Great Esker Park northern boundary.

## II. Designation of the Resources of the Back River ACEC.

In my letter of acceptance of the nomination of the Back River, I noted that the number of significant resource areas exceeded the minimum required for eligibility. The resources of the Back River, its surrounding lands and portions of its watershed have remained largely unaltered despite the generally urban setting. These significant resource areas within the ACEC include: anadromous and catadromous fish runs, fish spawning and nursery areas, an estuary with over 200 acres of water surface, flood plains, over 100 acres of salt marsh, several salt ponds, and over 100 acres of productive clam flats. Within the ACEC, habitat is available for many forms of wildlife, particularly birds. There are several important historic sites and many significant scenic vistas.

The presence of these resource areas clearly indicates that the site is important to the region and to the state.

## III. Procedures Leading to ACEC Designation.

Initial consideration of ACEC status for the area designated began in September of 1981 during a review of various environmental protection techniques by the Back River Committee. This group, consisting of appointees by the Boards of Selectmen of Weymouth and Hingham, met several times with staff of the CZM office. Subsequent informal meetings were held between CZM, the Back River Committee, Boards of Selectmen, Planning Boards and Conservation Commissions of the two towns to explain the ACEC program and ramifications of such a designation.

On 12 April 1982, a letter of nomination was signed by representatives of the above town Boards, Commissions and the Committee and by the Hingham Bare Cove Park Committee and the Weymouth Parks Board. Acceptance of the nomination was indicated by letter on 26 May 1982 and the review process was begun.

Notice of the acceptance of the nomination and of an informational meeting and

a public hearing was published in the Environmental Monitor of 7 June 1982. Notice was also given in the Boston Globe (7 June), Patriot Ledger (7 June), Weymouth News (9 June), Hingham Journal (9 June), and CZM Newslines (31 May). Several informational articles and editorials appeared in local and regional papers and notice of meetings was sent to property owners whose land was nominated for inclusion within the ACEC.

An informational meeting was held in the Hingham Town Office Building on 14 June 1982 with a formal public hearing in Weymouth's Town Hall on 13 July 1982. The public comment period was extended until 20 July 1982. Testimony at the hearing, and via written comments, was unanimously favorable.

#### IV. Discussion of Factors Specified in Sections 6.48 of the CZM Program Regulations and 10.17(6) of the MEPA regulations.

In the review process leading to the decision on a nominated area, the Secretary must consider the factors specified in Section 6.48 of the CZM Program regulations and Section 10.17(6) of the MEPA regulations. As stated in these regulations, the factors need not be weighed equally, nor must all of these factors be present for an area to be designated. While the more factors an area contains the more likely its designation, the strong presence of even a single factor may be sufficient for designation.

Based on information in the nomination letter, presented at the public hearing and through written comments, and on research of my staff, I find the following factors applicable to the designated ACEC:

Quality of the Natural Characteristics: The Back River remains a natural area in the midst of expanding urban/suburban development. The expanses of marshland and the eskers act as a buffer against the activity of surrounding residential, commercial, and industrial areas. This, in turn, provides habitat for wildlife and high quality passive recreation. The size and scope of the eskers are unique in Massachusetts. Each year thousands of alewives and smelt pass through the estuary and spawn in the tributaries and headwaters.

Productivity: The high productivity of estuarine/saltmarsh ecosystems has been well documented in the scientific literature. The plant growth within the marsh is exported by the tides and ultimately incorporated into the marine food web. The protected, shallow waters of the estuary act as a nursery to shellfish and finfish and the relatively high water quality of the tributaries and the headwaters provides spawning sites for anadromous fishes.

Uniqueness of the Area: That the Back River estuary has remained relatively unchanged while located in the state's largest metropolitan area (within a 45 minute drive of over 1 million people) makes it truly unique to the region. The eskers are remarkable both for their size and state of preservation. The Massachusetts Division of Marine Fisheries lists the Back River as a major anadromous fish run, again particularly notable considering the urban setting.

Irreversibility of Impact: The upper reaches of the Back River, designated as an ACEC, is a shallow basin with a narrow downstream opening under the Route 3A bridge. This portion of the estuary, therefore, is susceptible to problems due



to inadequate flushing. Discharge of pollutants or changes in bottom topography within the ACEC could have major impacts on fin and shellfish. Alterations in water quality or quantity or in bottom features could permanently impact alewife and smelt runs and spawning.

Imminence of Threat to the Resources: Alterations that could impact resources of the ACEC have been proposed in the recent past. This designation will focus attention on the value and sensitivity of the area and will serve as a guide regarding future activity in the area.

Supporting Factors: There has been virtually unanimous agreement on the appropriateness of the designation among local residents, environmental groups, and Boards and Commissions from the two towns. There has also been support from state legislators. It is therefore my strong feeling that the portions of the Back River estuary, the surrounding uplands and tributaries that have been nominated are very appropriate for designation as an Area of Critical Environmental Concern.

  
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John A. Bewick  
Secretary of Environmental Affairs

9/10/82  
Date