The natural or physical character of the Charles River is and always was peculiar. In the first place, the so-called "river" is not a river. It is a tidal estuary, a shallow and muddy trough, broad in its seaward part, narrow and tortuous in its inward extension, and filled and almost emptied by the tide twice every day. At high tide the original Back Bay (already filled in at this point) was about three miles long and two miles wide, and the original "river" wound its way inland five crooked miles to the natural head of the tide in Watertown.

> CHARLES ELIOT, FIRST REPORT OF THE CHARLES RIVER IMPROVEMENT COMMISSION, 1892

The Charles River—which English explorer John Smith named in 1614 to honor Prince Charles (later King Charles I)is one of the three major rivers of metropolitan Boston. At eighty miles in length it is the longest river entirely within the borders of Massachusetts. Twenty dams control the flow of the Charles from its source at Echo Lake in Hopkinton, 350 feet

above sea level, to its confluence with Boston Harbor.

Originally the segment of the river between the Watertown Dam and the historic Charles

River Dam was a sprawling salt marsh with nine-foot tides. The head of navigation, near Watertown Square, is eight and one-half miles from the waters of Boston Harbor. Today, the width of the Basin ranges from two thousand feet in its lower, downstream section to less than one hundred feet in its upper reaches. Channel depth ranges from an average of fifteen



BEFORE THE CONSTRUCTION OF THE DAM IN 1910, THE CHARLES MEANDERED THROUGH SALT MARSHES LIKE THIS ONE ACROSS FROM THE PERKINS SCHOOL AT WATERTOWN.

Herter Park, and the Upper feet in the lower section

near the Esplanade to an average of two to three feet in the upper section between the Newton Yacht Club and Watertown Square.

Basin, from Herter Park to the Watertown Dam. In its lower section the Basin is a structured and expansive creation that changes to a narrow meandering course in the middle section and changes again to a landscape of intimate, wooded banks in its upper reaches. The different characters of these zones, combined

should build.

Basin, from the BU Bridge to



BEGINS AT THE CHARLES RIVER DAM AND REACHES TO THE BOSTON UNIVERSITY (COTTAGE FARM) BRIDGE.

300



CHARACTER ZONES

The character of the Basin changes along this eight-and-one-half-mile stretch, forming three discernible zones: the Lower Basin, from the historic Charles River Dam to the Boston University Bridge; the Middle

with the continuity of the adjacent parkways, are essential to the identity of the Basin and provide an underlying base upon which future planning

The Lower Basin is two and one-half miles long and up to two thousand feet wide. Entirely manmade, it has the feel of an urban lake. Vertical seawalls, straight tree-lined parkways and paths, and the neoclassical presence of the Massachusetts Institute of Technology define its Cambridge shoreline. By contrast, the Boston shore is a wooded embankment with overlooks. It has for a backdrop Beacon Hill, at whose pin-

> nacle sits the Massachusetts State House.

The Middle Basin is a zone of transition from urban and formal to rural and natural. The Joint Board on the Improvement of Charles River, convened in 1893 to consider improvements along the entire Basin, recommended that the Cottage Farm Bridge (rebuilt in 1928 and

THE MIDDLE BASIN STRETCHES FROM THE BOSTON UNIVERSITY BRIDGE TO HERTER PARK.

renamed the Boston University Bridge in 1949) mark the end of the Lower Basin and the shift to a more informal landscape.

Despite the presence of intrusive industrial and commercial uses along the edges of the Basin, this change in character is evident along the Basin today. Above the Boston University Bridge the river flows in a narrower, curvilinear channel for six miles to the Watertown Dam.

With the exception of the overgrown sections by the Massachusetts Turnpike and Genzyme Corporation, the banks of the Middle Basin are open. Eight boathouses are located along the twisting course of the Middle Basin. The red brick buildings of Harvard University, fronting the tree-lined boulevards and grassy riverbanks, present a classic view of America's oldest university.

Upstream from the Eliot Bridge the low elevation of Herter Park and the broad sweep of the curving river create a hint of the expansive saltwater marshes that once bordered the meandering channel. The Harvard University athletic fields and Mt. Auburn and Cambridge cemeteries add to the breadth of the open space in this section of the Middle Basin.

In the Upper Basin, woods and brush that crowd the banks of the river from the open fields of Herter Park to the Watertown Dam create a more rural setting on the water. For pedestrians, the water is completely hidden from view along much of this section. Unlike the filled marsh grounds of the Middle Basin, the hills of Watertown and Newton hem in the river, creating a more intimate environment. The Basin widens near the Watertown and Newton yacht clubs; the tower of the Perkins School for the Blind is a landmark visible from Daly Field on the south side. The Galen Street



Bridge and a formal landing at Watertown Square form the terminus of the parkway-lined Basin, but the river continues on another thousand feet to the Watertown Dam.

A HISTORICAL SKETCH

Six thousand years before the first Europeans arrived in what is now Massachusetts, the Algonquins settled along the banks and marshes of a place they called Mushauwomuk, "where there is a big river." This big river was really a tidal estuary, "a shallow and muddy trough, broad in its seaward part, narrow and tortuous in its inward extension, and filled and almost emptied by the tide twice every day." The ancient river channel that once meandered between vast salt

marshes can still be traced along the bottom of the Basin today.

The first mill dam was built about 1634 at the head of the tide near Watertown Square. The towns of Boston and THIS PLAQUE MARKS ONE OF MORE THAN 30 SITES ON THE BANKS OF THE BASIN WHERE INDICATIONS OF PRE-EUROPEAN HUMAN USE HAVE BEEN FOUND.



A LESS URBAN CHAR-ACTER MARKS THE UPPER BASIN BETWEEN HERTER PARK AND THE WATERTOWN DAM.



Cambridge, once separated by marshes and mudflats, were linked in 1662 by the Great Bridge near Harvard Square. By the mid-19th century boat captains complained that the numerous bridges crossing the river impeded the tide and obstructed boat traffic. Because the river provided both water access to Boston Harbor and a convenient place to dump refuse, its shores were developed for various industrial uses, including slaughterhouses, coal-burning power plants, and shipping wharves. Canals were dug in the eastern end of Cambridge in the hope that Cambridgeportt would become a major port.

All this development along the shores slowly transformed the big river and its marshes and mudflats. Sewage was dumped directly into the river, a practice that lasted well into the twentieth century. By 1849 the Boston Board of Aldermen would describe the Back Bay marshes as "nothing less than a great cesspool, into which is daily deposited all the filth of a large and increasing population." The odors were so strong that Cambridge residents complained of having to close their windows in the heat of the summer. Worse still, slaughterhouses in Brighton and East Cambridge dumped carcasses directly into the river each day to float away with the tide. Filling of the marshes was called for,

and real estate developers had much to gain. The rapid disappearance of the Charles River mudflats began with the filling of the Back Bay—now one of Boston's most prestigious neighborhoods—from the 1850s through the 1890s.

While many people contributed to the idea of a grand water basin for Boston and Cambridge, it was Charles Eliot who placed this bold idea into the context of an even grander vision: a metropolitan park system for the entire region. Eliot was the son of the president of Harvard College and a protégé of Frederick

> Law Olmsted, the designer of New York City's Central Park, connections that helped considerably in the swift implementation of this



idea. Together with Sylvester Baxter, a newspaperman and Boston intellectual, Eliot convinced the state legislature in 1893 to establish the Metropolitan Park Commission, the forerunner of the Metropolitan District Commission.

Working for the Metropolitan Park Commission, Eliot and Baxter produced within a year a report recommending the acquisition and protection of thousands of acres of land throughout the Boston region, with the Charles River Reservation as the centerpiece. Eliot predicted that the Charles River Basin would become the "central court of honor" in the metropolitan district.

Within three short years the Metropolitan Park Commission and the Cambridge Parks Commission acquired most of the seventeen miles of shoreline between the Craigie Bridge at Leverett Street and Watertown Square. (LEFT) THE 1893 METRO-POLITAN PARK PLAN FOR A RING OF RESERVATIONS AROUND BOSTON CON-NECTED BY RIVERS TO THE BAY AND SEA SHORES. (ABOVE) THE EMBANK-MENT, ABOUT 1910, LOOK-ING TOWARD THE BACK BAY FROM THE FLATS OF BEACON HILL.

BEFORE THE BASIN'S CREATION, CAMBRIDGE BUSINESSES HOPED TO ATTRACT HARBORSIDE ACTIVITY BY DIGGING CANALS ALONG THE RIVER. THE BROAD CANAL, SHOWN HERE IN 1904, IS ONE OF TWO THAT REMAIN.



CHARLES ELIOT ADVO-CATED A METROPOLITAN PARK SYSTEM WITH THE

BASIN AS ITS CENTERPIECE

The polluted mud flats, exposed at each low tide, continued to be a problem, however. James Jackson Storrow, a wealthy investment banker and former captain of the Harvard crew team, campaigned for a dam on the Lower Basin to address this problem and to improve rowing conditions. Storrow's efforts resulted in the creation of the Charles River Basin Commission, chaired by Henry Pritchett, president of MIT.

The earthen dam and locks at the current site of the Museum of Science and the 100foot-wide Boston Embankment between the old dam and Charlesgate (where Storrow Drive runs today) were completed in 1910. The completion of the dam converted the Charles from a tidal saltwater estuary into a freshwater lake. Guy Lowell, the architect and landscape architect for the commission, designed a park on the dam to connect the Charlesbank Park in Boston with a planned park known as "The Front" in Cambridge. He also designed the park's stable, boathouse, two lockhouses, and pavilion.

After Storrow's death, his wife Helen Storrow donated one million dollars to widen the hard-

> edged Embankment into a less formal esplanade. The James J. Storrow Memorial Embankment, designed by the landscape

architect Arthur Shurcliff, was dedicated in 1936. For fifteen short years pedestrians had the pleasure of walking along the Charles without the sight or sound of automobiles. In 1949, against Helen Storrow's express wishes, the state legislature nar-

rowly passed a bill to build a parkway along the embankment. It was completed in 1951 and named—ironically—Storrow Drive. Arthur Shurcliff again was retained to expand the Esplanade to compensate for the land lost to the parkway.

CHANGES ALONG THE BASIN

Though pleasure drives were part of Eliot's original vision for the Basin, the expansion of parkways in the 1950s and 1960s whittled away at the original landscape reservation. Athletic facilities such as pools and skating rinks also were built during this period, often with little regard for the river setting. Bicycles were allowed on the Esplanade for the first time in 1960 at the urging of Dr. Paul Dudley White, an eminent cardiologist and personal physician to President Eisenhower. A continuous bicycle path was finally established around the entire Basin a decade later and named after Doctor White. Responding in part to the planned construction of underpasses at three intersections along Memorial Drive, environmental activists began campaigning for the river in the 1960s. The continuing improvement in water quality is a testament to the hard work of Charles River advocates and public funds over the last thirty years. The EPA predicts that water quality in the Charles River Basin will be at swimmable levels on most days by the year 2005. The MDC recently has been reclaiming river bank land, extending paths from Watertown Square four miles upstream to the lakes district in Waltham.

By 2005 the "lost half-mile" below the historic Charles River Dam will be lined with parks and paths linking the Basin to Boston Harbor and the Harborwalk. When complete, metropolitan Boston will have a system of river bank access unrivaled in the United States. SWIMMING IN THE CHARLES AT MAGA-ZINE BEACH IN CAMBRIDGE DURING THE SUMMER OF 1935. THE U.S. ENVIRONMENTAL PROTECTION AGENCY PREDICTS THE CHARLES WILL BE SWIMMABLE MOST DAYS OF THE YEAR BY 2005.



WROTE AN EXPANSION OF THE EMBANKMENT AS A MEMORIAL TO HER HUSBAND JAMES, A NEW PARKWAY WAS BUILT THROUGH IT. THIS 1950 PHOTO SHOWS CON-STRUCTION ON STORROW DRIVE LOOKING WEST TOWARD THE ARLINGTON STREET UNDERPASS.

FIFTEEN YEARS AFTER

HELEN STORROW UNDER-

