

DEPARTMENT OF PARKS AND RECREATION

Lifeguard Staffing Appears Adequate to Protect the Public, but Districts Report Equipment and Facility Needs

REPORT NUMBER 2004-124, AUGUST 2005

Audit Highlights . . .

Our review of the sufficiency of the Department of Parks and Recreation's (Parks) staffing levels and other resources at state beaches necessary to protect the public found that:

- Even though Parks reported a significant increase in estimated beach attendance and lifeguard workload from 2000 to 2004, it did not report an increase in drownings where there was a staffed lifeguard tower or station.*
- We noted instances in which Parks' aquatic safety statistics were incomplete or inaccurate.*
- Although we estimate that Parks' lifeguards worked slightly fewer hours in 2004 than in 2000, its lifeguard staffing patterns and its mix of permanent and seasonal lifeguards seem reasonable.*

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Department of Parks and Recreation's response as of October 2006

The Joint Legislative Audit Committee (audit committee) requested that the Bureau of State Audits (bureau) review the sufficiency of the Department of Parks and Recreation's (Parks) staffing levels and other resources necessary to protect the public at state swimming beaches. Specifically, the audit committee asked the bureau to review and evaluate the method Parks uses to determine what constitutes a sufficient number of lifeguards at state swimming beaches. As part of an assessment of whether Parks has a sufficient number of lifeguards at state swimming beaches, the audit committee asked us to determine how Parks' lifeguard staffing levels compare with those of cities, counties, and other states, if possible. The audit committee also asked us to evaluate whether Parks has sufficient equipment for lifeguards at state swimming beaches and whether Parks adequately budgeted for lifeguards and equipment to protect the public at those beaches. Finally, the audit committee requested that we determine the number of drowning incidents reported at state, county, and city beaches and whether there is a correlation between the number of drownings and either the number of lifeguards or the resources available to lifeguards stationed at state swimming beaches. Our review revealed the following:

Finding #1: Lifeguard staffing levels have been sufficient to prevent an increase in drownings at guarded waters despite a reported increase in beach attendance and lifeguard workload.

Despite a reported increase in beach attendance and lifeguard workload, Parks reported a total of seven drownings in guarded waters at state beaches within its lifeguard districts over the five-year period from 2000 through 2004. Parks defines guarded water as a location within the viewing area of a staffed lifeguard tower or station. The three local governments we surveyed reported similar results. This suggests that the presence of lifeguards has been effective at state and local beaches in minimizing drownings in guarded waters. These trends are similar to a national trend discussed in a 2001 report by the Centers for Disease Control and Prevention (CDC), which concluded that the

- ☑ *While Parks has reported an increasing number of drownings in unguarded waters over the last five years, adding more lifeguards may not be an appropriate response.*
 - ☑ *Parks' districts with aquatic safety programs have significantly decreased their spending on the equipment and facility operations portion of their support costs from fiscal years 1999–2000 to 2003–04.*
 - ☑ *Even though lifeguard sectors report a need for additional resources to maintain and add to their lifeguard equipment and facilities, Parks' management believes that the department has allocated sufficient funds to provide adequate aquatic safety.*
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total number of reported drownings at lifeguard-staffed beaches has remained relatively stable since 1960 although both beach attendance and rescues by lifeguards have risen steadily.

Based on the data Parks reported, attendance at state beaches and lifeguard workload increased significantly from 2000 to 2004. Specifically, Parks' lifeguard districts reported that attendance at state beaches increased from 23.4 million in 2000 to 41.4 million in 2004, an increase of nearly 77 percent. Parks and the three local beaches we surveyed use various methods involving some level of estimation to calculate their reported attendance. Therefore, it is difficult to closely compare the attendance data they reported. Consistent with its reported increase in beach attendance, Parks reported that the overall workload of lifeguards at state beaches increased significantly from 2000 to 2004. The most dramatic increase was in the number of warnings issued and preventive actions taken. Parks indicated that it issued almost four times the number of warnings and took almost twice the number of preventive actions in 2004 as it did in 2000. In comparison to its other workload statistics, Parks reported more modest increases in aquatic rescues and medical aids of 27 percent and 18 percent, respectively, from 2000 to 2004.

Finding #2: In certain instances, Parks' aquatic safety statistics were incomplete or inaccurate.

Our review of Parks' aquatic safety data for the five-year period ending in 2004, identified instances in which the data were incomplete or inaccurate. For example, we found that one lifeguard district failed to report most of its aquatic safety statistics for 2001. In addition, we found three other lifeguard districts that did not report swimmer-related rescues for 2001 and another that reported certain duplicate statistics for 2001 and 2002. In addition, Parks originally reported to us that 36 unguarded-water drownings occurred within state park boundaries in 2004. Unguarded water is an area where Parks either has no lifeguard assigned at all or has a lifeguard assigned but the waters are outside the immediate view of the lifeguard. After we reviewed a summary of these incidents and a sample of the related public safety reports it provided, Parks revised the number to 31.

These kinds of problems raise questions about the reliability of the aquatic safety data that Parks reported. Although we did not find an instance where the inaccurate data caused Parks to make an inappropriate management decision, if it is going to spend the time and effort to collect statistics regarding aquatic safety, it is reasonable to expect the information to be as accurate as possible. In addition, ensuring the completeness and accuracy of its aquatic safety statistics will help Parks make better management decisions regarding the allocation of its aquatic safety resources.

We recommended that Parks should:

- Make certain its districts that are required to track and report aquatic safety statistics are submitting them as required.
- Require its staff to review the statistics for accuracy and completeness.

Parks' Action: Corrective action taken.

According to Parks, its current policy for reporting on aquatic safety statistics is identified in the department's operation manual (manual). The manual outlines the process for collecting data from field staff and makes each supervisor responsible for ensuring the information is reported in a monthly activity report and reported through each district's chain-of-command. In addition, to help the accuracy of data tabulation, Parks updated its daily log and monthly activity reports into a spreadsheet that automatically tabulates into a year-end summary. Also, to emphasize the need for accuracy, completeness, and adherence to reporting requirements, a memo requesting aquatic statistics reporting is sent out each November to all district superintendents with aquatic safety programs. Parks reported that the outcome of the 2005 aquatic safety statistics reports showed improvement. Finally, in addition to follow-up on errors by the aquatic specialist, the department reinforced requirements through training in March 2006.

Finding #3: Although we estimate that Parks' lifeguards worked slightly fewer hours in 2004 than in 2000, its lifeguard staffing patterns and its mix of permanent and seasonal lifeguards seem reasonable.

Parks' lifeguards worked slightly fewer hours in 2004 than they did in 2000. Based on payroll data we obtained from the State Controller's Office, we estimate that in 2000, lifeguards worked about 376,000 hours compared with 357,000 in 2004.

Parks appears to adjust its lifeguard staffing levels to deal with changes in beach attendance and to use a reasonable mix of permanent and seasonal lifeguards to provide public protection at state beaches. Parks indicated that it attempts to increase the staffing levels of lifeguards in the summer months to cope with increased attendance at state beaches. According to Parks, the peak attendance season generally runs between April and October each year. For example, we found that the total number of hours lifeguards worked in the San Diego North sector during 2004 generally fluctuated with changes in reported attendance. In addition, this sector appeared to keep pace with increasing attendance, because the four months with the most hours worked by lifeguards (June through September) coincided with the four months in which the reported levels of attendance were highest.

In addition, we found that, based on the average number of hours lifeguards worked each month over the last five years, Parks used seasonal staff to augment the number of lifeguards on duty during the peak season. Permanent lifeguards worked a relatively steady number of hours each month on average over the five-year period, whereas seasonal lifeguards worked a great deal during the summer months but very little during the nonpeak season. This staffing pattern indicates that Parks relies on permanent lifeguards to protect the public in nonpeak months, while this task falls primarily to seasonal lifeguards during the peak attendance season.

Although seasonal lifeguards contribute heavily during the peak attendance season, 94 percent of seasonal lifeguards worked fewer than 1,000 hours in 2004, with 70 percent working fewer than 500 hours. Given that Parks set 1,778.5 as its standard measure of the annual hours a full-time employee works, it apparently does not need to convert any of its seasonal lifeguards to permanent status.

Finally, Parks requires all its permanent lifeguards to be peace officers. Parks reported that the workload levels related to the law enforcement aspects of a lifeguard's job have increased dramatically. Since Parks relies primarily on permanent lifeguards for about five months of the year during the nonpeak attendance season, it seems important for Parks' permanent lifeguards to be peace officers.

Finding #4: While Parks has reported an increasing number of drownings in unguarded waters, adding more lifeguards may not be an appropriate response.

Parks' lifeguard districts have reported an increasing number of drownings in unguarded waters over the last five years. The majority of the 31 unguarded-water drownings in 2004 occurred in north coast and inland lifeguard districts that generally receive less beach attendance than the south coast lifeguard districts. Overall, given the low number of drownings in guarded waters discussed earlier and the increasing number occurring in unguarded waters, one might conclude that adding more lifeguards would decrease the number of drownings in unguarded waters. However, although every drowning is a tragedy, based on the circumstances surrounding the 31 reported drownings in unguarded waters during 2004, we believe that adding more lifeguards may not be an appropriate response. In particular, for more than half these incidents, the level of lifeguard staffing did not appear to be an issue. Further, at the locations of the remaining incidents, it is not clear that Parks would choose to add more lifeguards if it received additional resources.

We recommended that Parks monitor the circumstances surrounding drowning incidents that occur in unguarded waters to help it determine the amount and best allocation of resources sufficient to protect the public.

Parks' Action: Corrective action taken.

According to Parks, the aquatic specialist follows up on all reported drowning incidents and analyzes the surrounding circumstances to consider possible actions to take regarding the amount and best allocation of aquatic safety resources. Based on this type of review, the aquatic specialist indicated that there were 24 drowning deaths in California state parks during calendar year 2005, a decrease of about 22 percent from 2004. Parks attributed the decrease to lower attendance driven by such factors as numerous foggy days during months that are normally busy because of warm weather and record numbers of jellyfish stings during July and August. After reviewing the circumstances surrounding the 2005 drowning incidents, Parks concluded that reallocating current lifeguard and aquatic safety resources within the department would not be a reasonable approach to decrease the number of drowning incidents. Nevertheless, Parks indicated that it received a budget augmentation for aquatic safety programs and it is identifying where increasing seasonal staff will have the greatest benefit for public safety. It is also pursuing the purchase of additional personal watercraft to support lifeguard programs and is developing a comprehensive brochure on aquatic safety to assist in educating the public.

Finding #5: Continued deferral of equipment repair and maintenance may eventually have a negative impact on Parks' ability to adequately protect the public.

Lifeguard districts significantly decreased their spending for equipment and facility operations costs from fiscal years 1999–2000 to 2003–04. As a result, according to the sectors within the lifeguard districts that operate aquatic safety programs (lifeguard sectors), some of their lifeguard equipment and facilities are in poor condition and in need of repair or replacement. Staff at Parks indicated that it generally cuts back on equipment and maintenance expenses when faced with budget cuts for operating expenses because they are nonfixed or discretionary expenses. This is consistent with responses to our survey, in which many lifeguard sectors expressed a need for additional resources to maintain and add to their lifeguard equipment and facilities. These sectors indicated needing primarily vehicles, rescue boats, and portable towers. In addition, although Parks plans to replace two of its permanent lifeguard facilities and expand another, lifeguard sectors reported that several other facilities are in need of repair or replacement. However, management at Parks believes that it has allocated sufficient funds to provide adequate aquatic safety while balancing the needs of all its programs. In contrast, the three local governments we surveyed reported having sufficient and operable equipment.

Although no instances came to our attention in which the poor condition of equipment affected the lifeguard sectors' ability to provide aquatic safety, we observed a few examples of equipment in poor condition. However, we were unable to assess whether the additional equipment needs reported by the lifeguard sectors were necessary, because we are not aware of any standard that specifies the amount of equipment lifeguards must have to perform their duties. Finally, although most lifeguard districts said they need additional funds to maintain their equipment, we are uncertain they would spend the additional funds to fulfill those needs. According to Parks' budget office, the lifeguard districts have some control over their spending for nonfixed or discretionary costs, such as equipment and facilities maintenance, overtime, and temporary staffing.

We recommended that Parks monitor how long it can continue to curtail spending on lifeguard districts' equipment and facilities to avoid a potentially negative impact on its ability to protect the public. In addition, if Parks decides to allocate additional funding to its aquatic safety programs in the future, either for equipment expenses or for additional lifeguards, it should work closely with its lifeguard districts to clarify the intended purposes of any proposed changes in spending. For example, if Parks decides to allocate additional funding to augment its lifeguard staff, it should carefully consider whether to expand coverage into unguarded waters in districts with existing aquatic safety programs or to implement new aquatic safety programs in districts at coastal or inland waterways without lifeguard coverage.

Parks' Action: Pending.

According to Parks, its 2006–07 budget contains an augmentation for lifeguard aquatic safety programs. As a result, it is identifying the programs with the highest needs to determine its priorities and where the augmentation will have the greatest benefit for public safety. Parks also expects to receive \$250 million for the repair of critical infrastructure in state parks in 2006–07 and plans to address the need for replacement and repair to districts' lifeguard facilities through this allocation. Finally, Parks stated that given the department's need to balance limited resources across all core programs, it is apparent that even critical need programs and facilities cannot always be fully funded in the manner it would prefer.

Finding #6: Lifeguard sectors lack evidence to support their reported need for automatic external defibrillators.

Although 15 of the 19 lifeguard sectors we surveyed said they need additional automatic external defibrillators (AEDs), Parks does not presently capture data that would be sufficient to assess its need for these devices. An AED is a piece of medical equipment that lifeguards can use to rescue victims of sudden cardiac arrest. For instance, lifeguard sectors reported that they used AEDs in six cases in 2004, which is the year they began reporting the number of times AED units were used. However, these reported cases might understate Parks' need for AEDs because they may not indicate the number of instances in which AEDs should have been used. A more relevant statistic would be to track the number of times in which a rescue required the use of an AED, but one was not available. Parks could then use these data to assess whether it needs additional AEDs and, if so, how many.

We recommended that, to clarify to what extent it needs AEDs, Parks should track not only its actual usage of AEDs but also the number of times it needed them but they were unavailable. Similar procedures could apply to demonstrating the need for other equipment.

Parks' Action: Corrective action taken.

In the November 2005 memorandum to district superintendents, the chief of Parks' public safety division instructed staff to record the number of medical cases in which AEDs were needed, but were unavailable, by using one of the boxes marked "OTHER" at the bottom of the form used to gather statistics with the heading "AED needed/unavailable."