

The Charles River Basin encompasses five coexisting systems. It is a living landscape of flora and fauna; a set of system of prehistoric and historic resources that reveals our past; a ribbon of narrow parklands supporting passive and active uses; a network of paths and parkways that carry commuters as well as recreational users; and an outstanding resource for boating. Each system overlaps to make the Basin a complex and vital place. It is nationally significant as a site of prehistoric and historic activity and occupation, an engineering achievement, a metropolitan open space, and a scenic and recreational resource.

A LIVING LANDSCAPE

Understanding how underlying natural systems function enriches a user's experience. Large public parks are appreciated both for their ecological value and their scenic value. Beautiful natural scenery emphasizing diversity of form, color, and texture should be the broad outward expression of healthy natural systems.

The Charles River Basin is not an untouched natural landscape; it has been actively shaped by humans for more than two centuries. Four hundred years ago the Charles was a sluggish river meandering between wooded hills in what is now Watertown and Newton, through salt marshes in what is today Cambridge and Boston, and finally emptying into Boston Harbor. Nine-foot tidal fluctuations flushed the salt marshes twice daily. The surviving salt marsh along the Neponset River Reservation to the south gives some sense of what this landscape once looked like. The Charles was dredged, and hundreds of acres of marsh were filled in the late nineteenth and early twentieth centuries. When the shut-off gates of the historic Charles River Dam were closed for the first time in 1908 the tidal river was converted to a freshwater urban lake stretching eight and one-half miles to the Watertown Dam. Most of the riverbank was armored to retain the dredged soil of the embankments. Much of this sloping stone work is buried by invasive plants today.

The vegetative communities along the river can be categorized into five types: open parkland (approximately 60%), strip parkland (approximately 25%), forest/shrub strip (approximately 9%), urban forest (approximately 4%), and wetland (approximately 2%).

Scattered trees or lines of boulevard trees planted in mowed turf areas characterize open parkland and strip parkland. This park landscape of open mowed turf with scattered trees has great aesthetic appeal and tremendous recreational value but has minimal habitat value.

Forest/shrub strip and urban forest are characterized by thick stands of volunteer shrubs and trees. In most instances invasive species such as jewelweed and false indigo dominate the forest/shrub strips, blocking views to the river. Such plants invasive pose a great challenge to maintaining a healthy Basin landscape. Dense colonies of these species, both native and exotic, choke out other species, destroying the layered structure of

SYSTEMS *of the Charles River Basin*

healthy woodlands. A healthy woodland has up to eight horizontal layers from the ground plane to the tree tops. Such mixed stands provide numerous niches for wildlife and are more flexible and resistant to disease. Some of the Basin's woodlands have only two or three layers.

Narrow forest/shrub strips along the river are mown once or twice a year by the MDC maintenance crews to open up views to the water but grow back vigorously each time. There has been much debate on the habitat value of these strips. Research indicates that as these strips narrow



to less than twenty-five feet in width there is an exponential loss of their habitat value due to the quantity and quality of available wildlife shelter. Much depends on other nearby habitats that can support the strip and the stratification of plant materials within the strip. A prickly, dense shrub layer under trees with light shade provides better cover than densely shaded woodland with no ground cover. Many of the forest/shrub strips in the Reservation are less than 25 feet in width and have minimal wildlife value. The presence of pedestrians and dogs on nearby paths reduces further the habitat value of the forest/shrub strips.

Some species of birds flourish even under these adverse conditions. In recent years night herons, blue herons, and cormorants have

returned to the Lower Basin. They can be seen in the trees along the river.

Where there are limited urban forest stands, especially those twenty-five feet or wider with a layered structure, better cover for wildlife is provided. Most of these screened woodland areas, however, are

crossed by paths and heavily disturbed. Pioneer tree species, such as river birch (*betula nigra*), indicative of disturbance, often dominate the stands.

Parkways lining the Charles River Basin separate it from contiguous open spaces. The largest, contiguous open space is within the Middle Basin, between the Harvard University athletic fields on the south and Mt. Auburn and Cambridge cemeteries on the north. Together, these areas form a critical oasis for migrating birds.

The only two surviving wetlands along the Charles are located in the Middle Basin, along Greenough Boulevard. Hell's Half Acre, at the Cambridge end of the Eliot Bridge, is the largest wetland in the Basin. A much smaller wetland lies close to the Arsenal Street Bridge. Despite heavy disturbance, low plant diversity, and the presence of invasive plants such as phragmites, these wetlands provide some of the highest-quality wildlife habitat in the Charles River Basin. (See "Project Areas," page 141) This is due to the layering of ecotones: woodlands, edges, and open marsh. The portions of the marshes dominated by phragmites have less diversity of plant material than those sections where cattails prevail.

PREHISTORIC RESOURCES

Sixteen locations within the Charles River Basin have been identified as sites of prehistoric activity and occupation.

ity and occupation.

All but three—the Lechmere Point Shell Midden and Simon's Hill in Cambridge and the Joshua Stone Farm in Watertown—have the potential to

yield evidence of use and habitation. Five—Magazine Beach, Anderson Bridge, and Steven's Garden in Cambridge and Sawins Pond and the Perkins School for the Blind site in Watertown—have been partially destroyed; surviving evidence may be found at these locations. Archaeological evidence and artifacts have been found along the Basin in Watertown at Union Market Station and the Watertown Arsenal sites. Part of the Watertown Arsenal site complex and Lemon Brook in Newton are disturbed sites that may yield important findings.

Among these sites, those that form the Watertown Arsenal cluster have demonstrated particular significance. They show evidence of continuous occupation through every stage of prehistory as well as largely intact fragments that may reveal detailed insight into the physical structure of Native American camps and the activities of their occupants.

Most of the sixteen prehistoric sites that have been identified in the Basin could yield significant archaeological data. Some show evidence of continuous prehistoric occupation.



BLACK-CROWNED NIGHT HERONS ON THE BOSTON SIDE OF THE LOWER BASIN.

HISTORIC RESOURCES

The Charles River Basin is historically significant in several respects. It was the first expression in this country of the European model of a water park. Modeled on Hamburg’s Alster Basin, it transformed an estuary into a recreational area in the middle of an urban center. The Basin also represents a series of social and design principles that were central to American urban development.

The Basin contains a set of structures and landscape designs that show the civic achievement of several of Boston’s best-known and respected

Four historic districts abutting the Basin are listed and protected by the state historic preservation officer.

Cambridge, designed by Olmsted & Olmsted and built from the granite used in the 1818 powder magazine on the site; the Boston University Bridge; the Western Avenue, Arsenal Street, and River Street bridges, whose plans emerged from design competitions; the headquarters of the Upper Basin section, designed by Stickney and Austin; Peabody and Stearns’s historic Charles River Dam viaduct; and the Weld and Newell boathouses.

Later structures also have architectural merit. The Herter Center, designed by Saltonstall Morton Architects, is a modernist design demonstrating the early use of an external structural skeleton. It is associated with Christian Herter—a former governor and U.S. secretary of state, and a key figure in the environmental movement—and has maintained its design integrity since its completion in 1960.

The significance of many of these historic resources has been recognized at the federal, state, and local levels. There are also four districts abutting the Basin whose resources are listed and protected by the state historic preservation officer (SHPO) along with local historic

preservation officers, who must review all future projects in these area for compliance with federal and state law. The SHPO advises the Metropolitan District Commission on all issues of historic preservation.



- **Charles River Basin Historic District** (Segments 1-7): A portion of the Charles River Basin, from the Boston Elevated Railway Viaduct at the historic Charles River Dam upstream to the Eliot Bridge, was listed in the National Register of Historic Places in 1978. The district includes the river, riverbanks, parkways, and the structures and landscapes therein. The nomination, prepared and submitted by the Cambridge

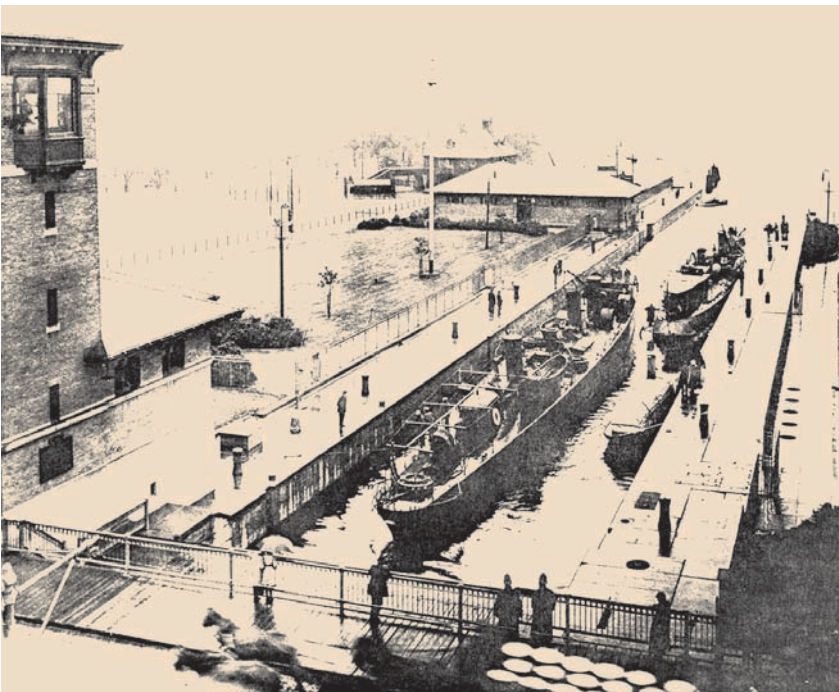
HAMBURG’S ALSTER BASIN, SHOWN HERE IN AN EARLY TWENTIETH-CENTURY PHOTO, SERVED AS A MODEL FOR THE TRANSFORMATION OF THE CHARLES.

CHARLES RIVER DAM LOCK, COMPLETED IN 1910.



THE BASIN IS A SHOWCASE FOR THE WORK OF SOME OF BOSTON’S BEST-KNOWN ARCHITECTS. THIS 1934 PHOTO SHOWS ONE OF THE ESPLANADE BOAT LANDINGS THAT ARTHUR SHURCLIFF DESIGNED DURING THE GREAT DEPRESSION.

designers and are fluent expressions of important architectural styles. Charles Eliot had argued that only “the most attractive structures” should be built along the Basin. Among these are Arthur Shurcliff’s boat landings along the Esplanade, dating from the 1930s; the storage building at Magazine Beach in



Historical Commission, embraces thirty properties of significance. Yet the Basin is far richer and more complex than thirty individual sites; many other elements contribute to its historical and design significance. Inclusion on the National Register automatically earns listing on the State Register of Historic Places.

- **Charles River Basin National Historic Civil Engineering**

Landmark (Segments 1–11): The Boston Society of Civil Engineers nominated the historic Charles River Dam and Basin as a National Historic Civil Engineering Landmark and it was designated in 1981. Considered a civil engineering marvel in its time, the Basin was designed to exclude harbor tides and create a freshwater lake that would maintain groundwater levels and control flooding. The locks are intact, although no longer in use.

- **Historic Beacon Hill District** (Segment 2S): Established by the legislature in 1955, this is the oldest historic district in the commonwealth. It is administered by the Beacon Hill Architectural Commission, and it abuts the Esplanade between Cambridge Street and the Arthur Fiedler Footbridge.



- **Back Bay Architectural District** (Segment 2S): This local historic district was designated in 1966, based on a report prepared by the Boston Landmarks Commission. The Back Bay Architectural Commission administers

the district regulations. The northern boundary is Back Street/ Embankment Road. The Back Street seawall, which forms one edge of Storrow Drive, appears to be included within the district.

- **Back Bay National Register Historic District** (Segment 2S): Nominated by the Boston Landmarks Commission, the district was listed in the National Register of Historic Places in 1973. Its northern boundary includes the Boston riverbank from the Arthur Fiedler Footbridge to Charlesgate East.

- **Bay State Road/ Back Bay West Architectural Conservation District** (Segment 3S): This local design-review district was designated in 1979.

THE BOAT BASIN AT THE ESPLANADE, HOME TO COMMUNITY BOATING, WITH THE JOHN HANCOCK TOWERS IN THE DISTANCE.

- **Old Cambridge Historic District** (Segment 7N): This local historic district runs to the middle of the river, bounded by the lines of Hawthorn and Willard streets. This configuration was established in 1963 to protect Longfellow Park and the view from the Longfellow House.

A SCENIC AND RECREATIONAL RESOURCE

Boaters, swimmers, and pedestrians have long recognized the value of the Charles River Basin as a place for open-space respite within an urban setting. Basin planners recognized that people naturally gravitate toward water and its scenic, calming effect. In a few short years at the end of the nineteenth century Charles Eliot laid the planning framework for the Basin as a river landscape shaped for the pleasure of passive or active recreation. Eliot articulated a regional planning vision that influenced the 1894 Report of the Joint Board Upon the Improvement of





Charles River, which laid the foundation for the establishment of the Basin. Arthur Shurcliff later put forward a design vision that implemented this framework.

Today the Basin functions much as originally planned—a testament to Eliot’s vision. The interaction among users, the landscape, and the river continues to be informal, the sort of interchange that Olmsted and Eliot advocated and that urban residents value. The broad ideas that inspired the Basin’s creation have guided the recommendations in this Master Plan.

The Charles River Basin has retained its scenic integrity despite massive industrial, urban, commercial, and transportation changes over the past century. The panoramas in the Lower Basin define the image of Boston and Cambridge. Sweeping views of the skyline from the

seawalls are captivating. The Longfellow Bridge is a powerful presence in the Lower Basin, as are the slope of Beacon Hill and the gold dome of the State House.

The more pastoral and institutional landscapes of the Middle Basin have changed little over the years. Here the courtyards and brick buildings of Harvard University face out to the river. The sweeping curves of the river are bordered by broad green lawns—a perfect place to watch rowers navigate the river with their narrow shells.

The Upper Basin, set between the hills of Newton and Watertown, is wrapped in dense vegetation blocking views from the paths and parkways. This green corridor can be best appreciated from a boat.

For years, before the trees matured, the skyline of downtown Boston was visible from Charles River Road. Today the views across the river of distant downtown skyscrapers come and go as drivers head toward Boston.

The precise number of yearly visits to the Basin is difficult to quantify. The Basin is both a regional resource, attracting audiences for concerts at the Hatch Shell or races on the river, and a local resource for its contiguous neighborhoods.

Half a million people attend the Boston Pops concert and fireworks display held at the Hatch Shell every Independence Day. The Hatch Shell also hosts more than seventy free public concerts and movies, and special events—walkathons, races, and festivals such as Earth Day—draw hundreds of thousands of additional spectators each year.

The eighteen-mile loop of the Paul Dudley White pathway, unique in the metropolitan park system, makes the Basin especially suitable for road races, walkathons, biking, inline skating, and running.

Particular park sections within the Reservation, such as Magazine Beach and Herter Park, provide intensely used open space for the bordering urban neighborhoods.

The banks of the Charles support a wide range of activities, from gardening to sunbathing, people-watching to dog-walking, playing volleyball to playing drums. The Basin is a common ground where people of widely different backgrounds meet.



The Master Plan's recommendations attempt to balance the Basin's roles as regional attraction, neighborhood resource, and host to intense active and passive recreational use.

The Charles River Basin is one of the most heavily used bodies of water in the country. For private boaters and tour boats, it is an important resource. Indeed, the Lower Basin—consciously designed for boating—is the birthplace of public sailing in this country. The river is unique in New England rowing circles, having both a world-class distance course and straight sprint courses. The narrow width and serpentine course of the Upper Basin is a wonderful challenge for rowers, while the wide-open Lower Basin easily accommodates large sailing regattas.

Intense boating activity make the Lower Basin one of the nation's great water parks. The Charles River welcomes crew teams and rowers from around the world. The Head of the Charles Regatta, one of the largest rowing events in the world, has helped to make the Charles an international center for the sport.

More than 6,000 rowers participate in the fall regatta, attracting crowds of over 300,000. The largest canoe race in the country, the Run of the Charles, occurs each spring; more than 1,200 paddlers participate. October 2000 was the 36th Head of the Charles. April 2000 was the 18th Run of the Charles.



The Basin has a long tradition of public boating programs. Community Rowing is one of the largest public rowing programs in the U.S. Community Boating, the country's oldest and largest public sailing program, each year teaches hundreds of children under the age of sixteen how to sail and charges them only \$1 for an entire summer.