

Office of City Manager

CONSENT CALENDAR  
September 9, 2003

To: Honorable Mayor and  
Members of the City Council  
From: ~~Weldon~~ Rucker, City Manager  
Subject: Initial Study Related to Proposed Use of Aquatic Park Main Lagoon

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to prepare an Initial Study to determine any environmental impacts related to use of the Main Lagoon at Aquatic Park by a proposed lease with the Berkeley High School (BHS) Women's Crew and by the existing use of the Lagoon by the Berkeley Rowing Club and the Berkeley Waterski Club.

FISCAL IMPACT OF RECOMMENDATION

The cost to prepare the environment document is not anticipated to exceed \$10,000. Funds are available in the Aquatic Park Capital Improvements Fund, Budget Code 610-5849-450-3038.

CURRENT SITUATION AND ITS EFFECTS

Before considering and possibly approving a lease with the BHS Women's Crew, and renewing leases with the Berkeley Rowing Club and Berkeley Waterski Club, staff recommends that the first step should be to identify any environmental impacts that use of the property and more importantly, use of the Main Lagoon these users may have on the environment, especially waterbirds. Staff endorses the concept of the Crew using the Main Lagoon, in addition to the continued use by the Rowing and Waterski Clubs, provided any adverse impacts can be mitigated in order to achieve a balance between water-based recreational use of Aquatic Park and maintaining a waterbird habitat in the Lagoon.

The effect of proceeding with the Initial Study is help the Council determine if it is sound public policy to approve a lease that would allow the BHS Women's Crew to use the Main Lagoon for its rowing practices. The Study will be used to determine the appropriate environmental document required by CEQA regulations, such as an EIR or a Mitigated Negative Declaration.

BACKGROUND

For many years, members of the Berkeley Waterski and Berkeley Rowing Clubs have used the Main Lagoon. Both clubs are presently operating under "Holding Over" provisions contained in their most recent leases with the City.

In 1999, the BHS Women's Crew responded to a Request for Proposals (RFP) issued by the City to solicit tenants for the boathouse property at 80 Bolivar Drive located at the northeast corner of the Park. The Tinkers Workshop and the Crew both indicated an interest in this property, previously occupied by a sailing school. Based on a recommendation from the Aquatic Park Sub-Committees of the Waterfront Commission and the Parks and Recreation Commission, Tinkers and the Crew agreed to both use the property, and the two groups agreed to a reasonable division of the site. Over the years, the property has been neglected and now needs significant repair work.

Since the Tinkers Workshop had been a viable community organization for several years prior to 1999 and has received funds from the City's Block Grant Program, Tinkers was able to execute a ten-year lease for its portion of the property and has started making substantial improvements. Parents serve on the Board of the Crew and generally leave the Board once their children graduate from BHS. It has been difficult for the Board to sustain the consistent effort required to implement a project of this magnitude. However, the Crew's current Board has been able to build on past efforts and has put together a feasible development program, pending the results of the proposed environmental documents.

Bird Impact Study

When discussing a proposed lease with the Waterfront Commission earlier this year, both Art Feinstein (Audubon Society) and Norman La Force (Sierra Club) recommended that the City obtain information on any impact the Crew activity would have on birds using Aquatic Park. In response to this suggestion, the City retained LSA Associates, Inc. (LSA) to prepare a report addressing this issue, as well as the cumulative impact of other persons using the Lagoon, including the Rowing and Waterski Clubs.

The attached report from LSA provides very useful information and recommendations that can be used, with some additional information, as a major component to the proposed Initial Study and other environmental documents.

Recommendation from the Parks and Recreation Commission

At its meeting on August 18, 2003, the Commission took the following action, as recorded in the draft minutes of the meeting. The Commission will consider and adopt the minutes at its next meeting on September 22<sup>nd</sup>.

Moved, seconded, carried (Weissman/Huang) to recommend that Council direct the staff to study the potential environmental impacts of allowing the Berkeley High School Women's Crew to practice on the Aquatic Park Lagoon as a potentially promising use of that facility. (6-0-0-1)  
(Absent: Barrantes)

RATIONALE FOR RECOMMENDATION

An Initial Study will examine any environmental impacts that would result from Council approving a new use of the Main Lagoon via a lease with the BHS Women's Crew and continuing existing uses by renewing leases with the Berkeley Rowing Club and the Berkeley Waterski Club. The information gathered from this Study will determine the scope of any further environmental documents required by CEQA regulations.

ALTERNATIVE ACTIONS CONSIDERED

Staff considered the option of providing a proposed lease to the Council, along with the recommendations contained in the attached Bird Impact Report. However, the process of preparing environmental documents provides a formal process for community review and input.

CONTACT PERSON

Cliff Marchetti, Waterfront Manager

644-6376, X224

Approved:



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Lisa Caronna, Director  
Parks Recreation & Waterfront Department

Attachment A: Bird Impact Report prepared by LSA-Associates, Inc.

RESOLUTION NO.

-N.S.

AUTHORIZING THE CITY MANAGER TO PREPARE AN INITIAL STUDY TO DETERMINE ANY ENVIRONMENTAL IMPACTS RELATED TO USE OF THE MAIN LAGOON AT AQUATIC PARK BY A PROPOSED LEASE WITH THE BERKELEY HIGH SCHOOL (BHS) WOMEN'S CREW AND BY THE EXISTING USE OF THE LAGOON BY THE BERKELEY ROWING CLUB AND THE BERKELEY WATERSKI CLUB

WHEREAS, the Berkeley High School Women's Crew has made a proposal to lease City property in Aquatic Park and to use the Main Lagoon in the Park for its rowing practices; and

WHEREAS, the Berkeley Rowing Club and Berkeley Waterski Club have used the Main Lagoon for many years and the leases are up for renewal; and

WHEREAS, the use of the Main Lagoon for these purposes may potentially result in impacts on the Park's environment and to the bird population that uses the Main Lagoon, but the City has no information that the uses might have a significant impact.

NOW THEREFORE BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is hereby authorized to prepare an Initial Study to determine any environmental impacts related to use of the Main Lagoon at Aquatic Park by a proposed lease with the Berkeley High School (BHS) Women's Crew and by existing use of the Lagoon by the Berkeley Rowing Club and the Berkeley Waterski Club.

ATTACHMENT A

July 25, 2003

Mr. Ed Murphy  
Parks and Recreation Department  
City of Berkeley  
2180 Milvia Street, Third Floor  
Berkeley, CA 94704

Subject: Berkeley High School Women's Crew Team Activity Impacts to Birds in Berkeley Aquatic Park

Dear Mr. Murphy:

Per your request, LSA Associates, Inc. (LSA) has evaluated the potential effects to birds that could result from the proposed use of Berkeley's Aquatic Park by the Berkeley High School women's crew team. Information on current and proposed boating activities was provided by Ed Murphy (Berkeley Parks and Recreation Department), Christopher Noll (President, Berkeley High School Women's Crew), Fred Conrad (President, Berkeley Paddling and Rowing Club), and Dave Ritter (Berkeley Water Ski Club). Our impact evaluation was based on a site visit with Christopher Noll and Fred Conrad on July 15, 2003, available bird count data provided by Steve Granholm of LSA, and a review of available literature on the effects of human disturbance on migratory and resident waterbirds.

For the purposes of this evaluation, we have divided the more general term "waterbirds" into 4 groups since the potential impacts to certain groups will vary due to their use of different habitats. These 4 groups are:

- Open-waterbirds (ducks, geese, loons, grebes, coots, cormorants, and pelicans): these species occur on open water and spend relatively little time along the shoreline or in flight.
- Shorebirds (sandpipers, avocets, and stilts): these occur on mudflats and other exposed areas along the shoreline.
- Wading birds (herons and egrets): these species occur all along the shoreline and in shallow water.
- Gulls and terns: these species occur on the shoreline and on open water, and, they naturally spend more time flying (particularly terns) than waterbirds do.

We have focused our evaluation on the potential impacts to open-water birds (as defined above) since the proposed use of Aquatic Park by the crew team will take place almost exclusively in the open water section of the main lagoon.

7/21/03(P:\Cbe330\Aquatic Park Impacts Report.wpd)

ATTACHMENT A

## **Site Description**

Berkeley Aquatic Park is located in Berkeley, California on the west side of Interstate 80, between University Avenue and Ashby Avenue. Aquatic Park consists of upland areas encircling a lagoon formed in the 1930's when Route I 80 was built on fill material, isolating the original shoreline from the Bay. The eastern edge of the Aquatic Park lagoon is the original San Francisco Bay shoreline. The 68 acres of water and 33 acres of surrounding upland are largely developed as a recreational park. The aquatic portion of the park is now divided into the main lagoon and two much smaller basins: the Model Yacht Basin and the Radio Station lagoon. Each of these basins is partially connected to the Bay through culverts under the freeway that allow limited tidal flow. In addition, fresh water flows into the main lagoon, resulting in lower overall salinity than the adjacent Bay.

## **Current Public Use**

Aquatic Park is open to the public for many recreational uses, but the following description focuses on those uses that occur on and around the water in Aquatic Park, because these are the activities most likely to affect waterbirds.

Much of the shoreline at Aquatic Park is available to pedestrians to hike, jog, walk their dogs, or fish.

The Berkeley Paddling and Rowing Club (BPRC) uses the main lagoon in Aquatic Park for paddling rowing shells and flatwater kayaks. Their activities are largely concentrated in deeper water, away from the shoreline, but they can also be expected to approach or paddle along the shoreline occasionally. Their boats are launched from the BPRC's boathouse in the southwestern corner of the main lagoon. The majority of this activity is concentrated in the morning and late afternoon. The BPRC user log for 2001 indicates that an average of 321 people used the lagoon each month - approximately 11 per day.

The Berkeley Water Ski Club (BWSC) is a recreational and tournament club that uses the main lagoon, with most of their use restricted to the central, deep-water sections in the southern two-thirds of the main lagoon. Most of the boats used are inboard engine, competition ski boats. The use of motor boats, and water skiing, are restricted to the period between May 1 and September 30 in order to minimize the impacts to winter resident and migratory birds during the fall, winter, and spring. No boating is permitted in the Model Yacht basin or Radio Station lagoon.

## **Proposed Crew Team Activities**

The Berkeley High School women's crew team proposes to use Aquatic Park between September 1 and May 31 each year for practices and training. Practices would take place on 3 to 5 afternoons per week, Monday through Friday, between approximately 4:00 p.m. and 6:30 p.m. In addition, Saturday morning practices would take place for 2.5 to 3 hours sometime between 7:30 a.m. and 11:30 a.m. During practice there would be up to 4 rowing shells on the water. In most cases these would be 8-person rowing shells that are 58 to 62 feet long, but 1-, 2-, and 4- person shells may occasionally be used as well. Other than the initial launch, rowing would take place in two straight lanes running

north and south down the center of the main lagoon. In addition to the rowing shells, usually 2, but as many as 3, coaching launches would be on the water, traveling behind the rowing shells during practice. The two main coaching boats are twin-hull, "wakeless" launches powered by a 10 to 15 hp, 4-stroke engine. A third coaching boat that would be available for emergencies and occasional use is a single-hull aluminum boat with a similar engine. All boats would be stored at and launched from their boat house in the northeastern corner of the main lagoon.

### Waterbird Use of Aquatic Park

Aquatic Park is used by over 50 species of waterbirds. Several of these species are residents or migrants that breed in the region. However, the majority of the waterbird species that have been observed using the park are winter residents or migrants that move through the region on their way north and south. For these wintering and migratory species, Aquatic Park may serve as an important foraging location where they can rest and feed in preparation for their migration. The abundance of wintering and migrant waterbirds that use Aquatic Park is illustrated by how many birds have been seen on six counts in recent years (Table 1). Aquatic Park, and other secluded lagoons around the Bay, are important locations for these bird species, because they offer relatively protected and calm locations to feed and/or rest compared to the open Bay.

**Table 1.** Number of individuals and species using Aquatic Park on five recent Christmas Bird Counts (all in December) and one recent October count<sup>1</sup>.

Species Group	Dec. 1996	Dec. 1997	Dec. 1999	Dec. 2001	Oct. 2002	Dec. 2002
Open-water birds	758(16) <sup>2</sup>	766(16)	940(18)	807(14)	374(7)	947(17)
Shorebirds	124(6)	70(4)	541(9)	210(7)	164(6)	7(2)
Gulls and terns	199(5)	52(5)	198(5)	342(4)	67(4)	184(4)
Waders	110(4)	80(4)	67(4)	52(5)	52(4)	32(5)
<b>Total</b>	<b>1191(31)</b>	<b>968(29)</b>	<b>1746(36)</b>	<b>1411(30)</b>	<b>657(21)</b>	<b>1170(28)</b>

<sup>1</sup> Except for the shorebirds, the great majority of these birds were observed in the main lagoon.

<sup>2</sup> Number of individuals (number of species)

### Effect of Human Disturbance on Waterbirds

Human activity on and around the water can cause significant disturbance to birds that are breeding, feeding, or resting. The degree of disturbance depends on the nature of the activity and the bird species, as well as the level of disturbance to which the local birds are accustomed.

Human disturbance can affect birds in several ways. In the breeding season, disturbance can cause adults to flush from the nest and when this occurs often enough or for long enough, nest success may

decrease as the eggs become exposed to the elements and more prone to predation (Carney and Sydeman 1999, Klein 1993, Korschgen and Dahlgren 1992). Disturbance during the nesting season can also cause adults and chicks to become separated, resulting in increased chick mortality (Korschgen and Dahlgren 1992). During the winter or migration, as well as the breeding season, human disturbance disrupts feeding behavior and increases flying time, which increases the energy expenditure by disturbed birds (Korschgen and Dahlgren 1992, Rodgers and Smith 1997). This impact would have its greatest effect on birds that are migrating, or preparing for migration, and thus are dependent on maintaining high energy reserves.

It is reasonable to expect that shorebirds and wading birds would be disturbed most frequently by shoreline activity such as pedestrians, dogs, and fishing, because they spend their time primarily along the shoreline. However, humans approaching the shoreline in water craft will also disturb these species. In contrast, open-water birds — like the many ducks that winter and migrate through the Bay — spend more time on the water and are probably disturbed more frequently by humans in water craft. One exception to this is disturbance to open-water birds during the breeding season, when many open-water bird species nest along the shoreline, where humans walking can cause adults to flush from or abandon their nests.

Different bird species and local populations may vary in their response to disturbance. For example, some migratory birds may be more easily disturbed because they spend most of the year in areas with little human activity, while other species, such as certain gulls, are less easily disturbed because they often live in close association with humans and have become habituated (Rodgers and Smith 1997).

### **Impact Assessment**

The greatest level of human disturbance to open-water birds results from rapid, loud movement on the water, such as that from motor boats, followed by over-water movement of non-motorized or quiet water craft. Less disturbing activities include wading and swimming and activities along the shoreline, such as fishing, bird-watching, and hiking (Korschgen and Dahlgren 1992).

The Berkeley High School women's crew team will be practicing during the fall, winter, and spring, when wintering and migratory waterbirds are most abundant in the Bay Area and the number of open-water birds using Aquatic Park is highest. As a result, the crew team's use of the Park will increase the level of impact to waterbirds above the current levels.

The primary source of impact will come from crew boats traveling back and forth down the center of the main lagoon, causing open-water birds to flush from the water. These birds will be forced to either fly to the edges of the main lagoon, the other two basins, or out of Aquatic Park. Compared to the current use of 1- and 2- person kayaks during these times of year, the rowing shells are likely to cause greater disturbance, for two reasons. First, rowing shells, particularly 8-person shells, are much larger, with long oars extending out either side. Second, the crew teams will travel back and forth down the length of the lagoon faster than most other non-motorized boats (approximately 11 mph). As a result, most birds in the central, deep-water section of the lagoon (where the rowing lanes are), will likely be flushed to the edges of the main lagoon. The repeated disturbance from

boats moving back and forth across the lagoon may cause many birds to leave the main lagoon or Aquatic Park altogether. The additional disturbance caused by the presence of the small motorboats following the rowing team is unlikely to significantly add to the level of disturbance, because the two main boats will have wakeless hulls and relatively small, quiet motors. These small motorboats will have much less impact than the quick and loud motorboats addressed by Korschgen and Dahlgren (1992).

During the practice periods, the crew boat activity will greatly reduce the amount of open water habitat available for open-water birds in Aquatic Park and the amount of time that they can spend feeding. Many will probably leave the main lagoon, and those that remain will be flushed to the edges, where they are subject to repeated disturbance by park users and dogs. Only a limited number of the birds that flush from the main lagoon could be supported by the adjacent, small basins and most would likely move to the Bay. As noted above, the repeated flushing of birds off the water and the reduction in feeding time would reduce the energy they have available for migration.

At those times of day when few or no boats are on the water, the main lagoon would be available for open-water birds to feed and rest and they would be expected to return to the lagoon.

### **Cumulative Impacts**

Currently approved on-the-water activities during the fall, winter, and spring are restricted to rowing and paddling of non-motorized water craft along the length of the main lagoon. Most of this activity consists of kayaks and small rowing shells and occurs in the mornings and late afternoon. Because there is a limited amount of space on the main lagoon, it is expected that the crew team practices will not overlap substantially with the activities of paddling club members. For this reason, the addition of crew team practices at the park would result in an overall increase in the number of hours each day that boats are on the water. This would decrease the number of hours that birds are able to feed and rest on the main lagoon without being disturbed.

Aquatic Park currently restricts water skiing and the use of motorboats, which cause the greatest disturbance, to May 1 through September 30, when few open-water birds are present, so no cumulative impacts are expected during this period.

### **Recommendations**

Some or all of the following measures could be implemented if the City of Berkeley seeks to minimize the potential impacts of crew team and other boating activities on birds in Aquatic Park.


1. Limit the total number of hours that the crew team and/or paddling club members can utilize Aquatic Park. The main lagoon could have designated no-boating periods.
2. Restrict disturbances to other water areas (the Model Yacht Basin and the Radio Station lagoon) when the rowing team is using the main lagoon. These areas may provide refuge for some of the birds that leave the main lagoon due to disturbance.

3. If possible, prohibit the use of boats in a section of the main lagoon - either the southern or northern end - that can serve as refuge for open-water birds during boating activities.
4. Reduce disturbance of open-water birds, as well as shorebirds and wading birds, by restricting access by park visitors and dogs to substantial segments of the main lagoon shoreline. For example, access could be restricted by means of fencing and by vegetative screening (planting dense, native vegetation) along the west shoreline of the main lagoon. Such measures would reduce flushing of birds due to shoreline disturbance, an important factor when they are forced to the edges of the lagoon during boating activities.

If you have any questions or comments, please call me or Rodd Kelsey at (510) 236-6810.

Sincerely,

**LSA ASSOCIATES, INC.**

*for* 

Steve Granholm  
Principal

#### **References**

- Carney, K.M and W.J. Sydeman. 1999. A review of human disturbance effects on nesting colonial waterbirds. *Waterbirds* 22(1): 68-79
- Klein, M.L. 1993. Waterbird behavioral responses to human disturbances. *Wildl. Soc. Bull.* 21(1): 31-39
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- Rodgers, J.A. and H.T. Smith. 1997. Buffer zone distances to protect foraging and loafing waterbirds from human disturbance in Florida. *Wildl. Soc. Bull.* 25(1): 139-145