

RFQ # 26-004

**REQUEST FOR QUALIFICATIONS
Lake Management Plan Consulting Services**

**PROPOSALS DUE NOT LATER THAN:
2:00 PM ON JULY 31, 2026**

**REQUEST FOR QUALIFICATIONS
SCHEDULE**

Questions submitted by	July 17, 2026, by 3:00 pm
Responses to Questions	July 24, 2026
Proposals due to City	July 31, 2026, by 2:00 pm

Submit Proposals to:

www.bidnetdirect.com//cityoffremont

CITY OF FREMONT – REQUEST FOR Qualifications
Lake Management Plan Consulting Services

REQUEST FOR QUALIFICATIONS
Lake Management Plan Consulting Services

- A.** The CITY OF FREMONT (hereinafter "City") hereby requests qualifications for the Lake Management Plan Consulting Services project (hereinafter "Project"), and will receive proposals at www.bidnetdirect.com//cityoffremont, up to the hour of 2:00 p.m., on the 31st day of July, 2026. If not already registered on the BidNet website, please visit the link to register for City of Fremont access for free at www.bidnetdirect.com//cityoffremont.
- B. SCOPE OF SERVICES.** The City has prepared an outline of services (which includes a description of the City's Project Objectives) which is attached as Exhibit "1" to the Request For Qualifications ("RFQ"), and generally includes: Project description, setting/location, available data, expectations of the project, and deliverables. City has also included a sample General Service Agreement as Exhibit "2." Lastly, City has provided a Lake Management Report for reference as Exhibit "3."
- C. REQUESTS FOR CLARIFICATION OF THE RFP.** The sole point of contact for information pertaining to this RFP is www.bidnetdirect.com//cityoffremont. Communication with City staff about the scope of services or anything else related to this RFP is forbidden. If any proposer has any question regarding the meaning of any part of this RFQ, or finds discrepancies in or omissions from this RFQ, the proposer shall submit any questions through the City of Fremont's online bidding provider at www.bidnetdirect.com//cityoffremont by 3:00 p.m. on Friday July 17, 2026. All responses to questions will be posted on BidNet Direct.
- D. SUBMITTAL OF PROPOSALS.** The instructions for the submittal of proposals are set forth throughout this RFQ. Generally, each proposal shall be submitted with a cover letter and four exhibits, including: (A) Scope of Service, (B) Billing Rates, (C) Statement of Qualifications, and (D) Terms of Service Agreement in a **SINGLE PDF** document. Proposals shall be clearly marked as "PROPOSAL FOR RFP 26-004 LAKE MANAGEMENT PLAN CONSULTING SERVICES.
- E. CITY'S REVIEW OF PROPOSALS.** All responsive proposals shall be reviewed and evaluated by the City in order to determine which proposer best meets the City's needs for this Project. The criteria by which the City shall evaluate proposals are set forth in this RFQ. The City reserves the right to reject any and all proposals or waive any irregularities in any proposal or the proposal process. The City reserves the right to negotiate the terms of the Agreement for this Project with one or more proposers.

CITY OF FREMONT – REQUEST FOR Qualifications
Lake Management Plan Consulting Services

F. AWARD OF AGREEMENT. The City currently anticipates awarding an agreement for this Project by approximately September 1, 2026. No proposal or agreement for this Project shall be binding upon the City until the Agreement is signed by the Consultant and the City.

- 1. TIME AND PLACE OF DELIVERY OF PROPOSALS.** It is the Proposer's responsibility alone to ensure that the proposal is received by the City's Authorized Representative at the time and place identified on page 1 of this Request For Qualifications ("RFQ").
- 2. FORMAT OF PROPOSAL.** The Proposer shall submit their proposal to www.bidnetdirect.com//cityoffremont clearly stated "PROPOSAL FOR RFQ 26-004 LAKE MANAGEMENT PLAN CONSULTING SERVICES.
- 3. FORMAT AND QUALITY OF QUALIFICATIONS.** All proposals shall be prepared in a clear and concise manner. Unnecessarily elaborate or glossy proposals are neither expected nor desired. The emphasis of the proposal should be on responding to the requirements set forth in this RFQ.
- 4. PROPOSER'S SIGNATURE.** An authorized representative of the Proposer shall sign the proposal on a cover letter which: (1) identifies this project by name and number; and (2) identifies the full legal name of the Proposer, along with name of contact person, address, phone number, fax number, and e-mail address; and (3) indicates Proposer's willingness to comply with the procedures identified in this RFQ, including an incorporation by reference of the four exhibits identified below.
- 5. CONTENTS OF QUALIFICATIONS PROPOSAL.** The Proposer shall include in its qualifications, at a minimum, the information outlined in this Section 5 in a manner which demonstrates the Proposer's competence and qualifications for the satisfactory performance of the services identified in this RFQ. The Proposer shall attach four separate exhibits to the cover letter proposal, including: (A) Scope of Service, (B) Billing Rates, (C) Statement of Qualifications, and (D) Terms of Service Agreement.

5(A). Scope of Services. The City has set forth on RFQ Exhibit "1," attached hereto and incorporated herein by reference, an outline of services which the City anticipates the successful proposer to perform. The outline of services set forth on RFQ Exhibit "1" is presented for the primary purpose of allowing the City to compare qualifications. The precise scope of services to be incorporated into the Service Agreement will be based upon RFQ Exhibit "1" as well as Proposal Exhibit "A" to be prepared by Proposer as a part of the proposal (described below) and may be the subject of negotiations between the City and the successful proposer.

CITY OF FREMONT – REQUEST FOR Qualifications
Lake Management Plan Consulting Services

5(A)(1). Based upon the City’s outline of services set forth on RFQ Exhibit “1,” the Proposer shall prepare a complete description of the scope of services (to be labeled: Proposal Exhibit “A”) which the Proposer intends to perform in order to achieve the Project Objectives. The Proposer may identify services in Proposal Exhibit “A” which differ from the outline of services in RFP Exhibit “1” if the Proposer believes the changes will assist the City in more efficiently and effectively achieving the City’s stated Project Objectives.

5(A)(2). The Proposer’s scope of services shall include, at a minimum, a description of the major components of services (or phases of service), a description of work product (or “deliverables”) to be provided by Proposer to the City, and the expected time of completion for each component.

5(B). Billing Rates. The Proposer shall prepare a schedule of billing rates (to be labeled: Proposal Exhibit “B”) which identifies:

5(B)(1). A proposed rate and method of payment for all services to be performed by the Proposer, including hourly rates, and a description of any reimbursable charges.

5(B)(2). A total proposed “Not to Exceed” cost for the performance of all services described in the scope of services, Proposal Exhibit “A.”

5(B)(3). An estimated cost breakdown for each major component of service, with a cross-reference to each component of service identified in Proposal Exhibit “A.”

5(C). Statement of Qualifications. The Proposer shall prepare a statement of qualifications (to be labeled: Proposal Exhibit “C”) which identifies:

5(C)(1). An identification of the size, stability, and capacity of Proposer’s organization, including, at a minimum, an identification of Proposer’s: (1) total number of years in operation, (2) total current number of employees, (3) number of office locations (including the location of each office), and (4) number of employees in the office location which is intended to provide the services described in Exhibit “A.”

5(C)(2). An identification of the Proposer’s experience performing services for projects of a similar size, scope, and complexity as the services required by this RFP, including an identification of: (1) the number of years Proposer has been performing similar services; and (2) the most recent projects for which the Proposer has performed similar services. The list of recent projects shall include the name, contact person, address, and phone number of each party for whom the service was provided, as well as

CITY OF FREMONT – REQUEST FOR Qualifications
Lake Management Plan Consulting Services

a description of the service performed, the dollar amount of the contract, and the date of performance.

5(C)(3). A list of the Proposer's principals, employees, agents, and subconsultants which the Proposer intends to assign to this Project. This list shall include a summary of the qualifications (including education, training, licenses, and experience) of each individual; the approximate number of hours each will devote to the Project; and the type of work to be performed by each individual. The City will retain under its agreement with the successful Proposer the right of approval of all persons performing under the agreement.

5(D). Terms of Proposed Service Agreement. The Proposer shall prepare a document identifying the terms of the proposed Service Agreement between the City and Proposer (to be labeled: Proposal Exhibit “D”), including:

5(D)(1). Specifically identify any portions of the City's standard form Service Agreement (attached to this RFP) which the Proposer desires to amend (either by addition, deletion, or modification).

5(D)(2). Disclose any past, ongoing, or potential conflicts of interest which the Consultant may have as a result of performing the work for this Project.

5(D)(3). Identify Proposer’s ability to comply with the City’s insurance requirements. A copy of an insurance certificate, or a letter of intent to provide insurance from the issuing company (including a description of types of coverage and dollar amount limits) may be favorably considered.

6. CITY’S REVIEW OF PROPOSALS. After the proposals are received and opened by the City, the City shall review and evaluate all proposals for responsiveness to the Request for Qualifications in order to determine whether the Proposer possesses the qualifications necessary for the satisfactory performance of the services required. The City may also investigate qualifications of all Proposers to whom the award is contemplated, and the City may request clarifications of proposals directly from one or more Proposers. In reviewing the proposals, the City may consider the following:

6(A). The qualifications (including education, training, licenses, experience, and past performance) of the Proposer and its agents, employees, and subconsultants in completing projects of a similar type, size, and complexity. The City may consider Proposer's timely and accurate completion of similar projects within budget.

CITY OF FREMONT – REQUEST FOR Qualifications
Lake Management Plan Consulting Services

6(B). The feasibility of the proposal based upon the methodology of the proposed scope of services, and the reasonableness of the schedule of billing rates.

6(C). Proposer’s understanding of the work to be completed based upon the clarity of the proposal and responsiveness to this RFQ.

6(D). Proposer’s proposed language for the Services Agreement.

7. AWARD OF AGREEMENT. Upon completion of the review period, the City will notify those Proposers who will be considered for further evaluation and negotiation. All Proposers so notified shall make presentations and negotiate in good faith in accordance with direction from the City. Any delay caused by Proposer's failure to respond to direction from the City may lead to a rejection of the Proposal.

7(A). If the City determines, after further evaluation and negotiation, to award the Agreement, a Service Agreement will be sent to the successful Proposer for the Proposer's signature. No proposal will be binding upon the City until after the Agreement is signed by duly authorized representatives of both Consultant and the City.

7(B). The City reserves the right to reject any or all proposals, and to waive any irregularity. The award of the Agreement, if made by the City, will be based upon a total review and analysis of each proposal and projected costs.

COSTS ASSOCIATED WITH PROPOSAL PREPARATION ARE SERVICE PROVIDER RESPONSIBILITY. All costs incurred by prospective proposers associated with the preparation of a response to this Request for Proposals and subsequent demonstrations, analyses, studies, responses to inquiries, travel for purposes of competing for and/or negotiating a contract with the City are the sole responsibility of the proposer.

COMPLIANCE WITH LAW AND STANDARD OF CARE. Consultant shall comply with all applicable federal, state, and local laws including any applicable legal requirement imposed by Executive Orders duly issued at the federal, state and local level, whether or not said laws are expressly stated in this Agreement. Consultant shall perform services under this Agreement using a standard of care equal to, or greater than, the degree of skill and diligence ordinarily used by reputable professionals, with a level of experience and training similar to Consultant, performing under circumstances similar to those required by this Agreement.

CITY OF FREMONT – REQUEST FOR Qualifications
Lake Management Plan Consulting Services

PROTESTS AND APPEALS. Protests may be submitted only by a party that has submitted a bid or proposal in response to the contract solicitation. A subcontractor of a bidder or proposer may not submit a protest. A party may not rely on a protest submitted by another party but must timely pursue its own protest.

A protest that merely requests a re-evaluation of a proposal's content will not be entertained.

Notice of Decision. After a decision to award a contract subject to these protest provisions has been made the City shall issue a notice of intent to award by posting the notice on the designated public bulletin boards and on the City's bid results web page.

Time to Submit Protest. All protests must be submitted in writing to the purchasing division before 5:00 p.m. on the fifth business day after the date of posting of the City's notice of intent to award. The protestor shall bear the risk of non-delivery within the time period specified above regardless of the method of delivery selected (facsimile, electronic mail, delivery service, United States mail service).

Form of Protest. All protests shall be in writing and shall contain a complete statement of: the legal grounds for the protest; all the facts relevant to the protest; and the form of relief requested and the legal basis for such relief. All protests shall be accompanied by all documentations supporting the

grounds for the protest. The protest shall include the name, address and telephone number of the person representing the protesting party.

CITY OF FREMONT – REQUEST FOR Qualifications
Lake Management Plan Consulting Services

Conflict of Interest
(Signed copy must be submitted with proposal)

Each vendor must disclose any existing or potential conflict of interest relative to the performance of the contractual services as a result of this RFP/Bid. Any such relationship that might be perceived as or represent a conflict should be disclosed. By submitting a proposal in response to this RFP/Bid, vendors affirm that they have not given, nor intend to give at any time hereafter, any economic opportunity, future employment, gift, loan gratuity, special discount, trip, favor or service to a public servant or any employee or representative of same, in connection with this procurement. Any attempt to intentionally or unintentionally conceal or obfuscate a conflict of interest will automatically result in the disqualification of a vendor’s proposal. An award will not be made where a conflict of interest exists. The City will determine if a conflict of interest exists and whether it may reflect negatively on the City’s selection of a vendor. The City reserves the right to disqualify any vendor on the grounds of actual or apparent conflict of interest.

Collusion

This is to certify that the undersigned bidder has neither directly nor indirectly entered into an agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date to the City of Fremont.

All terms and conditions of this Request for Proposal have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE _____
SIGNATURE

TITLE

ADDRESS _____

CITY OF FREMONT – REQUEST FOR Qualifications
Lake Management Plan Consulting Services

PROPOSALS ARE PUBLIC RECORDS
(MUST BE SUBMITTED WITH PROPOSAL)

Each proposer is hereby informed that, upon submitting its proposal to the City in accordance with this RFP, the proposal is the property of the City.

(A). Unless otherwise compelled by a court order, the City will not disclose any proposal while the City conducts its deliberative process in accordance with the procedures identified in this RFP. However, after the City either awards an agreement to a successful proposer, or the City rejects all proposals, the City shall consider each proposal subject to the public disclosure requirements of the California Public Records Act (California Government Code Sections 6250, *et seq.*), unless there is a legal exception to public disclosure.

(B). If a proposer believes that any portion of its proposal is subject to a legal exception to public disclosure, the Proposer shall: (1) clearly mark the relevant portions of its proposal “Confidential”; and (2) upon request from the City, identify the legal basis for exception from disclosure under the Public Records Act; and (3) the Proposer shall defend, indemnify, and hold harmless the City regarding any claim by any third party for the public disclosure of the “Confidential” portion of the proposal.

(C). Confidentiality Disclosure. Does your Proposal (including forms, documentation, catalogs, pricelists, or other materials submitted with the Proposal) contain information which Proposer considers proprietary or confidential? Please check one of the following:

NO, I certify that none of the information included with this Proposal is considered confidential or proprietary.

YES, I certify that this Proposal contains information considered confidential or proprietary and all such information is specifically identified on this form.

NAME OF PROPOSER: _____

AUTHORIZED REPRESENTATIVE: _____

SIGNATURE: _____

OUTLINE OF SERVICE

1. Project Description:

The City of Fremont is seeking a qualified consultant to develop a comprehensive Lake Management Plan (LMP) for Lake Elizabeth. The purpose of this plan is to clearly identify the current conditions of the lake, the issues affecting water quality and overall health, and the actions needed to properly maintain and improve the lake over time.

The selected consultant will gather and review existing data, evaluate what environmental or operational factors are impacting the lake, and recommend practical solutions. This includes identifying what the City should be monitoring, outlining maintenance needs, and providing clear guidance on short- and long-term management strategies. The final Lake Management Plan will serve as a roadmap for City staff to effectively care for Lake Elizabeth and protect its recreational, ecological, and community value.

2. Setting

Lake Elizabeth is an 83-acre constructed freshwater lake within Fremont's Central Park. It designed and constructed in the 1960s for flood control and stormwater storage purposes, but also serves as a recreational hub for the community. The Lake is owned by the Alameda County Flood Control and Water Conservation District (ACFCD) and licensed to the City to manage.

Since the time of its construction by the ACFCD, siltation within the Lake has decreased water depth and changed the character of the Lake. In the recent past, extreme heat events have caused fish die-offs that threaten existing beneficial uses identified for the Lake by regulatory agencies (e.g., fish spawning habitat, wildlife habitat, non-contact recreation).

3. Available Data

- Lake Elizabeth is owned by the Alameda County Flood Control and Water Conservation District and leased to the City of Fremont.
- Lake Elizabeth is an 83-acre freshwater lake designed for flood control and stormwater storage.
- The lake was originally constructed in 1968 at 63 acres and expanded by 20 acres in 1986 along the north shoreline.
- Mission Creek is the primary inflow source of water into the lake.

4. The selected consultant will be provided data in the City's possession including a 2009 Lake Management Report prepared by Engineering Science Inc, a 2023 Bathymetric Survey (appendix B), and data collected from the three monitoring probes in place over the past year capturing temperature and dissolved oxygen readings.

The selected consultant will complete tasks to assist the City with the development of the Lake Elizabeth LMP. The consultant will work collaboratively with the City by providing technical services to complete tasks as formalized between the consultant and the City. Below is a description of example tasks that are envisioned to be completed by the consultant, but consultant may propose alternative steps / scope in their proposal.

4.1. Task 1 - Kick-off meeting

Project team members from City of Fremont will meet with the consultant prior to commencement of technical work to review the project approach and to acquaint the consultant with the project history, available data sources, and available City support and budgetary resources. Following the meeting, the consultant will be requested to prepare a detailed work plan for the Project for review and comment of the City.

Deliverables:

- Attend a project kickoff meeting with project team
- Perform a site analysis, as needed
- Prepare a detailed work plan laying out the overall project approach and draft timeline

4.2. Task 2 - Data compilation and initial assessment

Identification of the key stressors to the Lake is required for an effective management plan. The City is currently conducting continuous water quality monitoring within the Lake and has access to data generated through a variety of investigations conducted in the past two decades assessing the biological resources, water quality, and bathymetry of the Lake. The consultant will be given access to all available data resources to identify any data gaps and propose additional studies or modifications to existing data collection efforts to support effective Lake management actions.

Deliverables:

- Summary of lake conditions
- Identification of data gaps and options for addressing
- Identification of known / potential stressors and prioritization of each as to their current / potential negative effects

4.3. Task 3 - Development of Lake Management Plan

Upon successful completion of Task 2, Task 3 will be initiated as agreed upon by City and consultant. Task 3 will consist of developing an LMP for helping the Lake support identified regulatory beneficial uses and reducing the frequency and duration of water quality stressors that threaten those uses. Existing data, or proposed collections to expand the current knowledge base, will be used to identify and prioritize existing and potential future stressors. The consultant will identify management actions that might be employed to mitigate for the identified stressors. The management plan will also identify monitoring metrics that can be measured to best ensure progress toward achieving the City's goals for the Lake and mechanisms for capturing and communicating this information.

To the extent that one-time and recurring costs can be identified associated with potential management actions, those will also be communicated to the City in a manner agreed upon between the City and consultant.

Deliverables:

- Prepare an LMP detailing the strategy for reducing the frequency and duration of fish die-off events and achieving beneficial uses identified for the Lake. The plan shall include review of Lake hydrology, water quality, and ecological conditions. It shall identify current and potential future stressors and assess potential management actions for addressing them (likelihood of effectiveness, drawbacks, uncertainties, upfront and recurring costs, etc.). The plan shall include a proposed design for monitoring and assessment to gauge progress toward management goals. Appendix B is a sample outline of what the plan could include but is not limited to the listed suggestions.

Sample Lake Elizabeth Master Plan Outline

1. Executive Summary

- Purpose of the plan
- Vision and goals
- Summary of key recommendations

2. Introduction

- Background on Lake Elizabeth
- Historical context and significance
- Stakeholders and community involvement
- Planning process overview

3. Lake Profile

- Physical characteristics (size, depth, volume)
- Watershed overview
- Hydrology and inflow/outflow sources
- Land use in surrounding areas

4. Water Capacity & Hydrology

- Current water levels and seasonal fluctuations
- Water balance analysis
- Flood and drought resilience
- Recommendations for water level management

5. Water Quality Management

- Current water quality data (nutrients, pH, turbidity, etc.)
- Sources of pollution (stormwater, runoff, etc.)
- Algae and harmful blooms
- Water quality improvement strategies

6. Wildlife & Habitat Management

- Inventory of aquatic and terrestrial species
- Migratory bird and fish populations
- Invasive species monitoring and control
- Habitat restoration and enhancement plans

7. Dredging & Sediment Management

- Sedimentation rates and sources
- Dredging history and future needs
- Dredging schedule and environmental considerations

8. Aeration & Circulation Systems

- Existing aeration infrastructure
- Oxygenation needs and water stratification
- Recommendations for upgrades or expansion

9. Shoreline & Erosion Control

- Shoreline condition assessment
- Erosion-prone areas
- Stabilization techniques (native planting, riprap, etc.)
- Public access and safety improvements

10. Stormwater & Runoff Management

- Drainage infrastructure
- Green infrastructure opportunities
- Pollution prevention strategies

11. Recreation & Public Use

- Current recreational uses (boating, fishing, walking, etc.)
- Accessibility and ADA compliance
- Infrastructure needs (trails, signage, restrooms)
- Balancing recreation with conservation

12. Community Engagement & Education

- Public outreach strategies
- Volunteer and stewardship programs
- Interpretive signage and educational materials

13. Operations & Maintenance

- Routine maintenance schedules
- Equipment and staffing needs
- Budget estimates and funding sources

14. Regulatory Compliance

- Applicable local, state, and federal regulations
- Permitting requirements
- Environmental impact considerations

15. Monitoring & Evaluation

- Key performance indicators (KPIs)
- Monitoring protocols (water, wildlife, usage)
- Adaptive management strategies

16. Implementation Plan

- Phased action plan with timelines
- Roles and responsibilities
- Funding and grant opportunities
- Risk assessment and contingency planning

17. Appendices

- Maps and diagrams
- Data tables and survey results
- Stakeholder meeting notes
- References and resources

GENERAL SERVICES AGREEMENT
 INSERT NAME OF PROJECT OR SERVICE

This Agreement is made by and between the City of Fremont, a municipal corporation (**City**), and _____ [INSERT FULL LEGAL NAME, I.E., LLC, PARTNERSHIP, CORPORATION] (**Contractor**). City and Contractor may be individually referred to as a “party” and collectively as the “parties.”

RECITAL

City requested a proposal from Contractor to provide the services generally including: _____ [INSERT GENERAL DESCRIPTION]. In response, Contractor submitted a proposal, and, after negotiations, agreed to provide the services described in Exhibit A (**Scope of Work**), in accordance with the schedule included with Exhibit B (**Schedule of Performance**), and in return for the compensation described in the Agreement and in Exhibit C (**Compensation**). In reliance upon Contractor’s representations regarding its qualifications, as set forth in its proposal, City finds that Contractor has the requisite qualifications, experience and training to perform the services.

NOW, THEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS AND CONDITIONS IDENTIFIED HEREIN, THE PARTIES AGREE AS FOLLOWS:

1. **SERVICES.** Contractor shall perform the services described in Exhibit A (**Services**) in accordance with the terms and conditions of the Agreement.
2. **EXHIBITS.** The following marked exhibits are attached and incorporated herein by reference:
 - “A” Scope of Work
 - “B” Schedule of Performance
 - “C” Compensation (Fee Schedule/Price Sheet)
 - “D” Insurance
 - “E” Payment and/or Performance Bond
3. **TERM.** The Agreement commences on the date last signed by the parties and ends on _____, unless terminated earlier or extended as provided in the Agreement.

OPTIONAL PROVISION TO INCLUDE IF BUDGETING FOR ADDITIONAL ONE-YEAR TERMS AND WANT TO LOCK IN ANNUAL COMPENSATION INCREASES. IF NOT USING THE 4% RATE INCREASE OR CPI-U INCREASE, STATE HOW COMPENSATION FOR ADDITIONAL ONE YEAR TERMS WILL BE DETERMINED IN EXHIBIT C:

Option to Renew. City may renew the Agreement for up to _____ additional one-year terms, by providing thirty (30) days advance written notice to Contractor. Compensation for the optional years will be based on the rates and charges included in Exhibit B plus an annual compensation increase equal to the lesser of: (a) four percent (4%) of the rates effective in the preceding term, or (b) the percentage increase in the San Francisco-Oakland-San Jose

Consumer Price Index for All Urban Consumers (CPI-U), as last published by the U.S. Dept. of Labor Statistics prior to the start date of the additional term.

- 4. **TIME FOR PERFORMANCE.** Time is of the essence and Contractor shall perform the Services as required by the Agreement and the timing requirements set forth in Exhibit B. Any Services for which times for performance are not specified shall be commenced and completed in a reasonably prompt and timely manner based upon the circumstances and City direction. Any request for a time extensions must be sent to City in writing no later than five days after the start of the condition which purportedly caused the delay and not later than by the date on which performance is due. If at any time Contractor determines it is unable to perform the Agreement, it shall immediately notify City in writing no later than five days after learning of its inability to perform, by notifying City’s Authorized Representative and sending a notice per section 21 of the Agreement. All references to “days” or “time periods” in the Agreement shall mean calendar days unless otherwise specified.
- 5. **COMPENSATION.** The total not-to-exceed compensation (including any reimbursable expenses) payable to Contractor for the Services identified in Exhibit A shall not exceed _____ dollars (\$ _____) and shall be based on the compensation, billing rates and charges set forth in Exhibit C. Any services for which payment would exceed the total compensation set forth herein shall be at no cost to City. City may authorize additional services for additional compensation only by written agreement signed by the parties.

Billing. To request payment, Contractor must submit monthly invoices identifying the Services performed (including personnel who performed the Services, hours worked, and reimbursable expenses), and the charges based on the rates set forth in Exhibit C. City will verify the charges and pay undisputed invoices within 30 days of receipt. Send invoices to:

Attn: _____

- 6. **AUTHORIZED REPRESENTATIVES.** All regular communication regarding the Services and administration of the Agreement shall be between the parties’ Authorized Representatives designated below. Contractor shall not replace its Authorized Representative, or any of its personnel or subcontractors identified in Exhibit C without City’s prior written consent. All Services shall be performed by, or under the direct supervision of, Contractor’s Authorized Representative. City will notify Contractor if it changes its designation.

City Representative:
NAME/TITLE
CONTACT INFORMATION

Contractor Representative:
NAME/TITLE
CONTACT INFORMATION

7. INFORMATION AND DOCUMENTATION.

7(A). City Confidential and Proprietary Information. In the performance of the Agreement or in contemplation thereof, Contractor may have access to proprietary or confidential

information owned or controlled by City, which if disclosed to third parties may be damaging to City. Contractor shall hold all City information in confidence and use it only to perform the Services and shall exercise the same standard of care to protect City information as a reasonably prudent Contractor would use to protect its own proprietary and confidential data.

7(B). Contractor's Records. Contractor shall maintain all accounting records related to the Agreement in their original form in accordance with generally accepted accounting principles and applicable law for the duration of the Agreement plus four (4) years from the date of final payment, including documents which support Contractor's costs and expenses, such as personnel hired, invoices, payments to vendors, and reimbursable expenses. Such records shall be made available to City upon request.

7(C). Work Product. All original documents prepared by Contractor or its subcontractors related to the Agreement ("**Work Product**"), in any form or media, whether complete or in progress, shall be the property of City and shall not be disclosed to any third-party without City's prior written consent. Contractor may keep copies and shall provide the Work Product to City at City's request or upon completion of the Services.

Subsections 7(A), 7(B) and 7(C) shall survive the expiration or termination of the Agreement.

- 8. RELATIONSHIP BETWEEN THE PARTIES.** Contractor is an independent contractor solely responsible for the acts and omissions of its employees, agents, and subcontractors. Contractor is not an employee or agent of City and shall have no authority to act for or to bind City to any obligation unless City provides prior written authorization. Contractor is not entitled to any benefit, right, or compensation other than that provided in the Agreement and shall be responsible for payment of all taxes, fees, contributions or charges applicable to Contractor's business operations and performance of the Agreement. Contractor shall not employ any subcontractors without City's prior written consent.
- 9. CONFLICTS OF INTEREST PROHIBITED.** Contractor (including its employees, agents, and subcontractor) shall avoid any direct or indirect interest that conflicts with the performance of the Agreement and shall comply with all requirements of the Political Reform Act, including California Government Code §§ 1090 and 81000, *et seq.*, and any other state and local law relating to conflicts of interest, including: (a) Contractor shall not make or participate in a decision made by City if it is reasonably foreseeable that the decision may have a material effect on Consultant's economic interest, and (b) if required by law, Contractor shall file financial disclosure forms with the City Clerk. If Contractor maintains or acquires a conflicting interest, any contract with City (including this Agreement) involving Contractor's conflicting interest may be terminated by City.
- 10. NONDISCRIMINATION.** Contractor shall not engage in discriminatory employment practices related to the Agreement and shall not discriminate against any person (including employees or job applicants) because of race, color, religion, national origin, disability, medical condition, marital status, age, gender, sex, sexual orientation, or other legally protected class. Contractor will include this requirement in any subcontract.

- 11. LABOR CODE COMPLIANCE AND WAGES.** Contractor shall comply with the minimum wage requirements of Fremont Municipal Code, Chapter 5.30. If any of the Services are considered a “public works” under California Labor Code § 1720 et seq., Contractor shall comply with all applicable legal requirements, including payment of prevailing wage, retention of certified payroll records, and any other requirements imposed by the Department of Industrial Relations.
- 12. COMPLIANCE WITH LAW AND STANDARD OF CARE.** Contractor shall comply with all applicable federal, state and local laws, codes and regulations, and any duly issued executive orders even if said laws are not expressly stated in the Agreement. Contractor shall be duly licensed, certified, and possess all permits and approvals legally required to perform the Services, which must be kept in effect for the entire contract term at Contractor’s sole cost. All Services shall be performed skillfully, competently, and to the highest standard of care of Contractor’s business, occupation, or trade and consistent with the care exercised by reputable members of Contractor’s occupation performing similar work under similar circumstances to those required herein. All personnel, vendors, and any subcontractors must be supervised to ensure the Services are provided in a professional, courteous, and safe manner. Any person who engages in rude, unsafe, or unprofessional conduct shall not be allowed to work under the Agreement.
- 13. HAZARDOUS MATERIALS.** If the Services require the handling of hazardous materials, this provision applies. Contractor must be certified and current on all required training and shall comply with all laws, regulations and city policies pertaining to the use, handling, transport and disposal of hazardous waste, materials and substances, including City’s Integrated Pest Management Policy (IPM), Stormwater Pollution Prevention Ordinance, and OSHA Hazard Communication Standard (24 CFR 1910.1200).
- 14. ERRORS AND OMISSIONS.** At its sole cost, Contractor shall correct any errors, omissions and defective work and re-perform any Services that do not meet the requirements of the Agreement, upon discovering said errors or receiving notice from City. City shall be reimbursed for any damages and costs caused by said errors, which City may charge as an offset to Contractor’s payment. Contractor is responsible for any damage to public or private property caused by Contractor’s performance or failure to perform, and City may withhold payment as necessary to protect itself from loss or damages. If City is required to remedy any losses, it shall have the right to deduct the cost from Contractor’s payment. This section survives the expiration or termination of the Agreement for a period of twelve months.
- 15. WARRANTIES.** If the Services include the provision of Goods, this section applies. Contractor warrants that any products, equipment, parts, materials, and goods (**Goods**) furnished under the Agreement conform to the requirements herein and are new and of merchantable quality, fit for purpose, and free from defects. Any defective Goods shall be replaced or repaired at no cost to City. Said warranties shall be in effect for a period of one year from the date of City’s final payment, unless a longer warranty period is provided, in which case the longer warranty period shall apply (**warranty period**). During the warranty

period, Contractor shall repair or replace any work defects or materials (including damage that arises out of Contractor's warranty work), except for any wear and tear or damage resulting from City's negligent use or maintenance. This section survives the expiration or termination of the Agreement for a period of twelve months.

16. CITY BUSINESS TAX. Contractor shall apply for and pay the business tax and registration tax required under the Fremont Municipal Code, Chapter 5.05 and must provide City with written documentation to support any requested waiver of said taxes.

17. REPORTING DAMAGES. If any person is injured or property is damaged in connection with the performance of the Agreement, Contractor shall immediately notify the City's Risk Manager by telephone at 510-284-4050 and shall promptly submit to the Risk Manager a written report (in a form acceptable to City) with the following information: (a) detailed description of the incident, (b) name and address of the person injured or deceased and of any witnesses, (c) whether any City property was involved, and (d) name and address of Contractor's insurance company.

18. INSURANCE. For the duration of the Agreement, Contractor shall maintain insurance to cover itself, its employees, agents, representatives and subcontractors for the performance of the Agreement and shall comply with the requirements set for in Exhibit D (**Insurance Requirements**), which identifies the insurance types and minimum levels required for the Agreement. Compliance with Exhibit D shall not relieve Contractor of any other responsibilities under the Agreement (including the indemnity requirements), and Contractor may carry, at its own expense, any additional insurance it deems necessary or prudent. Concurrently with the execution of the Agreement and prior to commencing any Services, Contractor shall furnish written proof of insurance (certificates and endorsements) in a form acceptable to City. Contractor shall provide substitute written proof of insurance no later than thirty (30) days prior to the expiration date of any insurance policy required by the Agreement.

19. INDEMNIFICATION. To the fullest extent permitted by law, Contractor shall hold harmless, defend (with counsel approved by City), and indemnify City, its elected officials, officers, employees, agents, and approved volunteers, from and against any and all claims, litigation, demands, damages, liabilities, costs, and expenses (including court costs, attorney's fees, experts fees, and other costs and fees of litigation or other dispute resolution proceeding) (**Claims**) resulting or arising out of, pertaining to, or relating to Contractor's performance or failure to perform under the Agreement, except for Claims arising out of City's sole negligence or willful misconduct. This section survives the expiration and termination of the Agreement and is not limited by the insurance provisions contained herein.

20. TERMINATION AND SUSPENSION. City in its sole discretion may terminate the Agreement or suspend the Services for convenience, in whole or in part, upon giving fifteen days' prior written notice to Contractor. If Contractor fails to perform any of its material contractual obligations, in addition to all other legal remedies, City may terminate the Agreement immediately for cause upon written notice to Contractor setting forth the effective date of termination. Contractor shall cease all work as of the date of termination unless otherwise

instructed by City and will be paid for Services satisfactorily performed up to the termination date in accordance with the terms of the Agreement and Exhibit C, but not to exceed the maximum compensation authorized in section 4 of the Agreement. If the termination is for cause, City may deduct from payment the amount of any actual damage sustained by City due to Contractor's breach. City may give Contractor the opportunity to cure a minor default by a specific date during which time City may suspend payments pending Contractor's performance. City shall not be liable for any costs incurred by Contractor due to termination or suspension of the Agreement beyond the compensation authorized hereunder.

21. OFFICIAL NOTICES. All notices required by law or concerning critical matters under the Agreement shall be in writing and delivered to the officers designated below. The notices shall be deemed to be effective upon the first to occur of: (a) actual receipt by the party's designated officer, or (b) actual receipt at the address designated below, or (c) five (5) days following deposit in the United States Mail of registered or certified mail sent to the address designated below. The parties may change their designations only in writing in accordance with the requirements of this section.

TO: CITY

Name _____
Title _____
Address _____

TO: CONTRACTOR

Name _____
Title _____
Address _____

22. ENTIRE AGREEMENT. The Agreement (including incorporated exhibits and attachments) comprises the entire integrated understanding between the parties regarding the Agreement and supersedes all prior negotiations, agreements, and understandings, whether written or oral. All incorporated documents are complementary; what is called for in one is binding as if called for in all. Section headings are intended only as a guide to content and not for construction of the Agreement. There are no third-party beneficiaries to the Agreement.

23. NEUTRAL INTERPRETATION. The Agreement represents the contributions of both parties, each of whom has had the opportunity to confer with legal counsel. Accordingly, California Civil Code § 1654, which provides for construction of a contract against its drafter shall not apply to the Agreement.

24. GOVERNING LAW AND VENUE. The interpretation and enforceability of the Agreement is governed by California law, and any suit, claim, or legal proceeding shall be filed and heard in a court of competent jurisdiction in the County of Alameda.

25. SEVERABILITY; CONFLICTS. If any part of the Agreement is held by a court of competent jurisdiction to be invalid or unenforceable, the Agreement shall be construed as excluding the invalid part and shall continue in full force and effect unless it would result in a frustration of the parties' contractual intent. The terms of the Agreement shall control and supersede any conflicting provisions in any exhibit or attachment.

26. ASSIGNMENT AND DELEGATION. Neither the Agreement nor any of Contractor’s duties shall be assigned or transferred without City’s prior written consent, and any attempt to do so shall be void and of no force or effect. City consent to one assignment shall not be deemed to be a consent to any subsequent assignment.

27. MODIFICATIONS. Except as expressly provided herein, the Agreement may not be modified orally or in any manner other than by written agreement signed by the parties.

28. WAIVER. No payment, partial payment, acceptance, or partial acceptance of Services shall operate as a waiver of any of City’s rights under the Agreement. City waiver of a specific violation shall not constitute a continuing waiver or a waiver of a new violation.

29. COUNTERPARTS. The Agreement may be signed in counterparts, each of which shall be deemed to be an original. The parties agree that their digital signatures are intended to authenticate this writing and shall have the same force and effect as manual signatures. The parties’ digital signatures shall have the same legal validity and enforceability as a manually executed signature, or use of a paper-based record-keeping system to the fullest extent permitted by law.

30. SIGNATURES. The signatories represent and warrant that they have the right, legal capacity, and authority to execute the Agreement on behalf of their respective legal entities. The Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

IN WITNESS WHEREOF, City and Contractor agree to the terms set forth herein.

CITY OF FREMONT

**CONTRACTOR *INSERT FULL
LEGAL NAME AND REFER TO SIGNATURE
BLOCKS GUIDE ON CAO INTRANET**

By _____
Name _____
Title _____
Date _____

By _____
Name _____
Title _____
Date _____
Tax ID No. _____

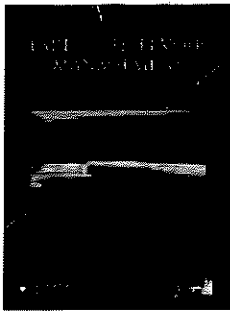
APPROVED AS TO FORM:

By _____
Name _____
Title Senior Deputy City Attorney

FURTHER INSTRUCTIONS AND GUIDANCE

1. For sample signature blocks for city consultants and contractors, refer to the Contractors Signature Blocks guide on CAO intranet page or at [Link](#).
2. For insurance requirements applicable to this agreement, which should be sent to the Contractor for compliance, refer to Exhibit D - Insurance Requirements on CAO intranet page or at [Link](#).
3. As applicable, include the appropriate exhibits, as titled below, and any other related attachments prior to routing the agreement for signatures:

EXHIBIT A - Scope of Work
EXHIBIT B - Schedule of Performance
EXHIBIT C - Compensation (Fee Schedule/Price Sheet)
EXHIBIT D - Insurance Requirements
EXHIBIT E - Payment and/or Performance Bond
4. For more information about processing contracts and other requirements, please visit the City Attorney's Office intranet page.



Lake and Reservoir Management

ISSN: 1040-2381 (Print) 2151-5530 (Online) Journal homepage: www.tandfonline.com/journals/ulrm20

Management of Lake Elizabeth, Fremont, California, For Competing Resource Values

Gary Halsey

To cite this article: Gary Halsey (1994) Management of Lake Elizabeth, Fremont, California, For Competing Resource Values, *Lake and Reservoir Management*, 9:1, 57-60, DOI: [10.1080/07438149409354725](https://doi.org/10.1080/07438149409354725)

To link to this article: <https://doi.org/10.1080/07438149409354725>



Published online: 03 Feb 2009.



Submit your article to this journal [↗](#)



Article views: 1167



View related articles [↗](#)

optimistic that, when other funding is more secure, this public utility will provide their fair share.

Conclusion

The China Lake Restoration Project has incorporated the greatest amount of non-point source remediation and public education in Maine and serves as an example of the change in focus at the State level to promote and support lake protection. The tangible benefits of the unconventional partnerships which we have formed between all levels of government and private citizens are obvious. The cost for MDOT erosion control projects alone in this watershed were projected at nearly \$3 million. The project as a whole has effectively tripled the allocation of conventional funding made available. By utilizing the talents, resources and energy of everyone who cares, we are accomplishing much more than any single entity could expect independently. One observation we have made along the way is that if you give someone a chance to do something which makes them feel meaningful and doesn't create adversity, they will give enormously. When it comes to lake protection and restoration, everybody wins and, more importantly, nobody loses. In this business, there is plenty of glory for everyone—And it doesn't hurt to give a little credit now and then.

References

- China, Town of. 1990. Community Revitalization Application, November, 1990.
- COLA/Maine DEP. 1992. A Citizen's Guide to Lake Watershed Surveys. April, 1992.
- KCSWCD. 1992. Camp Road Maintenance Manual: A Guide for Landowners.
- Maine DEP. 1989. Grant Application: China Lake Restoration Project, February, 1989.
- Maine DEP. 1991. China Lake Restoration Project, Progress Report, March 15, 1991.
- Maine DEP. 1992. Phosphorus Control in Lake Watersheds: A Technical Guide to Evaluating New Development. September, 1992.

Lake and Reservoir Management, 9(1):57-60. (1994) Extended Abstract of a paper presented at the 13th International Symposium of the North American Lake Management Society, Seattle, WA, Nov. 29 -Dec. 4, 1993

Management of Lake Elizabeth, Fremont, California, For Competing Resource Values

Gary Halsey
*Engineering-Science, Inc., 1301 Marina Village
Parkway, Alameda, CA 94501*

Lake Elizabeth is a man-made freshwater lake created in 1968 on the site of Stiver's Lagoon Marsh, a formerly extensive wetland. The lake is the focal point of Central Park, the largest park in the City of Fremont, which is located in the southeast portion of San Francisco Bay (Fig. 1). Because of the surrounding urbanized environment and the lake's many uses, there are a variety of potentially competing management concerns. These include:

1. Flood Control—Lake Elizabeth, Stiver's Marsh, and adjacent low lying park lands act as storage for major storm events.
2. Water Quality—the large resident bird population presents fecal contamination problems for water contact recreation (primarily boardsailing, a separate swim lagoon has been developed).
3. Wildlife—the lake and Stiver's Marsh provide habitat for many overwintering and migratory birds.
4. Recreation—the lake is a popular site for sailors, boardsailors, joggers, bikers, and walkers.
5. Public Education—the lake and Stiver's Marsh are often used by local schools for environmental education programs.

Lake Elizabeth has a surface area of 80 acres with a uniform average depth of 4 to 5 feet. Lake level is controlled by an inlet/outlet structure which hydraulically connects the lake to the adjacent stream, Mission Creek (also known as Line L in the Alameda County Zone 6 storm drainage system). Water from Mission Creek only enters the lake over the inlet structure during major winter storms. The primary water source to Lake Elizabeth during the summer months is Babbling Brook, a small stream fed by groundwater pumped from a well.

Lake Elizabeth is overseen by two local government agencies: the Alameda County Flood Control and Water Conservation District (District or ACFCWCD) and the City of Fremont. The ACFCWCD oversees flood control and water quality

issues at the lake and leases the lake area to the City. The City operates the park and recreational facilities including sailing and boardsailing. In recent years there has also been a growing grass roots movement to restore and enhance the value of lake Elizabeth and remnant portions of Stiver's Marsh as habitat for wildlife. Engineering-Science, Inc. (ES), under contract to the ACFCWCD, conducts water quality monitoring, makes lake management recommendations, and coordinates with the District and City regarding lake management issues.

Flood Control

ES constructed a hydraulic model of Lake Elizabeth and its drainages, using a HEC-2 model, to evaluate the storage and conveyance capacity of the hydraulic system. ES completed a summary report on hydraulics and flood routing which described four basic hydraulic flow regimes.

The hydraulic model identified the Paseo Padre culverts as controlling structures, stabilizing the outflow between 400 and 500 cfs. Greater outlet flow is not allowable to prevent downstream flooding. Flashboard height at the inlet/outlet has little effect on the backwater profile of Mission Creek and tributary lines. Based on this finding ES recommended

higher flashboard levels and greater passive storage at the lake through the winter months. The increased lake volume during the winter months helps dilute bird wastes, decrease coliform levels and provides a deeper lake for recreational boating and aesthetic benefits.

The flood storage capacity of Lake Elizabeth for the 100-year flood is 970 acre-feet at an elevation of 55.6 feet NGVD. Widening of the Southern Pacific and Western Pacific Railroad (SPRR and WPRR) trestles and raising of the Hetch-Hetchy aqueduct pipeline are recommended to increase stormwater conveyance to the Stiver's Marsh-Lake Elizabeth flood storage area and prevent potential backwater flooding of upstream residential areas.

The model also identified a large potential flood storage area between the SPRR and WPRR tracks. The City proposes a golf course in this area. In order to protect flood storage capacity the fairways will be depressed and greens and tees elevated to result in no net loss of flood storage capacity.

Water Quality

Water quality monitoring locations are shown in Fig. 1. Monitoring occurs in each of the four major arms and the lake center. Measured parameters include dissolved oxygen (D.O.), conductivity, temperature, pH, secchi depths, and total fecal coliform bacteria. Water quality concerns include: (1) Bacteria—boardsailing use requires that bacteria levels be monitored to safeguard public health, (2) Algae—periodic episodes of phytoplankton blooms are an aesthetic problem and may present an ecological problem if a bloom collapses, decreasing DO levels, (3) Lake Clarity—phytoplankton blooms, in conjunction with wind-stirred sediments, reduce lake clarity to less than 2 feet, (4) Stormwater—periodic large storm events, in which Mission Creek water flows into the lake, may introduce urban stormwater contaminants to the lake environment.

In July 1992 the City of Fremont discontinued weekly bacteria sampling by park rangers at the lake due to budgetary constraints. The lake was then temporarily closed to boardsailing. ES has since implemented a biweekly schedule of bacteria sampling, recommended the use of revised bacteria criteria, closing the lake during the winter months and reopened the lake to boardsailing in the summer of 1993. However, due to City budget cuts and closure of the boardsailing concession, this lake is not currently open to boardsailing.

Bacteria levels relate strongly to bird populations. Fig. 2 is a diagram of average monthly bird counts and bacteria levels over the last four years. During the summer months, a busy time for the

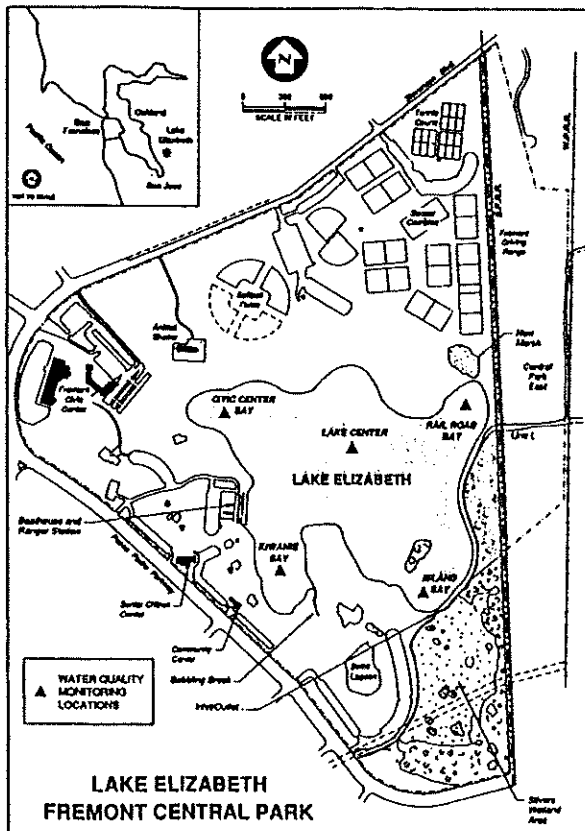


Figure 1.—Lake Elizabeth and Fremont Central Park

lake recreationally, water quality measurements are taken biweekly. ES recommended that winter bacteria sampling frequency be reduced from weekly to monthly because the bird population typically exceeds 1,000 individuals during this period, and interest in boardsailing is light. This recommendation was implemented in the autumn of 1991 and has since saved the ACFCWCD and City in sampling and analytical costs.

ES evaluated two alternatives for improving lake circulation and water quality: rerouting Mission Creek flow through the lake or flushing the lake by periodically removing control boards at the outlet and restoring the lake level using groundwater from Babbling Brook and other wells, as needed. The first option was rejected because: (1) The invert of the Mission Creek channel is lower than the lake and would require pumping; (2) Creek flow would be directed along the leeward (eastern) shore, and not actively flush a large part of the lake; and (3) Mission Creek water quality is typically of equal or lower quality than lake water quality. Lake level control/groundwater flushing was chosen because of superior groundwater quality, dispersion of flushing water throughout the lake, and lower operation and maintenance costs through utilization of existing control structures and pumping facilities.

Bird Management

Management of the bird population is critical to long-term reduction of the lake's bacteria levels. A reduced bird population would improve water quality and minimize turf damage. The waterfowl population is controlled through nest depredation of domestic ducks and geese, naturally occurring diseases (avian cholera) and controlled feeding. A prohibition on feeding of waterfowl was passed by the City Council. Signposts were erected at the lake, and Park Rangers have distributed educational pamphlets and warned violators. The island was also denuded of groundcover to discourage nesting. A native grass mix has been recommended, which does not provide cover and nesting habitat for waterfowl. Data from the winter of 1992-1993 suggest these measures have been effective in reducing the population of domestic and migratory geese and ducks, however, continued management will be required.

Since the creation of Lake Elizabeth, the channelization of Mission Creek, and the filling of the silt pond, little to no summertime flows reach Stiver's Marsh. Drought conditions over the last six winters have exacerbated dry conditions in the marsh and the wetland has been invaded by plant species adapted to drier conditions. The habitat of Stiver's Marsh could be enhanced by diverting more Mission Creek flow through the wetland. This could be achieved by breaching the eastern shore of Mission

Creek in several places, excavating sloughs through the wetland, and creating a silt pond at an upstream location (e.g., between the SPRR and WPRR) to contain stormwater sediments so the enhanced wetland is not filled. Installation of a summer weir or rubber dam is also proposed to impound waters in Mission Creek for diversion into Stiver's Marsh during the critical time when water levels in the marsh are at their lowest.

Environmental Science Associates and Philip Williams Associates have taken these recommendations and prepared a Stiver's Marsh Restoration/Enhancement Plan. Fig. 3 provides a cross section view of proposed improvements. Enhancement of Stiver's Marsh in this manner would restore its water table, natural flood storage capacity and water quality improvement functions in an environmentally sensitive manner which would also enhance wildlife habitat and public educational values.

Recreation

Recreational activities popular at Lake Elizabeth include boardsailing and boating which are controlled by park rangers headquartered in the Central Park boathouse. Construction of a sandy beach in the western portion of the lake would improve lake access for boardsailors. Controlling the bird population and improving lake circulation are measures that may be taken to keep the lake open longer for boardsailing. Other recreational activities include walking, jogging, bicycling, and fishing. Carp, crappie, and sunfish are some of the species that may be caught at Lake Elizabeth.

Education and public awareness programs at Lake Elizabeth include Junior Ranger and School Classroom programs. There are several issues that the public should be made aware of through these education programs, brochures, or press releases. One is the general function of the lake for flood control, water quality, wildlife habitat, and recreation. A nature walk around the lake and marsh with brochures and interpretive signs is proposed, which

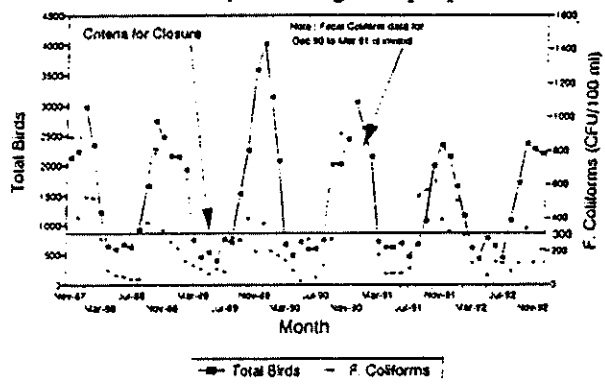


Figure 2.—Average monthly bird counts and fecal coliforms.

would explain the hydrologic functions and flora and fauna of the area. Such a system would be coordinated with the nature walk and signage already in place in the Stiver's Marsh area.

Capital Improvement Program

In 1991 ES prepared a comprehensive lake management plan for Lake Elizabeth which reviewed a variety of lake-related issues including wildlife habitat, water quality, flood storage, and recreation. Recommendations were made to improve these and other lake functions. As a result, the City has been studying several capital improvement projects for the lake. Some of the considered improvements include the following:

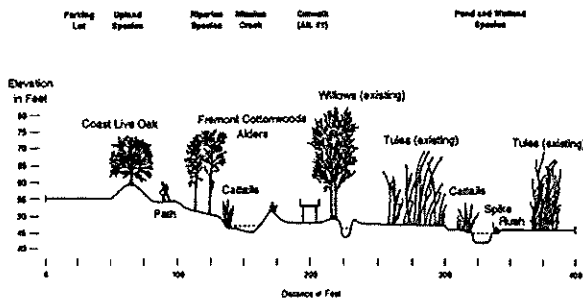
1. Dredging—the lake has not been dredged since it was created in 1968. Dredging would improve water quality and associated recreational and aesthetic values by increasing depth, making bottom sediments less susceptible to mixing and stirring caused by wind, and by removing muck high in organic matter and potential urban runoff contaminants, leaving a cleaner substrate.

The bays would be left as shallow water habitat. Dredged material would be disposed in landscaped mounds with elevations well above the 100-year flood level to provide topography and buffers between competing uses, while minimizing reduction of flood storage capacity.

2. Shoreline stabilization—stabilization would aid in reducing turbidity and lake bottom sediment deposition by making bank areas less susceptible to erosion.

Environmentally sensitive methods such as vegetated rip rap, planters in existing rip rap, and vegetated shoreline are recommended.

3. Stiver's wetland restoration and enhancement—as discussed previously, restoring Stiver's wetland



NOTE Vertical Exaggeration = 2.5x

SOURCE: Environmental Science Associates, Inc.

ENVIRONMENTAL SCIENCE, INC. ES

Figure 3.—Cross-section through Stiver's Lagoon Marsh with proposed improvements.

would increase habitat value, improve water quality, and restore natural flood storage capacity. This has been identified as a priority in the City's capital improvement program.

4. Turf management—heavy use of the park by birds and people has resulted in turf damage in the older southwestern portion of the park. The City is presently embarking upon an improvement program to replace damaged areas.
5. New facilities—a new boathouse and ranger station has been recommended to replace the present, crowded facilities. A fishing dock has also been donated.
6. Silt pond—a new silt pond would avoid deposition of sediments and in-filling of an enhanced Stiver's Marsh. The silt pond is critical to maintaining the long-term conveyance and flood storage capacity of Mission Creek and Stiver's Marsh and would protect marsh enhancement efforts. The recommended location for the silt pond is between the SPRR and WPRR. It is being designed in combination with a golf course between these railroads.

Management

The lease agreement between the Flood Control District and the City has been modified to improve management responsibilities and coordination. For instance, vegetation removal and dredging in channels to maintain flood conveyance and storage will be coordinated and announced to the public. One bank of Mission Creek within park would be maintained and enhanced for habitat value. Memoranda of Understanding will be used to adopt and coordinate specific capital improvements and maintenance operations.

Conclusions

This presentation emphasizes the need for comprehensive and multi-disciplinary planning for effective lake management of potentially competing resource values. The proposed management plan and capital improvements will protect the flood storage capacity of the Lake Elizabeth area while improving water quality, recreational use and aesthetic appearance. The Stiver's Marsh enhancement plan and vegetated shoreline treatments will enhance habitat value and wildlife use. More intensive recreational use will be limited to the northern and southwestern areas of the lake shore. The eastern portion of the lake will be managed for habitat, environmental education, and wildlife viewing. Therefore, conflict between active recreation and habitat is minimized.