



BOARD OF SUPERVISORS
AGENDA LETTER

Agenda Number:

Clerk of the Board of Supervisors
105 E. Anapamu Street, Suite 407
Santa Barbara, CA 93101
(805) 568-2240

Department Name: Parks
Department No.: 052
For Agenda Of: March 11, 2008
Placement: Departmental
Estimated Tme: 45 minutes
Continued Item: No
If Yes, date from:
Vote Required: Majority

TO: Board of Supervisors

FROM: Department Daniel C. Hernandez, Director of Parks (568-2461)
Director
Contact Info: Jeff Stone, Deputy Director of Parks (934-6145)

SUBJECT: Public Hearing to Consider Alternatives to Prevent the Introduction of the Quagga Mussel to Cachuma Lake County Park

County Counsel Concurrence

As to form: N/A

Auditor-Controller Concurrence

As to form: N/A

Other Concurrence:

As to form: N/A

Recommended Actions:

That the Board of Supervisors:

- a. Receive a presentation from the Cachuma Operations and Maintenance Board (COMB) on its request for temporary closure of Cachuma Lake to private boats due to the potential for introduction of the quagga mussel to Cachuma Lake.
- b. Receive a staff presentation on current management practices and actions in place and additional alternatives available for the prevention of introduction of the quagga mussel to Cachuma Lake.
- c. Provide direction to staff on the alternatives presented to prevent the introduction of the quagga mussel to Cachuma Lake.

Summary Text:

The Cachuma Operations and Maintenance Board (COMB) recently sent a letter addressed to the Board of Supervisors addressing the growing concerns regarding the possible introduction of the quagga mussel into Cachuma Lake and the potential operational problems for the Cachuma Lake water purveyors associated with this occurrence at the lake. In its letter, COMB maintains that introduction of the quagga mussel to the lake is very likely via private boats being launched at the lake, which may have previously frequented one of the bodies of water known to have the quagga mussel present. Based on this assertion, COMB has requested that Cachuma Lake be closed to private boats for a minimum of six

months, but, ultimately, as long as it takes, to allow for protective measures to be put into place to prevent the possible introduction of the quagga mussel into the lake.

It is COMB's position that, should the quagga mussel establish itself in the lake, any financial impacts related to maintaining the water purveyance systems would be the responsibility of the County. This is based upon the assumption that the only way the quagga mussel could be introduced into the lake and water reservoir would be via private boats acting as a carrier. Since the County is the responsible agency for the recreation component of the lake, the correlation is that the costs are directly related to recreational activities.

The County Parks Department has been proactive in preventing the spread of the quagga mussel into Cachuma Lake. Parks staff at Cachuma Lake began screening boaters as early as January 2007 and staff at the lake have also received training and have conducted boat inspections and other preventative measures since December 2007.

However, there are additional preventative measures that could be taken, short of closing the lake to private boats, including installation of a decontamination/wash station, which is discussed in more detail in this report.

Background:

History and Background on the Quagga Mussel

The quagga mussel is a non-native aquatic nuisance freshwater mollusk originating in Eastern Europe that clogs waterways, undermines healthy lake ecosystems, and creates costly maintenance for water resource agencies. Quagga mussels were introduced into the Great Lakes region in 1988 through ballast water emptied from ships and have spread throughout the Midwest and the eastern portion of the United States.

Quagga mussels were first discovered in California in Lake Mead and the Colorado River system in January 2007 and have recently been found in several Southern California lakes connected to the Colorado River via aqueducts and canals (see Attachment 1). The spread of the quagga mussel in Southern California is believed to have advanced through those aqueducts and canals via water conveyance systems. In addition to passage through the water conveyance process, the quagga mussel can also be spread by two alternative methods: (1) Adult mussels that have adhered to surfaces, such as boat hulls, are introduced to a water body or system, or; (2) Microscopic forms, such as "veligers", that live in the water column and could survive in water carried by recreational boats in bilges, live wells, and other areas where water could pool and remain, are transported into a water body or system.

The spread of the quagga mussel in California is becoming a significant concern due to the economic impacts associated with their introduction and proliferation. Quagga mussels cause the greatest economic damage when they infest pipes, pumps, or other components of municipal and industrial water supply systems, or power plant cooling systems.

In addition to the potential damage on water purveyance systems, quagga mussels can seriously disrupt and negatively affect the ecosystem of freshwater lakes and rivers. Once a water system is infested, the measures required to eradicate the quagga mussel can have serious detrimental effects on the recreational aspects of a freshwater lake or river system. In addition, preventative measures taken, such

as screening, inspection, and decontamination of boats, outright banning of boating, etc., can also have detrimental impacts on boating and fishing and other recreational activities, as well as cause spillover effects on local businesses that derive economic benefits from these recreational activities.

Request by the Cachuma Operations and Maintenance Board (COMB)

On January 11, 2008, at the request of the Cachuma Operations and Maintenance Board (COMB), County Parks Department staff met with representatives of the water agencies and federal Bureau of Reclamation staff to discuss the emerging and serious threat of the quagga mussel's potential introduction into Cachuma Lake, including its impacts on both the water purveyors and Cachuma Lake as a recreational resource. The General Manager of COMB detailed the water purveyors' concerns and the possible financial impact due to the associated maintenance costs should the quagga mussel become established and spread throughout the lake. Parks staff explained the County's current inspection and educational outreach programs and discussed what other reservoirs are doing in the way of screening, inspections, and other preventative measures. It was an informative meeting, with everyone present acknowledging the pending difficulties related to the quagga mussel issue.

As a result of this meeting, COMB submitted a letter to the Board of Supervisors (Attachment 2) requesting the temporary closure of Cachuma Lake to private boats "for a minimum of six months, but, ultimately, as long as it takes, to get all available protective measures in place, including, at a minimum, the following:"

1. Carry out thorough and adequate inspections of all boats entering the County Park.
2. Obtain signed affidavits from boat owners as they enter the park that their boat is clean and dry and that it has not been in infected waters.
3. Establish a decontamination protocol that boat owners must follow for boats and other recreational equipment.
4. Purchase and install high-powered, heated sprayers and decontamination stations, and require that all boats with ANY potential for harboring quagga mussels or veligers be decontaminated prior to entering the lake.
5. Continue regular inspections of the lake, boating facilities, and Cachuma Project facilities and equipment. Expand the current inspections of the lake to include diving inspections and plankton tows.
6. Make operational the boat registration tracking system being developed by the Department of Fish and Game for all boats. Turn away all boats that have been in infected waters unless owners can demonstrate the boat has been in dry dock for a minimum of 10 days.
7. Develop an exit inspection program.
8. Revise public information handouts to inform the public that all of these measures will be strictly enforced.

A response letter was sent to COMB from County CEO, Michael Brown, on February 14, 2008. (Attachment 3). In addition, a letter was sent to the U.S. Bureau of Reclamation from Congressman Elton Gallegly on January 16, 2008 expressing opposition to a ban on recreational boating for regional lakes (Attachment 4). A response to Congressman Gallegly's letter was sent by the Bureau of Reclamation on February 8, 2008 (Attachment 5).

Current Preventative Measures Being Undertaken by County Parks

The County Parks Department took the following steps at Cachuma Lake to prevent introduction of the quagga mussel into the lake and other regional lakes when the quagga mussel was first detected in California in January 2007:

- Informational signs were posted at the park entrance, boat launching area, bait and tackle shop, and fish cleaning stations
- Fliers about the invasive mussel were distributed to all boaters entering the park
- Boaters were verbally screened to determine whether they had been in any infected waters
- All ranger staff at the park viewed an instructional boat inspection video
- Management for the UCSB rowing team were notified and asked to decontaminate vessels before reintroduction to Cachuma Lake
- A determination was made that the trout plant contractor for Cachuma Lake did not have any contact with contaminated waters
- A determination was made that the Fillmore Fish Hatchery does not receive water from Lake Piru, a recreational boating reservoir
- A logging system/spreadsheet was created to track quagga mussel management actions implemented at regional lakes
- A Quagga Mussel Central Information Folder for Parks staff was created on a shared drive on the Parks Department's computer system containing the following documents and information:
 - History of the spread and ecology of the quagga mussel
 - Fliers and educational materials for the public
 - Management strategies and recommended actions
 - Quagga mussel monitoring and boat inspection forms

Lake Monitoring Actions

County Parks follows monitoring protocols established by the Center for Lakes and Reservoirs, Portland State University, and adopted by the California Department of Water Resources and the California Department of Fish and Game. Monitoring inspections are conducted monthly in the Cachuma Lake marina. Visual and tactile inspections are conducted on the docks, the shoreline, anchor lines, log booms, the boat hanger, and all park watercraft. In addition, monitoring stations are being set up on nylon lines at varying depths at the marina. Parks is also in the process of establishing a diving inspection in the marina.

Parks has also completed a survey to participate in a pilot training program in the spring of 2008 for early detection and monitoring of quagga mussels and other freshwater invasive invertebrates. This

training program is being offered by the University of California's Cooperative Extension Program and the California Sea Grant Extension Program.

Increased Management Actions

Increased management actions were begun in December 2007 and are consistent with protocols at this level of risk (i.e., no mussels, but moderate-to-high risk, based on risk assessment in the National Park Service document, "*Quagga/Zebra Mussel Infestation Prevention and Response Planning Guide*"). These actions are beyond measures being taken at all other lakes in the south coast region, with the exception of Lake Casitas.

Vessel Survey and Inspection:

- Administered to all boaters
- Boats must have a dry bilge, dry wet well, and clean undersides
- Copies of surveys are kept on file and CF numbers are kept in database (P:/Icons: Boat Inspections)
- Inspections are conducted, beginning in the morning when the lake opens
- Frequent boaters are given an abbreviated interview
- Live bait is limited to on-site vendors and night crawlers

Further Preventative Measures Being Studied and Considered:

- Restrictions through revisions to contractual language (i.e., stipulated in language of permits and agreements):
 - Fishing tournaments permits
 - Trout plant contract
 - UCSB rowing team agreement
- Boat inspection:
 - Boat washing stations
- Additional monitoring:
 - Diving
 - Plankton tows for early detection

Contacts:

Cachuma Lake staff have been in contact with representatives from various agencies and organizations regarding the quagga mussel issue since January 2007, including the California Department of Fish and Game, Department of Water Resources, Department of Food and Agriculture, and Department of Boating and Waterways; the Minnesota and Wisconsin Departments of Natural Resources; the Montana Department of Fish, Wildlife and Parks; the U.S. Army Corps of Engineers; the National Park Service; the U.S. Bureau of Reclamation; the Pacific States Marine Fisheries Commission; the University of California/Cooperative Extension Program; and the California Sea Grant Program.

The Casitas Lake Operations Manager and their acting quagga mussel coordinator/park ranger have been exchanging information with County Parks' staff since January 2007. In addition, the following lake managers have also been contacted for outreach, assistance, and expertise: Castaic Lake, the City of San Diego Parks and Recreation Department, Lake Nacimiento, Lake San Antonio, Lopez Lake, and Lake Piru. In addition, Cachuma Lake, Lake Casitas, and Diamond Valley Reservoir hold weekly phone conferences to share information regarding inspections and updates related to the quagga mussel.

Training:

February 2007:

(1) Boat Inspection Training DVD: *The Battle to Prevent the Spread of Zebra Mussels on Trailered Watercraft*, Pacific States Marine Fisheries Commission. All Cachuma staff viewed this video.

January 2008:

1) Boat Inspection Training presented by the Pacific States Marine Fisheries Commission and sponsored by the California Department of Fish and Game (attended by Park Ranger III and Park Naturalist at Cachuma).

2) Boat Inspection Training, Casitas Lake, for seasonal staff. Parks staff attended for observational purposes.

3) Boat Inspection Training DVD: *The Battle to Prevent the Spread of Zebra Mussels on Trailered Watercraft*, Pacific States Marine Fisheries Commission. All current Cachuma staff viewed this video.

Alternatives to Prevent the Introduction of the Quagga Mussel to Cachuma Lake

Following are the three main alternatives identified for the Board's consideration to prevent the introduction of the quagga mussel to Cachuma Lake:

1. Continue Current Inspection/Management Program

Staff can continue the current inspection/management program that has been deployed since January 2007, with implementation of enhanced information dissemination and inspection procedures, as they become available.

Fiscal Impact

There would be no additional cost or revenue impact associated with continuation of the current inspection/management program.

2. Acquisition and Operation of a Decontamination/Wash Station

One of the most accepted practices for quagga mussel prevention in reservoirs is the installation and operation of washing and decontamination stations. These decontamination stations apply high pressure, heated water to the boat and trailer undercarriages via a drive-on ramp and rack system. These units function as a closed-loop, with no requirement for a sewer discharge connection. Wash/rinse wastewater is processed to remove solids and other contaminants and then recycled and reused by the system. Wastewater processing is automatic and the system remains ready for decontamination. These wash stations are available for delivery in eight to ten weeks. Although several different size and capacity systems are available, one that was reviewed and priced by staff that would work most effectively at Cachuma Lake, based on the number of annual boat launches at the lake is listed below. The purchase and installation of this equipment would be a one-time cost.

Fiscal Impact

Cost Impact

Two-station, 14-foot wide platform, 40-foot long, single-lane wash station - \$242,400

In addition to the cost of the wash station equipment, there would be an ongoing annual cost of \$94,100 for additional extra help staffing (equivalent to 1.75 FTE's) required at Cachuma to operate the station on a year-round basis.

Funds for these costs would need to be appropriated from the General Fund into the Parks budget for FY 2008-09.

Revenue Impact

Staff has no knowledge of grant funds that are currently available for the purchase and operation of these wash/decontamination units.

A boat cleaning surcharge fee of \$10 per boat (in addition to the current \$8 per boat daily launch fee) could be instituted by the Board to help offset the operational costs associated with implementation of the decontamination/wash station. Based on the current number of annual boat launches, this fee would yield approximately \$60,500 per year, which would offset only a portion (64%) of the ongoing operating cost of the wash station (\$94,100).

It is likely that implementation of such a surcharge fee would have an adverse affect on the annual number of boat launches due to the increased launching costs for the user (from the current \$8 to \$18). This fee could be set at a higher level to provide a higher offset of the cost; however, it is staff's judgment that a fee higher than \$10 per boat would become cost prohibitive to the user and would likely significantly discourage boat usage at the lake.

3. Closing Cachuma Lake to Private Boats

This alternative would temporarily close Cachuma Lake to private boats, for a minimum of six months, but, ultimately as long as it takes, in order to implement additional protective measures described by COMB in their letter of request to the Board (Attachment 1).

If this alternative was implemented, the only fishing or boating opportunities that would continue to be available to the public during the temporary closure period would be boats provided by the boat rental concession at Cachuma Lake, which would not come close to meeting the current demand for boating on the lake.

Fiscal Impact

Cost Impact

There is no known cost impact associated with this alternative.

Revenue Impact

Closing Cachuma Lake to private boating, as requested by COMB, would significantly affect boating-related revenues for the Parks Department (\$186,500 for the remainder of FY 2007-08 and \$559,400 on an annualized ongoing basis). These estimated revenue losses include those directly related to boating at the lake (daily and annual boat fees) as well as those indirectly related to boating and fishing activities (daily auto entrance fees, overnight camping fees, concession fees, etc.).

In addition to the projected loss in operating revenue, the State Department of Boating and Waterways has indicated that, should the lake be closed to private boats, the County would be responsible for repayment of any grant funds used for recreational boating purposes. Cachuma Lake has previously received approximately \$2.7 million in grants for a new boat launching facility that is currently under construction, but not yet open to the public. The County could be required to repay these grant funds to the State on a pro-rated basis.

For purposes of this analysis, the revenue loss projections included in this report are limited to the Cachuma Lake operation; however, economic losses for local businesses, as a result of reduced recreational activity at Cachuma Lake, could also be substantial.

Fiscal and Facilities Impacts:

Alternative 2 – Acquisition and Operation of a Decontamination/Wash Station

Budgeted: No

Fiscal Analysis:

<u>Funding Sources</u>	<u>Current FY Cost</u>	<u>Annualized On-Going Cost</u>	<u>Total One-Time Project Cost</u>
General Fund		\$ 94,100	\$ 242,400
State			
Federal			
Fees – Boat Cleaning Surcharge Fee		\$ 60,500	
Other:			
Total		\$ 33,600	\$ 242,400

Alternative 3 – Closing Cachuma Lake to Private Boats

Budgeted: No

Fiscal Analysis:

<u>Funding Sources</u>	<u>Current FY Revenue Loss</u>	<u>Annualized On-Going Revenue Loss</u>	<u>Total One-Time Grant Repayments</u>
General Fund			
State - State Boating & Waterways grant funds			\$ 2,700,000.00
Federal			
Fees - Boat-related fees at Cachuma Lake	\$ 186,500.00	\$ 559,400.00	
Other:			
Total	\$ 186,500.00	\$ 559,400.00	\$ 2,700,000.00

Staffing Impacts:

Legal Positions:
0

FTEs:
1.75

Special Instructions:

N/A

Attachments:

Attachment 1 – Map of 2008 Quagga and Zebra Mussel Sightings Distribution in the Southwestern United States

Attachment 2 – January 23, 2008 Letter from Cachuma Operations and Maintenance Board (COMB) to the Board of Supervisors

Attachment 3 – February 14, 2008 Response Letter from County CEO, Michael Brown, to Cachuma Operations and Maintenance Board

Attachment 4 – January 16, 2008 Letter from Congressman Elton Gallegly to U.S. Bureau of Reclamation Commissioner, Robert Johnson

Attachment 5 – February 8, 2008 Response Letter from the U.S. Bureau of Reclamation to Congressman Elton Gallegly

Authored by:

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cc:

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