

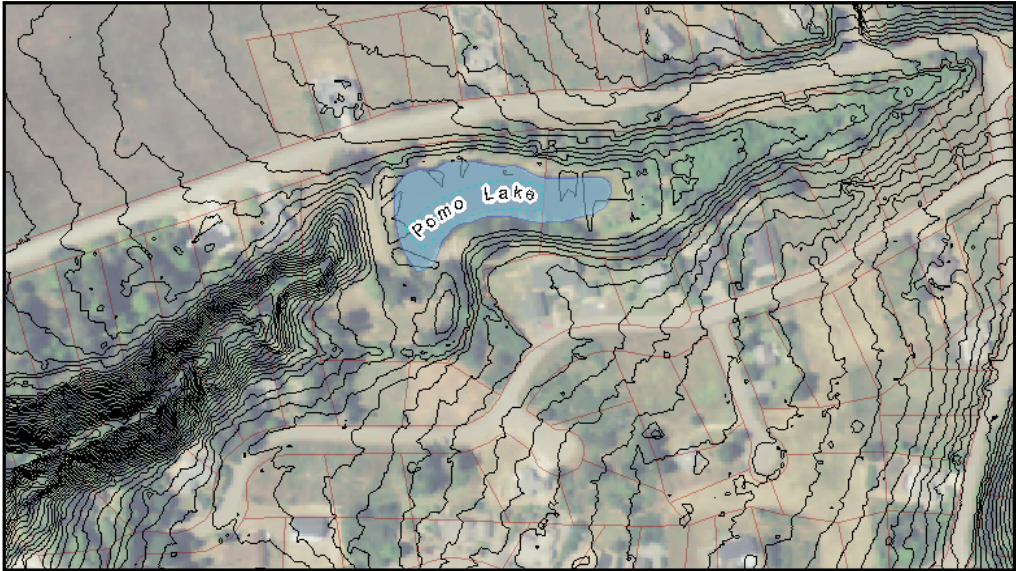
BID PROPOSAL

FOR

POMO LAKE STUDY

Prepared for:

Irish Beach Improvement Club



prepared by:

William Maslach, M.A.
32915 Nameless Lane
Fort Bragg, California 95437
(707) 964-4547
geobotanical@mcn.org

March 8, 2010

Purpose

From the information provided by Mr. Leon Drolet, the Irish Beach Improvement Club (IBIC) is seeking professional assistance for a study of Pomo Lake that would include an assessment of the present condition of Pomo Lake, its restoration, and a maintenance plan, including cost-estimates of tasks and permits in each of these phases. This information will be presented to the IBIC to facilitate their decision in proceeding forward.

Background

From discussions with Mr. Drolet, the Mendocino County Department of Planning and Building permit enforcement officer spoke to him and indicated that the lake was an Environmentally Sensitive Habitat Area (ESHA), and a Coastal Development Permit (CDP) would be needed for any work in the lake, including removing silt or cattails. I have had several conversations with county planner, Teresa Spade, and asked if a permit would be necessary. She has since referred this question to the senior planner and is awaiting his comment. When we spoke, she indicated that although the lake is an ESHA, certain types of work may not need a CDP.

In light of this information, this proposal does not include estimates for detailed surveys, such as a wetland delineation or botanical survey, as these are expenses that need not be incurred until it is determined by a permitting agency (California Department of Fish and Game, Mendocino County and Building, US Army Corps of Engineers, North Coast Regional Water Quality Control Board) that the least impacting method of the Pomo Lake restoration, does in fact require a permit. Additionally, the results of the US Fish & Wildlife's red-legged frog survey may preclude certain type of lake management activities. IBIC will be presented with several options for the ongoing maintenance of the lake in the Pomo Lake Study.

This proposal does not include estimates for surveys or for the applications of permits. That information will be included in the study, especially since some surveys may not be needed based on the desired method for the maintenance of the lake. Additionally, this proposal does not include an estimate for the analysis of the integrity of the dam or other geomorphic features.

Scope of Work and Work Products

Essentially, this report will describe the condition of the lake, outline effective means for maintaining the lake, and inform the board on what activities can and can't be done - and how much those activities will cost.

Lake Assessment

Lake Mapping:

Baselines will be established at key points across the lake to capture soundings at given intervals. These data will be used to create cross sections and a bathymetric map that can be used in the future for comparative analysis. Small, permanent markers will be placed at the baseline endpoints to facilitate repeatable surveys. Markers, baselines, and the lake edge will be plotted on a scaled map of approximately 1:600.

Topographic Contours:

Ground elevation will be interpolated from LiDAR (Light Detection and Ranging) bare earth elevation models and portrayed as 1' to 3' contour intervals on the lake map.

Floristic Inventory:

Plant species occurring in and around the lake will be documented and presented as a list that includes the scientific and common name and whether or not the species is native to California. Any invasive plant species will be identified.

Vegetation Map:

Vegetation within 100' of the water's edge will be identified based on *A Manual of California Vegetation* by John Sawyer and may be adapted to fit site-specific assemblage of plants. Polygons of vegetation will be drawn and labeled on a scaled map of approximately 1:720. All mapping will be available as layers in a geographic information system (GIS) should IBIC need the information in that format.

Aerial Photography Analysis:

Current and past (at least within 10 years) aerial photography of the lake will be analyzed to determine the increase or decrease of any vegetated infill or receding of the lake edge due to sedimentation.

Agency Contacts / Permits

Agency Contacts:

Agencies that have regulatory authority over activities associated with silt or vegetation removal from the lake or vicinity will be contacted to establish a threshold for their required permit. For example, the County may not require a permit until vegetation removal is considered "major vegetation removal" under the County's Local Coastal Program or Fish and Game may not require a Lake and Streambed Alteration Agreement (1600 Permit) if cattails are treated with aquatic-safe herbicide and removed when dead. Agencies to be contacted include California Department of Fish and Game, Mendocino County and Building, US Army Corps of Engineers, North Coast Regional Water Quality Control Board, and US Fish & Wildlife Service. The activity that "triggers" the need for each agency's permit will be summarized in a list.

Permits:

The cost or cost range of each permit will be included in the aforementioned list, including the cost of obtaining the permit, associated surveys (botanical, wetland delineation), and the cost of the surveys.

Lake Restoration

Nutrient and Sediment Management:

Potential nutrient and sediment sources that could enter the lake will be identified and remedies will be presented. This includes runoff from landscaped gardens, mowed lawns, and unvegetated areas. Culverts in the upstream dam will be evaluated and recommendations made for their maintenance. Likewise, sediment that may impede the flow of water through the diversion dam will be evaluated in terms of maintaining flow. All areas considered potential sediment sources will be located on the lake map.

Aquatic Vegetation Removal:

Effective methods for aquatic vegetation will be presented. These include, but are not limited to, the use of aquatic-registered herbicides, hand removal of cattails with shovels, and the use of heavy equipment in strategic areas. Costs for each will be developed. All areas of vegetation removal will be located on the lake map.

Maintenance Plan

Goals of Pomo Lake provided by IBIC (namely scenic and recreation) will be incorporated with recommendations for the lake restoration and presented as several alternatives. Each alternative will have an associated cost-range for completion of the tasks. The maintenance plan will include all baseline maps and existing conditions of Pomo Lake; identification of sediment and nutrient sources and prescription for their reduction; methods of aquatic vegetation removal and their costs, including permits. The maintenance plan will present alternatives so that it can be a tool for decision-makers interested in a "low-tech" method of vegetation removal this year, or a means for implementing a more robust method of sediment and vegetation removal in years to come.

Time Line

The Lake Pomo study presentation to IBIC will be on May 1st and the study will be completed by the end of the same month. The document will be given to IBIC for review and will be modified to accommodate any comments by IBIC before final submittal.

Cost Estimate

It is estimated that the cost based on the Scope of Work is \$5,950. Itemized tasks follow at a rate of approximately \$65/hr:

Lake Assessment \$2600

Agency Contacts / Permits \$800

Lake Restoration \$1000

Management Plan \$1300

Presentation \$250

Payment is due before submittal of final deliverables. No initial payment is needed for work to begin. William Maslach and/or coworker Tina Fabula will perform all work based on time and materials. Costs are estimated and

subject to change based on situations that may arise during this work. The client will be immediately notified if additional fees will be incurred and the reasons for the increase will be given.

Approval

A signature on the appropriate line below will give William Maslach or Tina Fabula official permission to enter the property for the purpose of completing this report and a commitment to pay the invoice based on this estimate.

[William Maslach or Tina Fabula]

[Client]

Signature

Signature

Title

Date

Title

Date