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205(j) CONCEPT PAPER

DEVELOPMENT OF A PROPOSAL TO REASSESS THE STATUS OF VANCOUVER LAKE RESTORATION

Problem Statement

The Vancouver Lake Restoration Project was completed in 1983 at a cost of $17,000,000. Five years later, Vancouver Lake is among Clark County's most popular recreational resources. However, the lake's swimming beach remains posted to warn swimmers of potential health risks associated with water quality. During September of 1987, the lake experienced a series of algal blooms. Moreover, sediment movement within the lake resulting from the operation of a flushing system may be having unanticipated, adverse impacts on fisheries and recreation.

A comprehensive reassessment of the restoration effort at Vancouver Lake is needed. At this time, available data are insufficient to permit a meaningful evaluation of the overall effectiveness of lake restoration efforts. In particular, additional information is needed on sedimentation rates, fishery conditions, flow characteristics, and water quality at the lake. In addition to historic concerns, accelerated development in the Salmon Creek drainage basin -- which feeds Lake River and, in turn, Vancouver Lake -- raises serious new concerns about increased sedimentation rates and nutrient loading to Vancouver Lake.

Background

During the mid-1970's Vancouver Lake was the subject of an extensive diagnostic study to determine its water quality condition, trophic status, and source(s) of its problems. Upon completion of the diagnostic study, the lake was determined to be highly eutrophic. Limnologists characterized the lake as "rapidly dying." Two key problems were identified during the diagnostic phase of the lake's restoration. These problems included sedimentation as a result of years of poorly controlled urban development in the Burnt Bridge Creek drainage basin, and high nutrient, turbidity, and bacteria levels resulting from nonpoint sources around the lake and in the lake drainage basin.

Limnologists recommended that local decision-makers take immediate action. In response, a master plan for Vancouver Lake was developed in 1977. The plan called for the establishment of a flushing channel to the Columbia River to provide relatively clean water to the lake, dredging to improve circulation and improve recreational opportunities, and reduction of nonpoint source pollution in the Burnt Bridge Creek drainage basin.

The master plan gained support from a broad cross-section of government agencies and the general public. The Port of Vancouver emerged as the lead agency for the implementation of the lake master plan. As lead agency, the Port played an important role in providing and obtaining funds to implement the master plan.

In 1983, the Vancouver Lake Master Plan was completed at a cost of $17,000,000 for in-lake measures. Additional measures to address nonpoint source pollution were being implemented through the formation of the Burnt Bridge Creek Drainage Utility by the City of Vancouver and Clark County. The Phase II lake restoration program was officially completed in 1983.

Vancouver Lake (2,600 acres) is now one of Clark County's most popular recreational resources, providing its users opportunities for swimming, sailboating, windsurfing, and fishing. However, no follow-up monitoring of the lake has occurred since the restoration project was completed five years ago. Today, Clark County posts the swimming beach at Vancouver Lake Park with signs to warn swimmers of potential health risks. During the summer of 1987, the lake experienced a series of algal blooms which have raised questions about water quality conditions at the lake. In addition, the Vancouver Port District has noted that sediments at the outlet of the lake flushing channel are accumulating at rates far lower than had been anticipated when the system was designed. This indicates that flow dynamics and sedimentation patterns within the lake -- and their associated impacts on lake use -- are not, at this time, well understood.

Corrective Actions Necessary

An immediate need exists to develop a grant application, including a scope of work and budget, for undertaking a comprehensive lake monitoring program. The purpose of this monitoring program will be to gather data which allow the status of lake restoration efforts to be re-evaluated.

A task force will be organized to assure that the monitoring program is comprehensive and that it addresses all relevant lake restoration issues. IRC will be responsible for organizing the task force and for staffing/coordinating task force meetings. The task force will be responsible for developing the monitoring program. The products of this effort will include a scope of work, budget, and funding strategy for undertaking a comprehensive lake monitoring effort.

Activities proposed at this juncture do not include the gathering of new data. Rather, appropriate data collection activities will be identified and a grant proposal prepared. The proposed monitoring program will be geared toward gathering data on patterns and rates of sedimentation, flow characteristics, water quality, and fishery conditions at the lake.

No specific corrective actions are proposed at this point. The need for corrective action will be based on the findings of the lake monitoring effort. Corrective actions which may be recommended as a result of the study include:

- Dredging of Vancouver Lake to alter circulation patterns or improve fishery conditions.

- Establishment of strict development controls in the Salmon Creek drainage basin, similar to those of Burnt Bridge Creek.

- Purchase of flood plains or other areas identified as erosion-sensitive zones.

- Restocking of fish in Vancouver Lake.

Project Description

Objective:
The specific objective of this project is to establish a Vancouver Lake Task Force and meet with this task force to (1) review the status of Vancouver Lake restoration efforts to date, and (2) develop the scope of work for a study to determine what additional measures need to be taken to assure the effective long-term restoration of Vancouver Lake.

Tasks:
The following tasks will be undertaken to realize these objectives:

- Task 1 - IRC will establish a Vancouver Lake Task Force representing a variety of agencies, interests, and areas of expertise. This Task Force will be responsible for developing the scope of work and budget for the lake monitoring program.

  Organizations to be represented on the committee will include, but not be limited to:

  - Port of Vancouver
  - Clark County Public Works
  - Clark County Planning
  - City of Vancouver
  - Diking Improvement District #14
  - Washington State Dept. of Game
  - Department of Ecology
  - USDA Soil Conservation Service
  - U.S. Environmental Protection Agency
  - Sportsmen's organizations
  - Citizen representatives

(The following tasks will be the responsibility of the Task Force:)

- Task 2 - Review the original objectives of the Vancouver Lake restoration effort, and review actions which have been undertaken to date to meet these objectives. Based on available information, identify deficiencies in data which must be addressed in order to adequately evaluate the status of lake restoration efforts.

- Task 3 - Prepare a grant application, including a scope of work and budget, for undertaking a comprehensive study of environmental and water quality conditions at Vancouver Lake. This study will assess the success of the lake restoration effort in meeting original program goals. Environmental concerns to be addressed by the study effort will include:

  - Sediment loading
  - Fisheries habitat
  - Nutrient loading/trophic status of lake
  - Hydraulic flow characteristics in the lake
  - Public health concerns

- Task 4 - Identify alternative funding mechanisms for implementing the lake monitoring program, and recommend a course of action for securing funding and generating required local match (if necessary). Identify the appropriate lead agency to coordinate the lake monitoring effort.

Schedule:
This effort will be of six months duration, from October 1988 to March 1989. Approximately seven meetings of the task force will be held during this period. Projected completion dates for each task are:

	Months
Task 1: Establishment of Task Force	Oct 1988
Task 2: Review of restoration objectives, identification of data deficiencies	Oct-Nov 1988
Task 3: Development of grant application	Dec-Mar 1989
Task 4: Identification of lead agency, recommendation for funding action	Feb-Mar 1989

Project Budget:

	Total, FY 89
Personnel Years (FTEs)	(.16)
Personnel	$ 4,292
Fringe Benefits	1,674
Travel	80
Equipment	-
Supplies	180
Contractual	-
Construction	-
Other	-
TOTAL DIRECT CHARGES	6,226
Indirect Charges	1,789
TOTAL	$ 8,015
Local in-kind	$ 2,672
TOTAL PROJECT	$ 10,687

Budget by Task:

	Total
• Task 1	$ 850
• Task 2	2,124
• Task 3	5,908
• Task 4	1,805
TOTAL PROJECT	$ 10,687
Local Contribution (in-kind):	$ 2,672
205(j) Contribution:	$ 8,015

Public Involvement:
Refer to Task 1.