III. Background and Methodology

A. Introduction to the Reservation

Located on the western boundary of the City of Cambridge, Massachusetts, and surrounding the City's 165-acre terminal reservoir, the Fresh Pond Reservation occupies approximately 162 acres of land. The original Reservation boundary, set by state statute in 1888 to protect the City's water supply, was bordered on the east by Fresh Pond Parkway, on the south by Huron Avenue, on the north by Concord Avenue, and on the west by what are now Grove Street and Blanchard Road. With the exception of the railroad line, which predated the Reservation, and the eight acres of house lots sold off in the 1950s and 60s along Grove Street and Blanchard Road, the 1888 boundaries remain in place (See Figure 1).

Fresh Pond, formed by glaciers, has provided drinking water to the City since 1852. Upcountry source reservoirs located in Weston, Lincoln, Waltham and Lexington have supplied Fresh Pond via the Huron Avenue aqueduct since the 1880s. Finished water is filtered through a water treatment plant at Fresh Pond and pumped to the Payson Park holding reservoir in Belmont prior to public distribution.

Less than one third of the Reservation retains the wild character that its landscape designers, Olmsted, Olmsted and Eliot championed between 1894 and 1909 under contract to the Cambridge Water Board. Reservation land accommodates numerous passive and active recreation activities on the Thomas P. O'Neill Jr. Municipal Golf Course, the Glacken playground, and various lawns, meadows, pathways, and trails.

The natural area bordering the Reservoir includes three smaller ponds (Black's Nook, Little Fresh Pond, and North Pond), wetlands and upland woods, numerous specimen trees, and a variety of soil types and plant and wildlife species within a complex ecosystem.

Developed space at the Reservation includes the golf course and its clubhouse and maintenance building; an elderly care facility; a School Department ecology center; the railroad tracks and bridge; several paved parking and access areas; and the new water treatment plant currently under construction (See Figure 2).

When the City determined that the existing water treatment plant at Fresh Pond was in need of replacement, a group of citizens working with City officials recognized the need and opportunity to prepare a long-term plan for the whole of the landscape surrounding the Reservoir.

B. The Fresh Pond Master Plan Advisory Committee

In July of 1997 the City Manager issued a request for Cambridge residents interested in joining a new advisory committee on long-term planning for the Reservation to submit letters to the Manager detailing their interests and qualifications.

1. Committee Members

In addition to 12 resident volunteers, the City Manager selected six City officials for the new Fresh Pond Master Plan Advisory Committee (FPMPAC, "Master Plan Committee" or "the Committee"), one representative from each department or agency directly or indirectly involved with the Reservation. Among those selected with direct responsibilities related to the Reservation were the Water Department's Watershed Manager, the Conservation Commission Executive Director and the Director of Recreation. In addition, the group included one representative each from the Community Development Department, the Housing Authority and the School Department, two of whom were also long-time Cambridge residents. An environmental education consultant from the Massachusetts Audubon Society's Habitat Wildlife Sanctuary in Belmont (Habitat) was selected to share a position with the science staff developer selected to represent the School Department programs at the Reservation. This shared position represented a partnership between Habitat and the Tobin Elementary School.

Among the key criteria for citizen representatives to the Master Plan Committee was active, long-time knowledge of the Reservation, concerns that spanned multiple uses and interest groups and/or expertise relevant to the use, design, and management of the Reservation.

Multiple interests, experiences, skills and uses of the Reservation were represented among the 12 volunteer residents appointed to the Committee. Among the Committee members were also walkers, joggers, dog owners, bicyclists, golfers, soccer and baseball supporters, bird watchers, public and private school teachers, cross-country skiers, photographers, writers, lawyers, a former elected official, and parents of small children and teenagers. The group also brought extensive knowledge of ecology and watershed issues, horticulture, landscape architecture, ornithology, soils science, City ordinances, environmental education, local sports organizations, local and natural history, teaching, forest restoration, public school issues, environmental engineering and neighborhood issues.

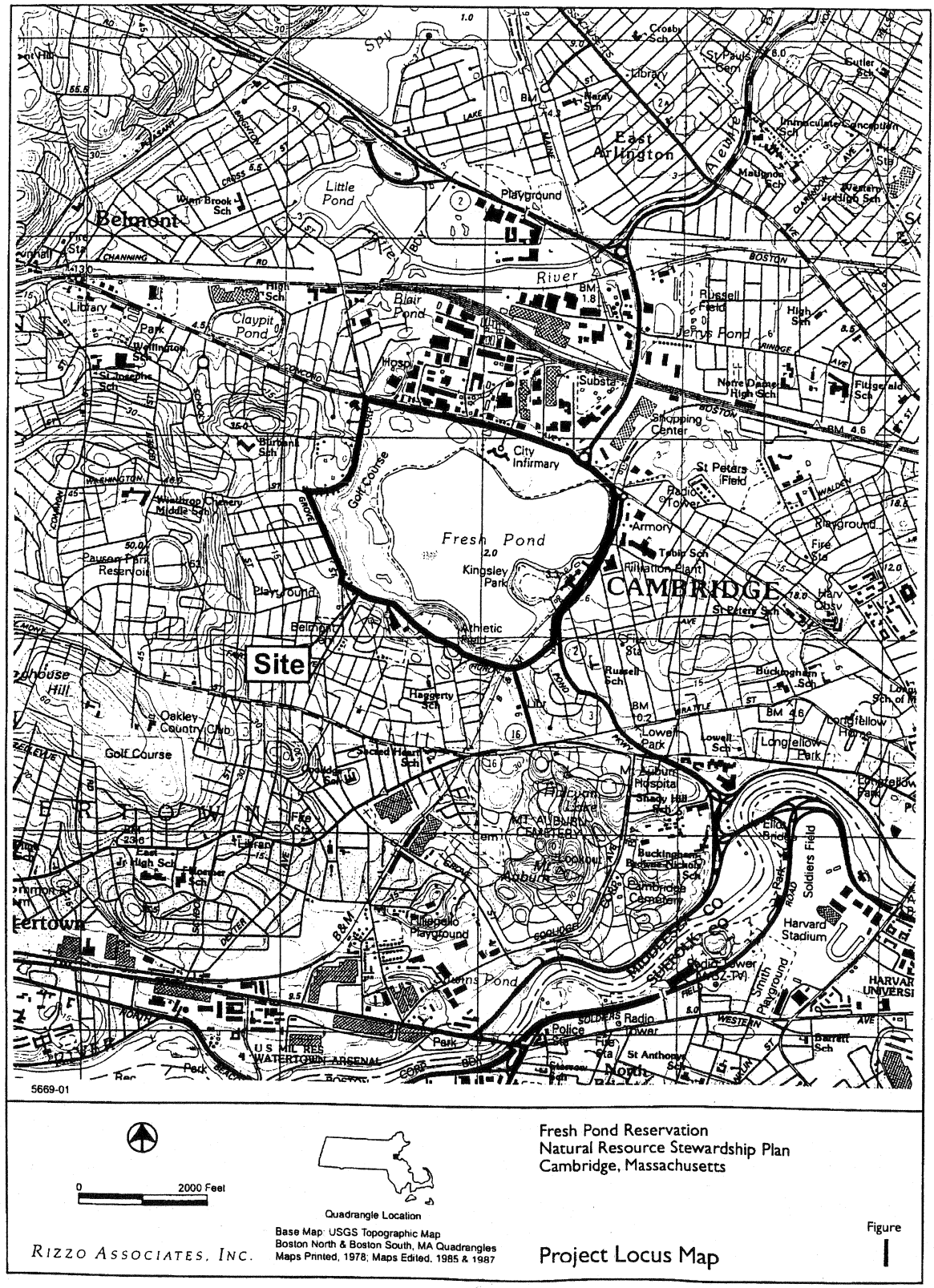

Figure 1: USGS Site Location Map

Some volunteer members were third generation Cantabrigians; others had lived in Cambridge all or much of their adult lives; a few had arrived within the last decade. Committee members ranged in age from late 20s to early 70s. Committee members hailed from the Haggerty and Tobin School areas abutting the Reservation, from North Cambridge, West Cambridge, Mid Cambridge and East Cambridge. Several of the citizen members were also active volunteer members of other committees and boards long involved with the health of the Reservation. The Water Board, the Committee on Public Planting, and the Conservation Commission were also represented by volunteer members (See Appendix 1 for annotated list of Committee members).

2. Mission of the Master Plan Advisory Committee

In his September 1997 letter to the Master Plan Advisory Committee, the City Manager "charged" the Committee to "develop a master plan" to function as "a road map for future site improvements," a plan that would "articulate the vision for the reservation, considering the constraints and opportunities imposed by" the Reservation and Fresh Pond's "urban context," its "natural environment (wetlands, soils, vegetation and wildlife)," its function as the "terminal reservoir for Cambridge water supply," and "as an educational, recreational and aesthetic resource." He further charged the Committee with developing "recommendations on long-term stewardship of the Reservation" and noted that a "horticulturist" would be retained to assist in the task of recommending and siting plantings.

C. Fresh Pond Master Planning Process and Methodology

1. The Deliberative Process and Public Participation

At the first meeting of the Fresh Pond Master Plan Advisory Committee on October 8, 1997 at the Water Treatment Plant, Deputy City Manager Richard Rossi presented an overview of the planning efforts that had been conducted relative to the new treatment plant and other proposed projects at the Reservation. The Watershed Manager distributed to each member a notebook summarizing the history of Fresh Pond and detailing prior studies, inventories, master plans and improvement projects dating from the 1970s. The group agreed to retain a meeting facilitator from the Metropolitan Area Planing Committee (MAPC) and meet on the first Wednesday of every month until a Master Plan had been developed and accepted by the Committee for submission to the City Manager.

All meetings of the Committee were public and publicized. A public comment period followed the end of business at every meeting. A process was set up to make Committee documents easily accessible to the public via the public library and the Water Department.

The Committee agreed that the deliberative process should involve several stages:

- setting of general goals and priorities for the Reservation,
- site inspections,
- the gathering and review of existing data on the Reservation's areas and uses,
- development of a vision statement for the area,
- presentations from knowledgeable parties regarding ongoing and proposed projects,
- a subcommittee structure to investigate specific issues and generate proposals to the whole committee, and
- the adoption of policies and specific subcommittee recommendations by consensus of the Master Plan Committee.

At the second meeting of the Master Plan Committee on November 5,1997, Mr. Rossi appointed Louise Weed of North Cambridge and Albe Simenas of East Cambridge to be co-chairs of the Committee.

2. Gathering Initial Data, Setting Priorities

Following the first meeting of the Master Plan Committee was the first site inspection, a walking tour of the shoreline on October 24,1997. A tour along the boundary of the Reservation followed on January 10, 1998.

Committee members were polled to determine a list and order of priorities. A Horticultural Subcommittee was established to more precisely determine the type, location and condition of the vegetated areas at the Reservation before setting any landscape policy recommendations (Meeting #2, 11/5/97).

To guide its deliberations and the work of its subcommittees, the Master Plan Committee, (Meeting #5, 2/4/98), produced a draft statement of purpose including the following preliminary goals to achieve at the Reservation:

- maintain and improve water quality
- no net loss of natural character at site
- maintain and improve wildlife habitat
- maintain and improve education opportunities
- maintain recreational use with minimum conflict between user groups

It was suggested that a proposal be forwarded to the City Manager to hold all proposed development projects at the Reservation until the Master Plan was completed, but consensus could not be reached.

3. Projects Proposed at the Reservation Outside FPMPAC Deliberative Process

Before the Committee met for the first time, several projects were underway or in the planning stages: the Water Treatment Plant and associated art project, the Neville Manor projects, the bikepath extending along the MDC-owned Fresh Pond Parkway (herein referred to as the MDC Bikepath) from Concord Avenue to Huron Avenue, and the conduit replacement projects in the Weir Meadow and beneath the Bikeway. All were deemed by the City Manager's office to be outside the scope of the Committee's deliberative process.

Three members of the Master Plan Committee, including the two co-chairs, were appointed by the City Manager to serve on the Neville Manor siting committee, which involved many additional hours of their time.

Many hours of Master Plan subcommittee time was spent gathering information to understand how these "prior" projects related to the overall vision for the Reservation. For example, an ad hoc Traffic Subcommittee was appointed to research the location of the proposed MDC Bikepath and its impact on the Reservation. In addition, Committee and subcommittee time was spent reviewing landscaping and storm water management plans under the Phase One Shoreline Maintenance and Improvement Program of the Treatment Plant contract. According to the Order of Conditions issued by the Conservation Commission, these shoreline maintenance and improvement plans required review by the Master Plan Committee prior to their implementation.

4. Developing a Vision Statement

From the Master Plan Committee's discussions of priorities and goals and its initial review of Reservation historical, ecological and recreation data evolved a series of draft mission statements. A writing subcommittee was designated by the Committee to craft a brief statement that reflected the uniqueness of the Reservation and the passion and commitment of citizens pledged to preserve it for future generations. Vision statement language also had to support legally enforceable standards for later recommendations. On April 4, 1998 (Meeting #7) the following "Vision Statement for the Fresh Pond Reservation" was adopted by consensus:

> For over one hundred years, the City of Cambridge has been blessed with a unique, irreplaceable natural resource, Fresh Pond Reservation, that has protected our water supply and contributed immeasurably to the quality of life for our community. This group of citizens has been appointed to create a Master Plan which guarantees the preservation of this legacy for future generations.
>
> The Fresh Pond Master Plan expresses the vital importance of protecting and enhancing both the water quality of the Fresh Pond Reservation and its open space and naturalistic character. The Plan embodies a vision and sets a framework for the preservation of water quality, recreational open space, natural green spaces, wildlife habitat, and a refuge from hectic urban life.

5. Subcommittees: Purposes, Goals and Tasks

Much of the Master Plan Committee's data gathering, analysis and preliminary recommendations was conducted by standing and short-term subcommittees working and meeting between the monthly Master Plan Committee meetings. Generally, each standing subcommittee presented a preliminary report followed by a draft policy document to the Master Plan Committee for comment and revision. The revision process was repeated and revisions presented until a final document was adopted by consensus by the Master Plan Committee.

Standing Committees were established as needed in the following order:

Horticultural Subcommittee

(Meeting #2, 11/5/97)

The charge of this subcommittee was "to propose guidelines and policies for preserving and enhancing the unique natural qualities of the Fresh Pond Reservation's vegetated areas" and its wildlife habitat. Its five citizen members met frequently from November 1997 to March 1998. With the assistance of the Watershed Manager, they drafted a request for proposals to do a comprehensive and easy-to-replicate inventory of vegetated areas of the Reservation (see D, below).

Recreation and Facilities Subcommittee

(Meeting #5 2/4/98, originally called the Usage Subcommittee)

This subcommittee was established to gather data on existing recreation usage, the recreation permit system and relevant statues and to report their findings to the Committee. From this data and public discussions, the subcommittee proposed sustainable recreational policies and procedures, as well as design and maintenance standards for park facilities. The Director of Recreation, the Watershed Manager, several Committee members who were active recreational users of the Reservation and a Horticultural Subcommittee member were continuing members of the Recreation and Facilities Subcommittee.

Land-use Subcommittee

(Meeting # 9, 6/1/98)

The Land-use Subcommittee was setup to review existing land-use policies, jurisdictions, statutes and administrative procedures, and to propose a comprehensive policy to the Master Plan Committee. Further, the subcommittee was charged with developing administrative procedures to review plans and proposals for use and management of Reservation land. Due to the legal complexities of water supply land-use issues, the subcommittee was chaired by Deputy City Manager Richard Rossi, who selected from the Master Plan Committee and Water Board only resident, citizen members: the co-chairs of the Master Plan Committee, Louise Weed and Albe Simenas; Master Plan Committee members Jim Barton, James Rafferty and Shippen Page; President of the Water Board, Joseph Harrington, and

Water Board and Master Plan Committee member, Ann Roosevelt. The Land-use Subcommittee met frequently (often weekly) from July to December of 1998, and led discussions of its draft recommendations with the Master Plan Committee before final approval of the current document on December 2, 1998 (See Section IX and XVI).

Stewardship Subcommittee

Consisting of the Horticultural Subcommittee, the Watershed Manager and the Conservation Commission Executive Director, the Stewardship Subcommittee was established to oversee the work of the contractor selected to inventory and analyze the Reservation's natural resources. The subcommittee met frequently to review the data collected, review findings of the Natural Resource Inventory and edit drafts of the resulting Stewardship Recommendations. The subcommittee also made frequent reports to the Master Plan Committee and planned public presentations and discussions of the Inventory data and Stewardship Recommendations.

Cultural Resources Subcommittee

(Meeting #17, 1/6/99)

This subcommittee was charged with researching and compiling an updated cultural and ecological history of the Reservation. The subcommittee reviewed existing Water Department documents, copies of original source materials and maps from the Olmsted Library, and records and recollections from the Cambridge Plant and Garden Club. The subcommittee invited the Director of the Cambridge Historical Commission to give a presentation on the history of Fresh Pond to the Master Plan Committee. The historical section (Section IV) and historical photos in this Master Plan are the result of this effort.

Education Subcommittee

This group reviewed existing Water Department education efforts, and consulted with Cambridge school teachers who use the Reservation as a curricular resource. The subcommittee proposed policies, guidelines and priorities for continuing and expanded educational efforts at the Reservation.

Wetlands and Water Bodies Subcommittee

This subcommittee addressed standards for all wetlands and small water bodies within the Reservation. Their recommendations were approved by the full Committee and appear in the Natural Resources section of this document (Section VII).

Master Plan Editing and Formatting Subcommittee

This group was designated by the Committee to compose introductory materials, insert images and tables, copy-edit, format and compile all approved Master Plan

documents into a single document for final Committee review before submission to the City Manager. Assistant City Manager Lisa Peterson chaired this subcommittee, which included Louise Weed (co-chair Master Plan Committee); Jim Barton, Janice Snow, and Shippen Page (Master Plan Committee members); Julia Bowdoin (Conservation Commission Director and editing project coordinator); and Chip Norton (Watershed Manager.)

Ad Hoc Subcommittees

(Meeting #s 5, 9 and 11; 2/4/98, 6/1/98 and 8/5/98)

A number of a short-term goal development subcommittees were created, each with a distinct focus: water quality, wetlands, wildlife, buffer zones, Black's Nook, Little Fresh Pond, facilities, pathways and bikeways, open space and recreation (including parking and access), carrying capacity, education outreach, jurisdiction, and maintenance.

D. Inventory and Stewardship Process

At its third meeting, the Master Plan Committee approved the purposes and goals statement for the Horticultural Subcommittee which was "to assist the Fresh Pond Master Plan Advisory Committee in preserving and enhancing the unique natural qualities of the Fresh Pond Reservation through setting guidelines for the selection, siting and culling of appropriate plant materials and in supporting effective on-going management and maintenance of vegetated areas." To that end, the subcommittee was also to "help the Advisory Committee recommend a qualified professional or professionals to identify and inventory current plant resources" and to propose "criteria and guidelines" for a long-term stewardship of the Reservation landscape.

The Horticultural Subcommittee along with Chip Norton, the Watershed Manager, worked jointly as the Stewardship Subcommittee and with the assistance of Assistant to the City Manager, Lisa Peterson, developed a Request for Proposals to hire, through a public bidding process, a qualified organization to conduct a scientific inventory of the Reservation landscape and develop stewardship recommendations based on the Inventory.

Following their review of the proposals submitted and presentations made by the bidding firms, the Stewardship Subcommittee unanimously recommended that the firm of Rizzo Associates be hired to conduct the Natural Resource Inventory and prepare stewardship recommendations. The Master Plan Committee approved the Stewardship Subcommittee's recommendation, which was sent to the City Manager for his approval.

The Stewardship Committee met monthly with Rizzo Associates and several times on site to monitor their progress and review their data analysis, recommendations and public presentation materials. The Stewardship Committee also gave monthly progress reports on the project to the Master Plan Committee.

On October 15, 1998, Rizzo Associates presented their inventory findings to the public, and in a highly publicized meeting on November 17, 1998, presented their stewardship recommendations to the public. At both of these public meetings there was a public comment period following the presentation, and written comment forms were distributed and collected. Electronic, telephone and mail contact information was also distributed so that citizens could contact members of the subcommittee for more information. Written comments from the public were compiled and distributed to the Master Plan Committee before they were asked to vote on the Stewardship Plan proposals.

A final Stewardship Plan document was delivered to the Master Plan Committee for review at its May 5, 1999 meeting. The Committee unanimously adopted the Stewardship Plan as a key section of the final Master Plan to be presented to the City Manager (See Sections VI, VII and VIII).

E. Public Policy Recommendations Approval Process

Each of this Master Plan's policy documents was approved by the Fresh Pond Master Plan Advisory Committee following many weeks of subcommittee research, drafts, and full Committee discussion and review at meetings open to the public and to public comment. Below is a chronology of the Committee's preliminary reviews and final adoption by consensus of the individual policy documents.

Vision Statement: adopted April 4, 1998.

Land-Use Policy: Draft goals first presented April 1, 1998. Creation of Land-use Subcommittee, June 1, 1998. Final Land-Use Policy and Advisory Board document approved by Committee December 2, 1998.

Final Stewardship Plan: Based on Natural Resource Inventory, presented to the public by Rizzo Associates on October 15, 1998 and Draft Stewardship Plan presented to public on November 17, 1998. Stewardship Plan approved by Committee on May 5, 1999.

Education Policy: Draft mission statement and goals presented on March 3, 1999. Final policy approved May 5, 1999.

Access Policy: Draft access document presented on July 7, 1999. Final policy approved August 4, 1999.

Recreation Policy: Preliminary Recreation Goals approved on December 2, 1998. Final policy approved August 4, 1999.

Facilities Policy: Preliminary Facilities Goals approved December 2, 1998. Final policy approved September 8. 1999.

Implementation and Staffing Recommendations: Proposed staffing plan and implementation presented September 8, 1999. Final plan approved October 6, 1999.