

A landscape park requires, more than most works of men, continuity of management. Its perfection is a slow process. Its directors must thoroughly apprehend the fact that the beauty of its landscape is all that justifies the existence of a large public space in the midst, or even on the immediate borders, of a town. As trustees of park scenery, they will be especially watchful to prevent injury thereto from the intrusion of incongruous or obtrusive structures, statues, gardens (whether floral, botanic, or zoologic), speedways, or any other instruments of special modes of recreation, however desirable such may be in their proper place.

CHARLES WILLIAM ELIOT, *CHARLES ELIOT, LANDSCAPE ARCHITECT*, 1902

For the Charles River Basin to continue as Boston's Central Park, substantial investments of time, funds, and staff will be required over the next fifteen years. When the master plan for New York's Central Park was completed in 1987, a partnership between the city and the Central Park Conservancy spent millions of dollars over ten years to restore this neglected resource. Crews trained in park restoration were added to existing maintenance crews, dramatically improving care. The Charles River Basin deserves no less.

Careful weaving of public and private investment can accomplish the ambitious renewal strategies of this Master Plan. They will also require changes in the way that the MDC manages and maintains the Basin.

ONE KEY TO THE RESTORATION OF NEW YORK'S CENTRAL PARK WAS THE ADDITION OF MAINTENANCE CREWS SPECIFICALLY TRAINED IN PARK-RESTORATION TECHNIQUES.



MAINTAINING THE CHARLES RIVER BASIN

Nine full-time crew members are assigned to the Lower Basin. They are also responsible for MDC land from Leverett Circle north to Wellington Circle in Medford, the north bank of the Basin from the new Charles River Dam to the Eliot Bridge, and the south bank of the Basin to the

Boston University Bridge. Six crew members work in the Upper Basin and are also responsible for Watertown Square, the Charles River Reservation in Newton, and Fresh Pond. A five-member weekend crew of five supplements the weekday crew during peak months.

Standard maintenance includes cutting grass, picking up litter three times a week in the summer (daily when necessary), repairing potholes, sweeping parkways, and emptying trash barrels. A separate crew prunes and removes dead and hazardous trees. The MDC Engineering and Construction Division contracts out work for larger park projects, such as bridges and parkland restoration.

EXISTING CONDITIONS AND ISSUES

A detailed study of maintenance operations, budgets, and staffing was beyond the scope of this Master Plan, but field observation and discussions with maintenance staff have pinpointed numerous management opportunities within the Charles River Basin.



MAINTAINING THE SHORE LINE IS ONE OF THE MOST CHALLENGING MAINTENANCE TASKS IN THE BASIN. (MDC photo)

MANAGEMENT *and Implementation*

- **Communication:** Communication among the several MDC departments whose work affects the Charles River Basin lacks a formal structure. Central Services, Engineering and Construction, Finance, Flood Control, Planning, Recreation (including Special Events scheduling), and Reservations and Historic Sites have an informal, unstructured communication system. Staff input into key planning, design and budget decisions thus is less effective than it should be.
- **Funding:** Funding for staffing and maintenance is insufficient. According to *Enhancing the Future of the Metropolitan Park System* (the "Green Ribbon Commission" report, May 1996), the MDC's park system budget had been reduced by more than thirty percent and its park

staff by more than forty percent since 1986. Often additional operating funds are not provided to protect new capital investments.

- **Systematic Maintenance:** There is no written maintenance plan or schedule for the full range of the Basin's needs. The limited crew does an admirable job of grass maintenance, and they have an excellent plan for winter snow removal. However, there is no overall plan for vegetation maintenance, most critically for the trees.
- **Staffing:** No crew is dedicated solely to maintaining the Basin. Over the years funding limitations and policy changes have forced a shift from dedicated crews for individual reservations to roving crews assigned to larger districts. The crews assigned to the Upper and Lower Basins each are responsible for several other major MDC parks.

MANAGEMENT RECOMMENDATIONS

In 1985 the management consulting firm Touche Ross & Co. prepared a detailed park maintenance review for the MDC. The Charles River maintenance district was used as the model. Many of the recommendations contained in the report have not been implemented, yet they remain critically important. They were used as a reference for this Master Plan and to assess the effectiveness of current practice. Many of the Master Plan's recommen-

dations appeared in the 1985 report and should be addressed to improve standard maintenance and implement the Master Plan.

- *Improve communication and coordination among MDC departments whose work affects the Basin.* Formalize the process of receiving information and recommendations from maintenance supervisory staff and improve communication among planning, design, and maintenance staffs. Maintenance needs and issues should be considered in design decisions, and design intent should be supported by maintenance practices.
- *Appoint a Basin manager and develop a dedicated Basin crew that understands both the landscape issues and the communities that use the Basin.* Increase staff size by at least 20 percent over 1988 levels to meet the needs of landscape maintenance. Institute zone management by replacing roving crews with dedicated crews. Appoint a Basin manager or superintendent to head this dedicated crew, to be accessible and accountable to Basin users, and to organize the efforts of staff, volunteers, and other Basin maintenance groups.

- *Hire a coordinator to continue to recruit volunteers to supplement the maintenance staff.*
- *Develop a training program for maintenance personnel focusing on maintaining the full range of site vegetation.* Teach personnel the latest maintenance methods. Maintenance has become a complex and technical field. New understandings of plant growth, condition, and care are continually becoming available.



MDC RANGERS ON BIKE PATROL

- *Develop a training program for supervisory staff.* Provide updated information on work planning and scheduling, regulatory requirements, environmental policy, and new technologies relevant to site landscape management.
- *Continue to contract out tree pruning work, expand the tree crews, and shorten the current seven-year cycle for targeted areas to a four-year cycle for pruning throughout the Basin.*

- *Continue to contract with a Massachusetts-certified arborist to evaluate the condition and maintenance needs of selected trees, such as the London planetrees on Memorial Drive.*

- *Continue the cost-effective practice of supplementing year-round crew with seasonal labor.*
- *If the use of inmates is determined to be successful and cost-effective, separate the labor of inmate crews from that of staff crews.* It is critical that the maintenance staff regard its work as a legitimate and valuable professional occupation.
- *Build a state-of-the-art maintenance facility with direct access to the Lower Basin.* The Western Avenue maintenance facility should be retained and restored as a satellite facility for the Upper Basin. Splitting maintenance staffs between facilities is far from ideal, but travel times on crowded parkways dictate this compromise.

- *Increase the watering of high-use turf areas and new plantings with the use of a portable pump system that uses river water.* Irrigation systems are not recommended because of the cost and effort of maintaining them and associated problems. Instead, a floating pump system should be set on the water, anchored at the shore, and equipped with a hose. Use MDC water trucks and investigate, in concert with the communities that abut the Basin, the potential for using area hydrants. The limited number of hydrants along the parkways should be increased to serve areas of high use.
- *Conduct an engineering and feasibility study for the rebuilding of parkway drainage systems.* Drainage along some parkways is poor. This not only affects drivers, it affects the river, park

landscape, pathways, and users. Addressing the drainage problem will insure the improvements in water quality, user experience, and park land will endure.

- *Develop a maintenance work plan and schedule that addresses all maintenance needs.* Such a plan will increase accountability and productivity and will support the implementation of Master Plan recommendations.



CHARLES RIVER
MAINTENANCE CREW

IMPLEMENTING *the master plan*

The vision for a renewed Charles River Basin cannot become a reality without substantially greater financial support from the commonwealth, private partners, and Basin users. The MDC cannot do this work alone.

While the commonwealth has experienced budget surpluses of hundreds of millions of dollars in recent years, very little of this money has found its way to the Charles River Basin. In the last twenty years two major improvements have been undertaken: the Community Boating building and the restoration of the Hatch Shell. These were high-profile projects. Securing funding for less glamorous but critical renewal projects has been very difficult.

The substantial and sustained public participation in this Master Planning process signals a growing interest in the future of the Charles River Basin. Hundreds of people outside the planning team shaped this Master Plan. To broaden this base of support current advocates need to communicate their vision for a renewed Basin to the general public and individual legislators. Advocates will attract the broadest support if they can focus consistently on the Basin as a unified whole, accessible to all. Various groups have staked a claim to various parts of the Basin, particularly to its parks, but groups must embrace the Basin in its entirety, as well. Thousands of people use the Basin every day, but few “own” and defend it. The Basin’s advocates must play that role.

The Charles River Watershed Association (CRWA) has been the strongest, most visible advocate for the river and its watershed. In the recent past the Association has focused its efforts primarily on water quality.



THE CHARLES RIVER BASIN SUPPORTS BOTH SOLITARY ENJOYMENT AND CIVIC EXPRESSION AT LARGE EVENTS.

The variety of Basin users is an asset. Few other parks enjoy such a diverse group of users on land and on water. These users should make a concerted effort to join in the Basin's renewal as a common cause. The extent to which users respect each other's claims, resolve conflicts of use, and share a vision will, in large part, determine the success of this effort.

More people enjoy the beauty of the river from their cars than from any other vantage point. The support of these users is critical to the success of a renewal cam-

paign. The parkways are an essential element of the reservation. The effort to reclaim these parkways for the Basin through landscaping, bicycle lanes, and traffic calming is essential. If well-executed, this effort can improve the driver's experience, keep the efficiency of the road system, enhance the overall park experience, and engage a very broad spectrum of the public in caring for the Basin.

CREATING A BASIN COUNCIL

Creating a friends group or "Basin Council" would be an appropriate step toward implementing the Master Plan. Such an advocacy group, or alliance of groups, is needed to work with elected officials, MDC staff, and private partners, including businesses and institutions along the Basin.

The Basin has benefited from private giving since its creation. A council could build on this history of contributions, and by its very existence it would emphasize the need to continue the tradition. The Esplanade resulted from the million-dollar Storrow bequest. The Hatch Shell, the Weeks Bridge, and the Anderson Bridge were all built with private bequests. David Mugar has underwritten the annual Fourth of July celebration since 1974. This is an extraordinary tradition of philanthropy.

The MDC and community leaders need to plan carefully just how a Basin Council would be structured and operated. Models for public-private partnerships are as varied as the parks they support. They range from volunteer friends groups to appointed park councils with advisory powers to full-fledged park conservancies with their own budgets and staff. New York City's Central Park Conservancy, one of the oldest and most successful in the country, has an extensive management and maintenance staff to supplement that of the city parks department

and has raised tens of millions of dollars for the restoration of Central Park. The Central Park Conservancy was preceded by the more modest Central Park Community Fund, which provided money for maintenance, and the Central Park Task Force, which sponsored youth employment and school volunteer programs.

The Boston area offers several successful models of private organizations formed to reclaim specific open spaces, the Friends of the Public Garden and Common and the recently formed Emerald Necklace Conservancy among them. Both groups, and the open spaces for which they advocate, have ties to the Charles River Basin.

A Basin Council should include representatives from the various neighborhood associations, the business community, and the institutions along the Basin and should have an MDC liaison. The ability to attract a high-profile chairman and board combining personal prestige with a deep commitment to renewal of the Basin is crucial. Individuals with ties to state government, to the corporate and philanthropic communities, and to the Basin's educational institutions would be strong candidates. The vision and the ability to form bridges between broad, grassroots involvement and the boardroom and the State House will be critical to success; Isabella Halsted inspired such cooperation when she helped create Riverbend Park in 1975.

A Basin Council would have several vital functions:

- lobbying the State House for increased support for the Basin
- assisting MDC rangers in monitoring Basin use and reporting conflicts
- conducting surveys and soliciting public input on future initiatives
- working with MDC rangers on an effective public education and information program
- sponsoring specialized maintenance projects and coordinating volunteer projects with the MDC to supplement maintenance efforts
- fundraising

Depending on the council's growth and development it could assist the MDC by:

- creating a Basin trust fund and mounting private fund-raising efforts for renewal projects
- contributing to the annual process of setting master plan priorities based on available public and private funding
- preparing an annual progress report on the Basin and sponsoring an annual event to acknowledge outstanding efforts

A Basin Council would be in a position to assure that the goals of the Charles River Basin Master Plan are being addressed. It would hold state government accountable to the Master Plan and would itself be held accountable by Basin constituents for the level of funding and support it was able to develop.

A crucial task of a private partner would be to communicate to a broad range of stakeholders the extraordinary value of the Charles River Reservation to the region, to underscore the threats to this vital resource, and to articulate a vision for renewal. To reach diverse constituencies it should employ a variety of media ranging from newsletters to radio and television appearances. Moreover, a Basin Council could lobby, the sort of advocacy a governmental agency such as the MDC cannot undertake.

INVESTING IN THE CHARLES RIVER BASIN

An important component of a lobbying effort is aimed at securing increased public appropriations for the Basin. A substantial special appropriation each year for several years is required to address the deferred maintenance and renewal initiatives laid out in this Master Plan. A net increase in the operating budget is absolutely essential as well. As with most public parks, tax revenues support day-to-day operations of the Basin, and bond issues finance capital improvements.

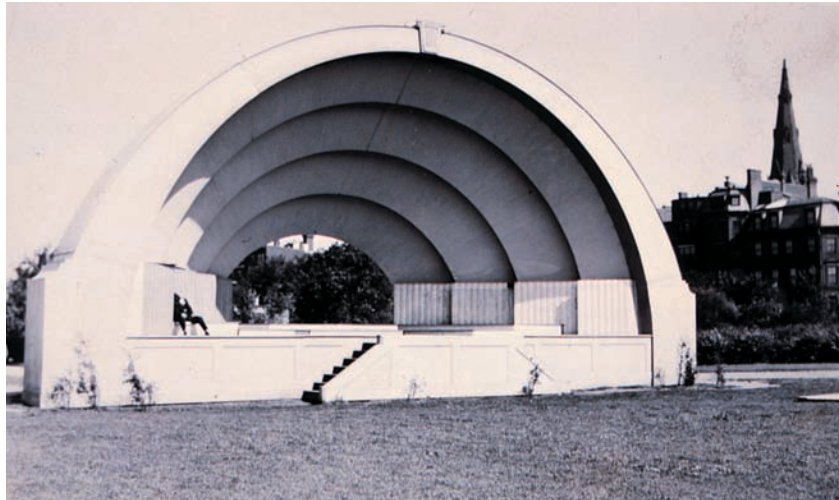
Massachusetts has bonding capacity; since the institution of a bond-spending cap in the late 1980s, however, state agencies may not spend above a certain amount each year. While this recession-induced austerity measure has helped to raise the state's bond rating, it has severely constrained park improvements. The renewal of the Charles River Basin provides a compelling

reason either to consider raising the bond cap or to exempt five to ten million dollars a year over three to six years—the estimated cost of implementing the Master Plan—and dedicate it to the renewal of the Charles River Basin.

A Basin Council could also raise funds for specific projects. The Metropolitan Park Trust Fund, an entity within the MDC, already exists to receive gifts and donations, but some donors may prefer private management of funds. A dedicated fund for the Charles River Basin, controlled in part by a Basin Council, could be expended for the planning, design, and construction of renewal projects in close coordination with the MDC.

Private gifts should be directed to projects that reinforce the overall design and purpose of the Basin. Naming opportunities should be reserved only for the most generous gifts, on the order of the Hatch Shell, and even in the event of large gifts plaques should be kept to a minimum. A donors' wall that would acknowledge private gifts throughout the Basin would be one way to acknowledge and encourage gift giving. Printing and distributing an annual report featuring gift opportunities, recommended donations, and donor acknowledgments might also stimulate donations.

Limited private funding should not be used to perform functions that are the core responsibility of the agency, such as ongoing park main-



A GIFT FUNDED THE CREATION OF THE EDWARD HATCH MEMORIAL SHELL TO REPLACE THIS TEMPORARY 1934 SHELL.

tenance or the repair of essential infrastructure, including roads, bridges, and paths. Given the Basin's size and complex infrastructure, the commonwealth must continue to cover the majority of operating and capital expenses.

State bond funds and private gifts are normally directed to capital projects, but a percentage of all donations should be set aside for an endowment whose income would be dedicated to maintenance.

Given the intensity of use to which the Basin is subjected, the MDC should seek to direct user and lease fees to a maintenance endowment. For example, many of the boat clubs provide a substantial level of public service in the Basin. Still, there is a general public feeling that they should contribute more for the privilege of having their facilities in a public reservation. The proceeds from leases and other uses of the river are considerably below market rate. The MDC should set and charge fair market rates, which would involve appraising property values

(improvements and water rights) and assessing depreciation, income, and expenses for each of four yacht clubs and fifteen boathouses, as well as for moorings, miscellaneous structures, utility easements, and other uses. Applying fair-market rates to subject facilities would increase the revenue stream from rents in the Basin to tens of thousands of dollars a year. If these funds were directed to supplement a maintenance endowment, the higher level of maintenance would benefit leaseholders as well as the general public. Special legislation would be required to direct all lease fees to a special maintenance fund.

ESTABLISHING VOLUNTEER PROGRAMS

Volunteer labor supplements the capacity of the maintenance staff along the Basin but is currently organized on an *ad hoc* basis. Community groups in Watertown, Longfellow Park, and Magazine Beach organize spring cleanup days every year for their stretches of the river. One volunteer coordinates the planting of thousands of bulbs that bloom along the banks of the river every spring. The MDC supports these

efforts by supplying materials, tools, and skilled labor, but staff reductions have limited this crucial assistance.

An Office of Volunteer Coordination should be established at the MDC. Volunteers should be given a menu of choices, quality tools, adequate direction, and a chance to have some fun. An exemplary model has been developed along the MDC's Southwest Corridor Park. One source of volunteer labor is the thousands of students attending the three universities along the Basin. Friendly rivalries between colleges could go a long way toward clearing the banks of trash and weeds.

Trash along pathways or washed up on shore is an unsightly part of most urban rivers. Adopt-a-path or adopt-a-mile (of parkway) programs have proliferated across the country to



AN OFFICE OF VOLUNTEER COORDINATION WOULD HELP THE MDC HARNESS THE POTENTIAL OF VOLUNTEER WORKERS TO SUPPLEMENT THE WORK OF THE PROFESSIONAL MAINTENANCE STAFF.

address this problem. To establish such a program in the Charles River Basin would be an ambitious but worthwhile undertaking. Bridges divide the approximately seventeen miles of riverbank into twenty-two sections, some thousands of feet long, some a few hundred feet long. Neighborhood associations, school groups, recreational organizations, and boat clubs could be recruited to adopt a bank. Land-based groups would have to coordinate with boating partners to clear obstacles from the river and gain access to steep banks. An integrated schedule of MDC trash pickup would support this program.

To recruit adopt-a-bank volunteers and get the program started, a river sweep should be organized each spring to pick the banks clean of

trash, with a goal of 100 percent removal of trash from the riverbanks, channel, and pathways of the Charles River.

Institutions along the river have expressed interest in sharing maintenance responsibilities for areas fronting their facilities. Genzyme Corporation cares for an open space next to its property. Harvard University maintains John F. Kennedy Park through a formal agreement with the MDC, developed in advance of its construction. Harvard has one of the best turf

management programs in the region, as the green lawns and fields on either side of the river attest. Yet the area of riverbank in front of the Harvard houses is perpetually worn to bare

It would be in the best interest of businesses and institutions along the river to take a hand in restoring and maintaining their "front yards," freeing up MDC resources for stretches of the river that lack obvious sponsors.

earth. MIT has cultivated a magnificent urban forest on its campus, the health of which is threatened by diseased trees along Memorial Drive. In many cases it would be in the best interest of

these institutions and businesses to take a hand in the restoration and maintenance of their "front yards." This would free up MDC resources for other stretches of the river that lack an obvious sponsor.

Master plan PRIORITIES & COSTS

The character of the Basin and the extensive public input into the master planning process has led to a list of potential projects ranging from essential, near-term projects to longer-term projects and ranked according to these criteria:

- Does the project protect public health and safety?
- Is it an important resource that might be lost if work is postponed?
- Is the project suitable to the character of the Basin in terms of historic significance, scenic beauty, or environmental quality?
- Does it benefit contiguous areas and the entire system?

- Will the project benefit many local and regional users?
- Are the benefits distributed fairly up and down the Basin?
- Is the project cost-effective? Are funds available?
- Is there potential for private support?
- Does the public understand and support the project?
- Can it be carried out in a timely fashion?
- Is it sustainable in the long term with current management and maintenance capacity? If not, what provisions are being made to bolster this capacity?

Projects are classified according to the structure of the Master Plan. Basinwide initiatives are listed first and prioritized to help guide the efforts of the Metropolitan District Commission. Some of these initiatives can be implemented immediately with existing staff and budgets. Specific Basin renewal projects are listed next, rank-ordered, and budgeted with the intent of targeting \$3 million to \$6 million a year for Basin renewal over the next fifteen years. This reflects an overall cost estimate of \$51 million for basic Basin renewal.

BASINWIDE PROJECTS

Preservation and restoration priorities

- Respect original design intent in all restoration projects.
- Inspect and stabilize all dams, seawalls, and railings.
- Stabilize and restore historic overlooks, steps, and landings, including the Commissioners Landing steps and walls, the Esplanade overlooks, and Water-town steps.



JOGGERS HAVE WORN PATHS ALONGSIDE THIS HISTORIC SHADE STRUCTURE ON THE CAMBRIDGE ESPLANADE. RESTORING AMENITIES AND REVITALIZING PARKS ARE KEY ELEMENTS OF THE MASTER PLAN RECOMMENDATIONS.

- Stabilize and restore historic buildings—the MDC Upper Basin maintenance facility at Western Avenue (the former Charles River Speedway headquarters complex); the Magazine Beach administration building; and the MDC boat house, stables and lock gate houses at the historic Charles River Dam (these structures are currently under study).

- Stabilize and restore the bridges spanning the Charles River.
- Stabilize and restore historic shade structures in the Lower Basin and historic lighting, especially at bridges.

Access and circulation priorities

- Widen and improve the condition of existing pathways.
- Improve curb cuts and transitions at intersections.
- Add pedestrian phases to existing traffic signals.
- Install parallel pedestrian path system at select locations.
- Install trail etiquette and orientation signage at key entrance points.
- Replace bike trail signs with multiuse trail signs.
- Stripe all paved multiuse paths and bicycle lanes including the Dr. Paul Dudley White Bike Path and those on the Longfellow and Harvard bridges to improve circulation.
- Repaint crosswalks to improve their visibility, and install pedestrian/bicycle yield signs where necessary.
- Add pedestrian crosswalks and signals or yield signs at key points.

Leading the list of master-plan priorities are basinwide projects, primarily stabilization and restoration of bridges, buildings and historic structures in need of repair throughout the Basin.

- Limit parking along the river to two to four hours, post the new limits prominently, and encourage MDC ranger and State Police enforcement.
- Begin Sunday parkway closures along Greenough Boulevard and Charles River Road.

- Remove one traffic lane from the inbound side of Memorial Drive at MIT.
- Restripe Charles River Road, North Beacon Street, and Greenough Boulevard from four lanes to two and provide generous bicycle and skate paths on either side.

Parkland use priorities

- Establish clear policies for special events at the Hatch Shell and elsewhere in the Basin.
- Add amenity clusters (bathrooms, emergency phones, water fountains) at select intervals along the river.
- Reopen existing bathrooms and/or add chemical units at key points such as Herter Park and Magazine Beach.
- Repair and maintain existing water fountains.
- Repair or replace all 500 benches with MDC standard benches where concrete footings

remain and add about ten benches on the south bank between the Western Avenue and Anderson Bridges.

- Add a limited number of picnic tables to Herter Park, Magazine Beach, Squibnocket Park, Daly Field, and the Watertown front.
- Continue the program to remove all broken and/or obsolete site furnishings, including benches, play equipment, and exercise equipment and replace where appropriate.
- Remove the pavement, and loam and seed the basketball court in Watertown and the dead-end paths at Herter Park.
- Reshape sports fields for flexible, multiple uses.
- Set up a hotline for reporting problems on land or water.

Water use priorities

- Assign an MDC staff member to work with the Boating Conference to review and improve the rules of the road for the Basin channel.
- Remove dead trees from water and banks and skim the Lower Basin regularly for floating trash.
- Rebuild existing floats at the Esplanade.



A LONDON PLANETREE SAPLING—PLANTED IN 1998—COMMEMORATED THE FIRST PLANTING OF LONDON PLANETREES ON MEMORIAL DRIVE.

- Provide additional public landings.

Landscape priorities

- Initiate cooperative maintenance agreements with abutting businesses, institutions, and cities.
- Implement recommendations for turf maintenance.
- Remove all dead trees and prune back dead limbs along parkways, especially the London planetrees at Memorial Drive and the trees at the Cambridge Esplanade.

- Install signage at Daly Ramp to explain the “rules of the road” and to promote use of alternative ramps; provide locations of additional ramps closer to the harbor.
- Replace bulbs and repair bridge lights.
- Increase MDC ranger presence and install a harbormaster based at the historic boathouse.

- Establish two or three vistas in the Upper Basin with alternative shore designs and maintenance techniques as a test case.
- Lay out experimental wildflower meadows in segment 7S of the Middle Basin or segment 10N of the Upper Basin. Test different seed mixes and maintenance regimes.



THE MASTER PLAN CALLS FOR A TOTAL REVITALIZATION OF THE BASIN WITH AN INVESTMENT OF \$98.4 MILLION OVER A FIFTEEN-YEAR PERIOD. THIS FIGURE DOES NOT INCLUDE SUBSTANTIAL ADDITIONAL MILLIONS THAT WILL BE NEEDED FOR RESTORING THE BASIN'S BRIDGES, INCLUDING THE WESTERN AVENUE BRIDGE, SHOWN ABOVE.

COST SUMMARIES

BALANCING CAPITAL BUDGETS WITH OPERATIONS-AND- MAINTENANCE BUDGETS

For any park agency, the cost of doing business can be divided into spending for annual maintenance and spending for capital improvements (new or improved park elements). The former budget covers operations, maintenance, and cyclical operating costs. According to the director of the MDC's Southwest Corridor Park, annual maintenance costs for a new park can equal as much as 10 percent of capital costs. Yet, park maintenance budgets often fall far below this benchmark, resulting in higher capital outlays for restoring or replacing neglected park features.

Politically, obtaining capital funds has always been easier than securing a healthy level of funding for operations and maintenance. Ribbon cuttings are much more exciting for press and celebration than keeping trees mulched or underbrush cut. Ironically, these less glamorous maintenance tasks directly benefit park users and cut long-run costs to taxpayers.

Because of the difficulty of securing adequate operations-and-maintenance funding, some portions of the Charles River Reservation have been ignored for years. Their condition has deteriorated to the point that they require an injection of capital funds for restoration. This practice is not acceptable. Allocating large sums of money to reservation renewal without a pro-

PROJECT AREA		CAPITAL COST *	COMMENTS
1E	Historic Charles River Dam	\$ 2,065,000	Chan, Krieger report estimate
1N	East Cambridge Front	288,000	
1N	Broad Canal	100,000	funded by developer
1N&S	Longfellow Bridge	140,000	
1S	Charlesbank (including Lederman Field)	618,000	
2S	The Esplanade	1,960,000	
2N	Cambridge Esplanade East	834,000	MIT frontage east of Harvard Bridge
3N	Cambridge Esplanade West	786,000	MIT frontage west of Harvard Bridge
3S	Charlesgate	538,000	reflects new pathways only
3N&3S	Boston University Bridge	715,000	
4S	Allston Landing & Massachusetts Turnpike	66,000	
4N	Magazine Beach	1,500,000	
5S	Genzyme Front	185,000	
5N	Riverside Press	3,000	
6S	Harvard Business School	67,000	
6N	Harvard College Houses	71,000	
7S	Soldiers Field	21,000	
7N	Kennedy Park/Longfellow Park	365,000	
8S	Herter Park	1,862,000	
8S	Herter Park West	2,469,000	
8N	Hell's Half Acre	1,000,000	estimate from Rizzo
8N	Greenough Boulevard	1,380,000	
8N	GSA site at Arsenal	12,573,000	U.S. Army Corps of Engineers estimate and new athletic complex
9S	Soldiers Field Road/Birmingham Parkway	35,694,000	includes 20-acre park**
9N	Greenough Boulevard, Watertown	333,000	
10N	Squibnocket Park	1,250,000	U.S. Army Corps of Engineers estimate
10N	Watertown Front	1,798,000	
10S	Daly Field and the Upper Basin	1,132,000	
10S	Nonantum Road	282,000	
11N&S	Watertown Dam	223,000	
Construction costs		\$70,318,000	
Design costs & contingencies (40%)		\$28,127,000	
Estimated cost		\$98,445,000***	

* 1998 dollars

** Inclusion of the park doubles the costs for the Basin, which would otherwise total roughly \$48 million

***Does not include any bridge restoration costs

portional increase in maintenance budgets makes little sense. Because the reservation landscape is cultivated over decades—indeed, over generations—maintenance is as important as capital spending in creating a healthy and beautiful park.

Because the reservation landscape is cultivated over decades, a realistic maintenance budget is as important as capital spending in creating a healthy and beautiful park.

The table on the facing page summarizes capital expenditures for each segment of the reservation. The projects for each segment, described in the “Project Areas” chapter beginning on page 89, represent both restorations and new initiatives. These order-of-magnitude costs—expressed in 1998 dollars—are intended only for planning purposes.

The three tables on this page group the recommended projects into five-year short-, mid-, and long-term phases. The totals for the three phases add to \$98,445,000, which is the total for the section-by-section recommendations in the table on facing page.

1
Short-term Initiatives (years 1–5)

PROJECT AREA	LOCATION	COST
The Esplanade	(2S)	\$ 1,960,000
Cambridge Esplanade West	(3N)	786,000
Boston University Bridge	(3N&S)	715,000
Allston Landing & Massachusetts Turnpike	(4S)	66,000
Magazine Beach > City of Cambridge/MDC partnership	(4N)	1,500,000
Genzyme Front	(5S)	185,000
Kennedy Park/Longfellow Park	(7N)	365,000
Greenough Boulevard	(8N)	1,380,000
Soldiers Field Road/Birmingham Parkway (9S) > Estimate for short-term improvements only		694,000
Squibnocket Park	(10N)	1,250,000
> Not including hazardous waste		
Construction costs		\$ 8,901,000
Design costs & contingencies (40%)		\$ 3,560,000
TOTAL *		\$12,461,000

* All totals on this page are in 1998 dollars

2
Mid-term Initiatives (years 6–10)

PROJECT AREA	LOCATION	COST
Historic Charles River Dam pedestrian bridge > 1993 MDC plan	(1E)	\$ 2,065,000
Longfellow Bridge > not including cost of bridge renovation	(1N&S)	140,000
Charlesgate and the Fens	(3S)	538,000
Harvard Business School	(6S)	67,000
Harvard University houses	(6N)	71,000
Soldiers Field	(7S)	21,000
Herter Park	(8S)	1,862,000
Herter Park West	(8S)	2,469,000
Watertown Front	(10N)	1,798,000
Construction costs		\$ 9,031,000
Design costs & contingencies (40%)		\$ 3,612,000
TOTAL *		\$12,643,000

3
Long-term Initiatives (years 11–15)

PROJECT AREA	LOCATION	COST
East Cambridge Front	(1N)	\$ 288,000
Broad Canal	(1N)	100,000
Charlesbank (including Lederman Field)	(1S)	618,000
Cambridge Esplanade East	(2N)	834,000
Riverside Press	(5N)	3,000
Hell’s Half Acre > Full restoration, 1998 Rizzo study	(8N)	1,000,000
GSA Site at Arsenal > Not including hazardous waste	(8N)	12,573,000
Soldiers Field Road/Birmingham Parkway (9S) > Parkway relocation and new 20-acre park	(9S)	35,000,000
Greenough Boulevard, Watertown	(9N)	333,000
Daly Field and the Upper Basin	(10S)	1,132,000
Nonantum Road	(10S)	282,000
Watertown Dam	(11N&S)	223,000
Construction costs		\$52,386,000
Design costs & contingencies (40%)		\$20,954,000
TOTAL *		\$73,340,000

A NOTE ON THE COST ESTIMATES

A \$98 million investment in the Charles River Basin and a focused maintenance and management regime will fully revitalize this resource over the next five to fifteen years. In addition, substantial expenditures for bridge restoration will be needed, but are not included in these estimates.

All costs for the project areas are conceptual, based on gross estimates of area,

design, and construction in 1998 dollars. These estimates will need to be adjusted for inflation and unforeseen contingencies.



THE MIRIAM AND SIDNEY
STONEMAN PLAYGROUND
ON THE ESPLANADE
OPENED IN 2001.