

# California State Auditor

B U R E A U O F S T A T E A U D I T S

## **Department of Parks and Recreation:**

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



August 2005  
2004-124

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# CALIFORNIA STATE AUDITOR

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August 2, 2005

2004-124

The Governor of California  
President pro Tempore of the Senate  
Speaker of the Assembly  
State Capitol  
Sacramento, California 95814

Dear Governor and Legislative Leaders:

As requested by the Joint Legislative Audit Committee, the Bureau of State Audits presents its audit report concerning the sufficiency of the Department of Parks and Recreation's (Parks) staffing levels and other resources at state swimming beaches necessary to protect the public. This report concludes 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. In addition, 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. While Parks has reported an increasing number of drownings in its unguarded waters over the last five years, based on the circumstances surrounding the 31 unguarded water drownings it reported in 2004, we believe that adding more lifeguards may not be an appropriate response.

Further, while Parks' districts with an aquatic safety program (lifeguard district) overall spent about the same amount on support costs in fiscal years 1999–2000 and 2003–04, they significantly decreased their spending on the equipment and facility operations portion of those costs in comparing the two years. As a result, the lifeguard districts' sectors that operate an aquatic safety program report a need for additional resources to maintain and add to their lifeguard equipment and facilities. However, Parks' management believes that the department has allocated sufficient funds to provide adequate aquatic safety while balancing the needs of all of its programs.

Respectfully submitted,

ELAINE M. HOWLE  
State Auditor

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# SUMMARY

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## 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.*
- 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.*

*continued on next page . . .*

## RESULTS IN BRIEF

The Department of Parks and Recreation (Parks) manages more than 300 miles of coastline and 625 miles of rivers and lake shoreline. Parks provides aquatic safety in these areas through various strategies, including tower-based lifeguard operations, roving vehicle and boat patrols, signs, visitor pamphlets, and news releases. During the five-year period ending in 2004, Parks reported only seven drowning incidents in its waterways where there was a staffed lifeguard tower or station (guarded waters), suggesting that lifeguard staffing has been adequate to protect the public at Parks' guarded waters.

The number of reported drownings in its guarded waters has remained low even though Parks reported a significant increase in estimated beach attendance and lifeguard workload during the same five-year period. However, we noted some instances in which Parks' aquatic safety statistics were incomplete or inaccurate, raising questions about the reliability of the data Parks reports. From 2000 to 2004, the three local governments we surveyed—the cities of Huntington Beach and San Diego and Los Angeles County—also reported no relative increase in the number of drowning incidents in their guarded waters. According to the Centers for Disease Control and Prevention, these statistics mirror the national trend of few drownings in guarded waters despite rising attendance and workload.

Based on pay records, we estimate that Parks' lifeguards worked slightly fewer hours in 2004 than in 2000. However, its lifeguard staffing patterns and the mix of permanent and seasonal lifeguards seem reasonable, with Parks relying on permanent lifeguards in nonpeak attendance months and on seasonal lifeguards during the peak attendance season. Further, Parks appears to benefit by requiring its permanent lifeguards to be peace officers, because the largest percentage increase in the lifeguards' workload has been related to law enforcement. Our surveys also revealed that Parks generally follows relevant, professional standards when assessing its lifeguard staffing needs.

Parks reported an increasing number of drownings in unguarded waters over the last five years. Unguarded waters are areas where Parks either has not assigned lifeguards or has assigned lifeguards

- ☑ *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.*
- 

but the waters are outside the lifeguards' immediate view. Overall, given the low number of drownings in guarded waters reported in 2004, one might argue that adding more lifeguards could reduce or eliminate drownings in unguarded waters. However, although every drowning is a tragedy, based on the circumstances surrounding the 31 unguarded-water drownings that Parks reported in 2004—21 in its lifeguard districts and 10 in districts without aquatic safety programs—we believe that adding more lifeguards may not be appropriate. The level of lifeguard staffing did not appear to be an issue in 17 of the 31 drowning incidents, primarily because of the times of day or the seasons in which they occurred. For the remaining incidents, it is not clear that Parks would choose to add more lifeguards at these locations if it received additional resources.

According to Parks' aquatic safety specialist, given additional lifeguard staffing and resources, Parks would be able to address the increasing rate of unguarded-water drownings. However, it is unrealistic to think that Parks could prevent all drownings in state parks, no matter how many lifeguards were assigned to protect the public along state waterways. Finally, we acknowledge that Parks must make difficult management decisions about the best allocation of its resources to maximize public safety given the State's current fiscal situation.

Further, 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.

## **RECOMMENDATIONS**

To help it determine the amount and best allocation of resources sufficient to protect the public at beaches and waterways within state parks, Parks should do the following:

- Make certain that 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.
- Monitor the circumstances surrounding drowning incidents that occur in unguarded waters.

To avoid a potentially negative impact on its ability to protect the public, Parks needs to monitor how long it can continue to curtail spending on lifeguard districts' equipment and facilities.

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.

## **AGENCY COMMENTS**

Parks is pleased with the findings of our audit and it generally concurs with our recommendations. ■

# INTRODUCTION

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## BACKGROUND

The Department of Parks and Recreation (Parks) is responsible for preserving the State's biological diversity, protecting natural and cultural resources, and creating opportunities for high-quality outdoor recreation for the State's citizens. With about 3,000 staff positions and a support budget of nearly \$300 million for fiscal year 2004–05, Parks focuses its efforts on five core program areas: resource protection, education and interpretation, facilities, public safety, and recreation. Currently, Parks manages more than 270 park units within the state park system. Park units include recreation areas, coastal and inland state beaches, wildlife reserves, and historic homes, as well as various other types of natural and cultural heritage holdings. These park units are operated through 23 districts. Parks further subdivides 18 districts into sectors; the remaining five are off-highway-vehicle districts that Parks does not subdivide into sectors.

## AQUATIC SAFETY PROGRAMS

In 1950, Parks initiated an aquatic safety program at Huntington State Beach, located in Southern California, laying the foundation for aquatic safety programs throughout the State. We refer to Parks' districts that have one or more sectors with an aquatic safety program as lifeguard districts. Similarly, we refer to those sectors and the single off-highway-vehicle district (Oceano Dunes) that also has an aquatic safety program, as lifeguard sectors. Lifeguards employed at lifeguard sectors provide aquatic safety services at waterways within the state park system. Figure 1 on the following page shows which of Parks' districts are lifeguard districts. Today, state lifeguards protect citizens from the hazards of aquatic recreation in state parks throughout California. Since 1967, Parks has reported that state lifeguards have rescued more than 201,500 people, with 10,000 water rescues occurring just in 2004. According to Parks, drowning is among the leading causes of accidental death nationally and is the leading cause of accidental death within California state parks.

**FIGURE 1**

**Ten of the Department of Parks and Recreation's 18 Districts  
Have Aquatic Safety Programs**



Source: Auditor generated based on information received from the Department of Parks and Recreation, current as of 2004. Map does not include off-highway-vehicle districts, one of which (Oceano Dunes located in the San Luis Obispo Coast district) has an aquatic safety program.

Parks reported that each year more than 85 million people visit California's state parks, the majority of which contain significant aquatic resources, such as rivers, reservoirs, lakes, and ocean beaches. In fiscal year 2003–04, Parks reported that nine of the 10 most visited state parks were state beaches. In addition, visitor surveys reveal that water recreation is the number one reason for visiting state parks. Parks manages more than 300 miles of coastline and 625 miles of rivers and lake shoreline, much of which is patrolled by state lifeguards.

Parks helps ensure the aquatic safety of the multitude of water recreation enthusiasts who visit state parks each year through public education, interpretation, youth programs, boat patrols, lifeguards, and aquatic safety responses to statewide or regional emergencies. According to the deputy director of park operations, Parks addresses aquatic safety through strategies that range from the traditional tower-based lifeguard operations found in Southern California to the roving patrol lifeguards who cover the rugged coastline of the Russian River sector and patrol vessels used on a number of state reservoirs. Additionally, in lifeguard districts and in state park units with no lifeguards, Parks enhances its aquatic safety operations with signs and interpretive panels, visitor pamphlets, and news releases.

When necessary to supplement its lifeguard staff, Parks calls on aquatic rangers. Parks defines an aquatic ranger as a ranger, supervising ranger, or superintendent who maintains certification as a Parks lifeguard by completing the annual requalification swim test and attending Advanced Lifeguard Emergency Response Training. According to Parks' operation manual, nonlifeguard employees with valid department lifeguard certificates, such as aquatic rangers, may be assigned to aquatic safety patrol shifts when environmental, crowd, or staffing needs dictate an increased aquatic patrol. However, the aquatic rangers have a minimal impact on the aquatic safety program because only 13 exist within the entire department, and they are used as lifeguards only when needed. Finally, in areas where Parks has no aquatic safety program, it works in partnership with concerned citizens and local agencies to identify potentially hazardous aquatic conditions and to educate the public by providing informational programs and by posting signs.

## LIFEGUARD DUTIES

The functions of a state lifeguard include more than monitoring the various bodies of water found within California's state parks. A lifeguard's duties vary depending on the specific needs of the work location and the employment level of the lifeguard. However, there is a general distinction between the focus and workload of permanent lifeguards and those of seasonal lifeguards. Permanent lifeguards are full-time employees who perform their duties year-round. Most seasonal lifeguards work only during the peak aquatic season, although some work during the nonpeak season when necessary. Parks generally considers April through October, when beach attendance is at its highest, to be the peak aquatic season and the remaining months to be the nonpeak aquatic season.

In addition to protecting park visitors from natural oceanic and other aquatic dangers, permanent state lifeguards also perform law enforcement duties. According to Section 5008(b) of the California Public Resources Code, the director of Parks may designate an employee as a peace officer. In response to rising crime, increasing urbanization, and various other social impacts on the park system, Parks began training its lifeguards to be peace officers in 1974. In 2003, Parks' peace officers, both permanent lifeguards and rangers, issued more than 18,000 citations and arrested 1,600 persons.

Lifeguards are instructed to wear the appropriate uniform for the task at hand, and given the variety of their duties, a number of uniform items are available. According to Parks' aquatic safety specialist, one option available to permanent lifeguards is wearing a uniform with a swimsuit underneath. This uniform has a "tear-away" design, allowing the lifeguard to quickly remove it when necessary to perform an aquatic rescue. Further, the aquatic safety specialist indicated that a permanent lifeguard's vehicle contains a lock box for quick and secure storage of the lifeguard's firearm. In contrast, the uniform of a seasonal lifeguard generally consists of a swimsuit, allowing the lifeguard to quickly enter the water to perform a rescue.

The duty statements of the permanent lifeguard reflect the provisions of the Public Resources Code, designating the majority of a permanent lifeguard's time to performing tasks related to public safety, including aquatic safety, and law enforcement. This encompasses a broad range of activities, such as enforcing rules and regulations; responding to divers, boaters, surfers, and members of the general public who may

**Average Breakdown of the Duties  
Required of Lifeguards in State Parks**

**Permanent Lifeguards (nonsupervisory)**

- 58 percent—public safety and enforcement
- 11 percent—administration
- 10 percent—interpretation
- 9 percent—maintenance
- 6 percent—resource protection
- 6 percent—other

**Seasonal Lifeguards (entry level)**

- 70 percent—visitor safety and protection
- 10 percent—leadership
- 5 percent—administration
- 5 percent—maintenance
- 5 percent—employee safety
- 5 percent—interpretation and stewardship

be in distress; searching for lost persons; making arrests and issuing citations or written warnings for public offenses or infractions; performing cliff or rock rescues; and identifying and coordinating removal of beach hazards. A permanent lifeguard's remaining time is divided among administrative activities, interpretation, equipment maintenance, resource protection, and other duties. While still providing some patrol and enforcement duties, a permanent lifeguard supervisor focuses on management, supervision, and administrative activities, including interpretation.

According to their duty statements, seasonal lifeguards primarily perform functions related to visitor safety and protection. Although not designated as peace officers and lacking the power to write citations and make arrests, seasonal lifeguards still promote aquatic safety by advising state park visitors of rules and regulations and informing them of ocean conditions and safety hazards. According to the United States Lifesaving Association (USLA) these preventative actions are a critical, though often unnoticed, aspect of a lifeguard's duties. Each preventive action taken

mitigates a potentially hazardous situation or safety concern. In fact, preventive actions made up more than 91 percent of lifeguards' activities in the United States from 1991 through 2000, according to the USLA. To protect park visitors, seasonal lifeguards perform many of the same functions that permanent lifeguards do. However, an on-duty permanent lifeguard generally supports seasonal staff to provide guidance and law enforcement capabilities as needed.

Through various reports, Parks tracks the aquatic-related activities occurring within state parks. One of a lifeguard's administrative duties is to complete a lifeguard daily log, which includes data on attendance, number of rescues performed, and number of preventive actions taken. Parks tallies the information from these logs at the park unit level and maintains the records at the district level. Using the lifeguards' daily logs, each supervisor creates a monthly report, called the aquatic activity report, that includes the calendar and fiscal year totals of activity within the park unit. This information is then summarized at the district level in the district aquatic activity summary. Additionally, Parks' staff complete aquatic safety

incident cards for the following events: aquatic rescues, lost persons, vessel rescues, and aquatic-related minor medical aids. Parks records this information by park unit and maintains it at the district level. When a nonroutine rescue or emergency medical services incident demands further medical attention, Parks requires a public safety report to be completed. Finally, in the event of a serious injury or death, additional steps must be taken, including immediately notifying the Office of the Attorney General, contacting the State's 24-hour Central Communication Center, and filling out the necessary forms.

## **UNIQUE CHARACTERISTICS OF CALIFORNIA BEACHES**

The beaches located throughout California have unique characteristics. For example, the Monterey County coastline alone varies from rocky cliffs at Big Sur to broad, sandy beaches at Zmudowski and Moss Landing. Additionally, some beaches are located near large cities; for example, Manhattan and Redondo beaches near Los Angeles, and Pacific and Ocean beaches near San Diego, are within miles of the second and seventh most populated cities in the United States, respectively, according to the 2000 census. On the other hand, some beaches, like Trinidad State Beach in Humboldt County, are located in less densely populated areas. According to Parks, the number of people visiting state beaches has been primarily predicated on weather conditions. For example, the average high temperature in Huntington Beach, where beach attendance is generally higher than in Parks' north coast districts, is 75 degrees Fahrenheit, while in Monterey, the average high temperature is only 65 degrees. State beaches also vary widely in size. Some beaches, such as South Carlsbad State Beach in the San Diego district, span several miles, while others are much smaller, such as Brannan Island State Recreation Area, which has a small designated swim area only 50 yards long. Further, the oceanic conditions of coastal beaches differ from beach to beach. For instance, rip currents, which USLA defines as currents of water traveling away from shore generated by wave action, are permanent features of some beaches but come and go at other beaches. Finally, some beaches are located along swift-flowing rivers or relatively calm lakes, which can present a different set of challenges to lifeguards.

## **PARKS' BUDGET PROCESS**

The budgeting of available funds begins at the department level. According to Parks, it allocates funds to each district on an incremental basis; a district receives funds based on the

amount received the previous year, adjusted for any anticipated changes in spending. Adjustments to the current year's budget can be made through budget change proposals or finance letters and can be necessitated by changes to existing programs, implementations of new programs, or budgetary reductions, among other reasons. Each district must annually submit to Parks' operational chiefs a list of the objectives it intends to achieve with the resources available to it. Parks then holds the districts accountable for achieving those objectives. Additionally, Parks may dictate priority objectives, either departmentwide or targeting specific groups of districts. Primarily, Parks designates the general use of allocated support funds in two parts: personal services and operating expenses. Aside from this general guidance, each district must decide how best to use its resources.

According to Parks, budget cuts are distributed among all districts as equitably as possible. Parks asserted that it first reduces spending in categories that have the greatest flexibility and, depending on program needs; this could include cutting back on maintenance costs, temporary personnel (such as seasonal lifeguards), and overtime. In fiscal year 2005–06, for instance, Parks anticipates implementing the currently proposed reduction in maintenance funding by decreasing the money available for districts' operating expenses. The districts will then decide what types of maintenance costs to cut.

## **SCOPE AND METHODOLOGY**

The Joint Legislative Audit Committee (audit committee) requested that the Bureau of State Audits review the sufficiency of Parks' staffing levels and other resources necessary to protect the public at state swimming beaches. Specifically, the audit committee asked us 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 identify the number of lifeguards authorized by the State and the number stationed per mile at swimming beaches; how Parks' lifeguard staffing levels compare with those of cities, counties, and other states, if possible; and whether any published studies recommend an appropriate number of lifeguards at swimming beaches. Further, the audit committee requested that we determine what steps Parks takes to ensure the safety of beachgoers when it is not able to have the appropriate number of lifeguards at a state swimming beach.

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 on those beaches. In addition, we were asked to determine the impact of having rangers serve dual roles—as rangers and lifeguards—and whether rangers that serve as lifeguards are constrained by their uniforms during rescue operations. 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.

To determine what constitutes a sufficient number of lifeguards necessary to protect the public, we interviewed Parks' aquatic safety staff, surveyed lifeguard sectors, and reviewed Parks' operations manual and its *Aquatic Operations Handbook*. We also reviewed lifeguard standards published in 2003 by the USLA as well as the aquatic safety statistics that Parks and certain local governments reported to USLA. In addition, we reviewed a report titled *Lifeguard Effectiveness: A Report of the Working Group*, published in 2001 by the Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Finally, we researched state and federal statutes for guidelines related to aquatic safety and lifeguard staffing. None of these resources provided quantitative guidance regarding appropriate lifeguard staffing levels. Instead, the standards and guidelines we reviewed offered various qualitative factors to consider in assessing aquatic safety resources and how to render a beach safe for the public. Therefore, we compared these factors to survey responses from lifeguard sectors, aquatic safety statistics reported by lifeguard districts, and similar surveys and data from three local governments. According to parks, its lifeguard districts include 18 lifeguard sectors within 10 districts and one off-highway-vehicle district that we refer to as a sector when discussing responses to our survey.

In assessing whether Parks has a sufficient number of lifeguards, we did not analyze the number of positions authorized by the State because the authorizations are only for permanent lifeguard positions; for all temporary employees, including seasonal lifeguards, who work substantially more hours overall than permanent lifeguards, the State provides funding in a lump-sum manner. For this reason, we also did not attempt to calculate the number of lifeguards per mile stationed by

Parks, local governments, or other states at swimming beaches. In addition, we found that making such comparisons can be misleading given the unique characteristics of California beaches. Instead, we analyzed the number of hours we estimated seasonal and permanent lifeguards spent performing lifeguard duties from 2000 through 2004 based on payroll data from the State Controller's Office. We also considered the number of hours lifeguards worked in the context of various aquatic safety statistics that Parks tracks and reports to the USLA, including the number of drownings in both guarded and unguarded waters, estimated beach attendance, and key lifeguard activities, such as preventive actions, aquatic rescues, medical aids, and various aspects of law enforcement. Although we validated some of Parks' drowning statistics by reviewing a sample of public safety reports, we did not otherwise test the aquatic safety statistics Parks reported. In addition, we compared the aquatic safety statistics reported by Parks' lifeguard districts to similar statistics reported by the cities of Huntington Beach and San Diego and Los Angeles County.

To determine what steps Parks takes, if any, to ensure the safety of aquatic visitors when it cannot staff the appropriate number of lifeguards at state beaches, we surveyed all lifeguard sectors, including the Oceano Dunes off-highway-vehicle district. We also interviewed lifeguard supervisors, Parks' aquatic safety specialist, its chief of public safety and its deputy director of field operations.

We were not able to determine whether Parks has a sufficient amount of aquatic safety equipment for its lifeguards because we are aware of no standard or guideline that quantifies the amount of equipment that is necessary. However, we surveyed Parks' lifeguard sectors, the cities of Huntington Beach and San Diego and Los Angeles County and made limited observations about the condition of existing equipment and facilities during site visits. We also reviewed USLA guidelines to identify the types of equipment and resources it recommends having available to lifeguards.

To determine whether Parks adequately budgeted for its lifeguards and their equipment, we evaluated the amount of money spent for these aquatic resources over the five-year period from fiscal years 1999–2000 through 2003–04. We focused our analysis on support costs for lifeguard districts. In calculating these expenditures, we relied on Parks' California State Accounting and Reporting System (CALSTARS) and the payroll system at the State Controller's Office. We assessed the reliability of the data from these systems by tracing certain support cost totals from CALSTARS to the governor's

budget and relied on our testing of payroll transactions performed during our annual financial audit of the State. Based on these assessments, we found the data to be sufficiently reliable for the purposes of this audit.

We calculated the total support costs, including personal services costs and operating expenses, for lifeguard districts using the year-end reports from Parks' CALSTARS for the General Fund and the State Parks and Recreation Fund. Although certain other funds provide support for lifeguard operations, we focused on these two funds because they accounted for approximately 95 percent of lifeguard personal services costs in two of the five years we reviewed. We also used these two funds because Parks' accounting system does not track costs in a manner that separately identifies expenditures from all funding sources for either its aquatic safety program or its public safety element noted in the governor's budget. In addition, we compared the total amount of salary and wages paid to lifeguards, based on data from the State Controller's Office payroll records, with the personal services costs for all positions at lifeguard districts paid from the General Fund and the State Parks and Recreation Fund based on CALSTARS data.

To determine the impact of having rangers serve dual roles—as rangers and lifeguards—and whether rangers that serve as lifeguards are constrained by their uniforms during rescue operations, we interviewed Parks' aquatic safety specialist and reviewed its uniform handbook for lifeguards. In addition, we asked Parks to identify how many rangers serve this dual role. Because Parks told us that only 13 rangers are presently qualified to serve as lifeguards, we did not pursue the issue further.

To determine the number of drowning incidents that have been 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, we obtained the statistics on the number of drownings in both guarded and unguarded waters from 2000 through 2004 that Parks, the cities of Huntington Beach and San Diego and Los Angeles County reported to USLA. Because of concerns about the sufficiency and reliability of the data, the unique characteristics of California beaches, and the unique circumstances of reported drownings, we could not draw a direct correlation between the number of drowning incidents and the number of lifeguards stationed at state swimming beaches. However, we reviewed a sample of

public safety reports and Parks' summary of the circumstances of the unguarded-water drownings it reported for 2004 to assess the potential effects on lifeguard staffing. Similarly, we could not draw a direct correlation between the number of drownings and the resources available to lifeguards stationed at state swimming beaches. However, in reviewing the circumstances surrounding the unguarded-water drownings Parks reported for 2004, nothing came to our attention to suggest that an insufficiency or failure of equipment or other resource contributed to any of the drownings. ■

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# CHAPTER 1

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## ***Despite a Reported Increase in Beach Attendance and Lifeguard Workload, Drowning Statistics Do Not Suggest a Need to Increase Lifeguard Staffing***

### CHAPTER SUMMARY

The total number of drownings in waterways with a staffed lifeguard tower or station (guarded waters) managed by the Department of Parks and Recreation (Parks) has remained at a little over one per year for each of the last five years. Parks has maintained this low number in spite of a reported increase in estimated beach attendance and a significant increase in the reported workload of lifeguards. Parks' rate of guarded-water drownings is comparable to that at beaches controlled by the three local governments we surveyed (local beaches): the cities of Huntington Beach and San Diego and Los Angeles County. Parks compiles aquatic safety statistics, such as rescues and drownings, for its districts with aquatic safety programs (lifeguard districts). However, we found some omissions and inaccuracies in the data for some of the years we reviewed, bringing into question the reliability of the statistics.

Despite a large increase in 2001 followed by a similar decrease in 2002, Parks' lifeguards worked slightly fewer hours in 2004 than they did in 2000. This was generally consistent with lifeguard staffing reported by local beaches. However, the hours worked by Parks' seasonal lifeguards, who are employed primarily during the peak season, generally decreased more than those worked by permanent lifeguards. Nevertheless, Parks appears to adjust its lifeguard staffing levels to deal with changes in beach attendance and uses a reasonable mix of both permanent and seasonal lifeguards to provide public protection at state beaches. Over the last five years, it has relied more heavily on seasonal lifeguards during the peak season from April through October, while its permanent lifeguards worked a relatively steady number of hours throughout the year.

Further, Parks appears to benefit by requiring its permanent lifeguards to be peace officers. We found that activities related to the law enforcement aspects of a lifeguard's job have increased

dramatically. Coupled with Parks' reliance on permanent lifeguards during the nonpeak season, it seems important for Parks' permanent lifeguards to be peace officers.

Based on the survey responses we received from sectors with an aquatic safety program, including the Oceano Dunes off-highway-vehicle-district (lifeguard sectors), Parks uses criteria that are consistent with professional standards to determine its lifeguard staffing needs. In particular, it uses criteria consistent with those included in manuals published by the United States Lifesaving Association (USLA) and the Centers for Disease Control and Prevention (CDC). Local beaches also use criteria consistent with the USLA and the CDC.

Finally, within the last five years, Parks' lifeguard districts have experienced an increasing number of drownings in unguarded waters along the coast and in lakes and rivers. According to Parks' aquatic safety specialist, given additional lifeguard staffing and resources, Parks would be able to address the increasing rate of unguarded-water drownings. However, based on the circumstances surrounding the 31 reported drownings in unguarded waters during 2004, we believe adding more lifeguards may not be an appropriate response.

## **BACKGROUND**

The USLA defines *guarded water* as an area under the protection of lifeguards, as determined by the lifeguard provider, or within a designated swimming area. Consistent with the USLA definition, Parks defines *guarded water* as a location within the viewing area of a staffed lifeguard tower or station. It is important to note that Parks does not always have lifeguards posted at its lifeguard towers. For example, although some of Parks' lifeguard towers are staffed before 7 a.m. and after 8 p.m. and are in operation more than six months of the year, others are staffed only from approximately 10 a.m. to 6 p.m. from Memorial Day through Labor Day.

Unguarded water does not necessarily mean that no lifeguard is ever present. Instead, it can be any body of water that is not guarded at a given time. Specifically, unguarded water includes a location or body of water where Parks has lifeguards on roving-vehicle or boat patrol instead of sitting in a tower, or a location with a lifeguard tower that is not always staffed. Therefore,

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.

### **LIFEGUARD STAFFING LEVELS HAVE BEEN SUFFICIENT TO PREVENT AN INCREASE IN REPORTED DROWNINGS AT GUARDED WATERS**

The total number of drownings in state and local guarded waters remained low from 2000 through 2004. During the same period, Parks' lifeguard districts reported that attendance at their beaches increased by nearly 77 percent, while reported attendance at two of the three local beaches we surveyed actually decreased slightly. However, the method of calculating beach attendance varies not only among state beaches but among local beaches as well.

Parks' aquatic safety statistics show that the workload of its lifeguards increased from 2000 to 2004, with the largest percentage rise in duties related to law enforcement. However, we found some errors in these statistics, bringing into question the reliability of the data. Further, lifeguard workload as reported by local beaches varied depending on the activity. Although Parks' lifeguard workload appears to have increased, its lifeguard staffing levels in 2004 were slightly less than they were in 2000. Nevertheless, staffing patterns for Parks' lifeguards and the mix of permanent and seasonal lifeguards seem reasonable. In addition, it appears that Parks benefits by requiring its permanent lifeguards to be peace officers. Finally, Parks' lifeguard sectors consider criteria that are consistent with professional standards when determining their need for lifeguards.

### **Reported Drownings in Guarded Water Have Not Increased at State Beaches**

Over the five-year period from 2000 through 2004, Parks reported a total of seven drownings in guarded waters at state beaches within its lifeguard districts, an average of less than 1.5 drownings per year. Parks reported that no drownings occurred in guarded waters during 2002 and 2004. Four of the seven drownings occurred in 2001, with three of the four occurring within the same lifeguard district. According to public safety reports provided by Parks, these three drownings occurred in the Orange Coast district on three dates between May and August. The public safety reports also indicated that two of the drownings involved victims who had little or no swimming experience and fell

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*Over the five-year period from 2000 through 2004, Parks reported a total of seven drownings in guarded waters at state beaches within its lifeguard districts.*

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off their body boards. The third drowning involved a victim who could not swim and was caught in a rip current—a current of water traveling away from shore that is generated by wave action—while standing in waist-deep water. The three local beaches we surveyed reported similar results. Los Angeles County reported no drownings in guarded water from 2000 through 2004, while Huntington Beach reported only one and San Diego reported two over the same five-year period. 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 CDC, which concluded that the 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. Nevertheless, as we discuss later in this chapter, we cannot infer from these statistics that Parks could have avoided many of the drownings in unguarded waters by assigning additional lifeguards, because of the circumstances of those drownings.

#### **Parks Reported a Sharp Increase in Beach Attendance From 2000 to 2004**

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*Parks' lifeguard districts reported that attendance increased from 23.4 million in 2000 to 41.4 million in 2004.*

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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 stated that one of the primary factors contributing to this increase has been the park fee reduction in fiscal year 2001–02. In addition, Parks said the increasing population in California and the increasing popularity of water-oriented recreation contributed to the increase in beach attendance. Meanwhile, San Diego reported that attendance at its beaches increased from 20.5 million in 2000 to 23 million in 2004, an increase of 12 percent. However, the other two local beaches we surveyed reported a decline in their estimated beach attendance. Los Angeles County reported that its beach attendance decreased from 53.9 million in 2000 to 48.5 million in 2004, a 10 percent decrease. Although Los Angeles County indicated that cooler weather may have contributed to its lower beach attendance in 2004, it also acknowledged that the numbers can fluctuate because they are estimates. Similarly, Huntington Beach reported a decrease from 9.2 million to 8 million, a 13 percent decrease. Huntington Beach asserted that its beach attendance decreased because it closed a one-half mile parking lot for redevelopment projects.

Parks' figures for beach attendance are estimates. For example, the Orange Coast and San Diego Coast districts estimate attendance by multiplying the number of vehicles in the park by estimates of how many people are typically in each vehicle that visits the park. Further, prior to 2004, San Diego North sector's former lifeguard supervisor added approximately 7.5 percent to the estimated total to account for beachgoers who walked to or were dropped off at the beach. Starting in 2004, when the former lifeguard supervisor left, the sector discontinued this practice and calculated beach attendance based on monthly attendance reports. As a result, the district reported a total attendance figure for 2004 that was about 500,000 less than it would have been using its previous estimating method.

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*Because the methods to calculate attendance vary and involve some level of estimation, it is difficult to closely compare attendance data reported by various locations.*

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The local beaches also use various methods to calculate their reported attendance. Huntington Beach stated that it derives its reported attendance from seasonally adjusted data provided by its beach parking operation. San Diego told us that its reported attendance is an approximate number based on observations of staff in their main lifeguard tower. Finally, Los Angeles County told us that its lifeguards make a general estimate of attendance based on crowd density they observe throughout the day and, during the peak season, they multiply the estimate by three to account for crowd turnover. Because the methods vary and involve some level of estimation, it is difficult to closely compare attendance data reported by the locations we surveyed.

### **The Reported Workload of Lifeguards at State Beaches Has Increased, Although We Noted Some Errors in Parks' Data**

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. Parks is required to report certain lifeguard activity statistics annually to the USLA to maintain its USLA certification as a lifeguard agency. The statistics for several key activities, including preventive actions, aquatic rescues, medical aids, warnings, citations, and arrests, are indicative of the workload that lifeguards and other personnel have at state beaches in lifeguard districts. Table 1 on the following page provides definitions for these statistics and shows that Parks reported increases in all the key activities 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.

**TABLE 1****The Department of Parks and Recreation Reported That Its Lifeguards' Workload Increased From 2000 to 2004**

Key Activities	2000	2004	Increase	
			Number	Percent
Preventive actions	274,500	541,800	267,300	97%
Aquatic rescues	7,900	10,000	2,100	27
Medical aids	6,000	7,100	1,100	18
Warnings*	42,400	161,300	118,900	280
Citations*	1,400	2,700	1,300	93
Arrests*	80	210	130	163

Source: Department of Parks and Recreation aquatic safety statistics for 2000 and 2004 for districts with an aquatic safety program.

\* These activities related to law enforcement include actions taken by both park rangers and lifeguards; however, they all occurred within the aquatic setting.

**Definitions:**

**Preventive actions**—Verbal warnings to people who are in locations or positions where, if they were to remain, their safety would be compromised.

**Aquatic rescues**—Rescues in which people are physically brought to safety from the water.

**Medical aids**—There are two types of medical aids. Minor medical aids represent injuries that do not require attention from a paramedic or medical doctor. Major medical aids represent injuries that require attention from a paramedic or medical doctor or emergency transport to a medical facility.

**Warnings**—Contacts resulting in warnings or directions concerning violations of local, state, or federal laws or regulations, including state park regulations.

**Citations**—Citations issued by lifeguards or other state park personnel for violations of state park regulations or federal, state, or local laws or regulations.

**Arrests**—Law enforcement contacts resulting in physical arrests of suspects for violations of the law or outstanding warrants.

According to Parks, as the number of visitors to state beaches increases, so too does the level of crime at those beaches. This leads to an increase in the number of warnings. In addition, Parks stated that when more people visit a state park, the potential for injury or rescue is greater and the need to warn visitors of hazards through preventive safety actions increase.

The three local governments we surveyed reported increases in warnings and preventive actions from 2000 to 2004 similar to those reported by Parks; however, San Diego combined these

statistics and reported them together as preventive actions. The USLA believes that these types of actions consume much of a lifeguard's time. In support of its view that the primary role of lifeguards is prevention, the USLA reported that, on average, lifeguards throughout the United States spent 91 percent of their time performing preventive actions from 1991 through 2000.

In addition to the rise in warnings, Parks also reported an increase in other law enforcement activities. As shown in Table 1, Parks issued 1,300 more citations and made 130 more arrests in 2004 than in 2000. Parks attributed the increase in citations and arrests to an increase in crime, which is a result of more people visiting state parks. In contrast, two of the three local governments we surveyed reported a substantial decline in these statistics. For example, San Diego reported that the number of citations it issued dropped from about 1,000 in 2000 to about 300 in 2004. San Diego told us that it attributed the decrease to its renewed emphasis on aquatic safety as its primary focus and its deferral of many law enforcement activities to local police. Los Angeles County did not report any statistics regarding citations and arrests from 2000 through 2004 because it does not consider these activities to be the primary focus of its lifeguards and thus defers them to local law enforcement agencies.

In its 2003 manual titled *Open Water Lifesaving*, the USLA indicates that lifeguards are usually granted some degree of authority to enforce regulations, which may be limited to issuing warnings. However, in some areas, lifeguards are appointed as peace officers and have the authority to issue citations and make arrests. In fact, the permanent lifeguards for Parks, Huntington Beach, and Los Angeles County, along with most full-time lifeguards in San Diego, are peace officers. However, as stated previously, San Diego and Los Angeles County rely more heavily on local law enforcement agencies to handle citations and arrests, leaving their lifeguards better able to focus on the water. In contrast, Parks stated that it is charged with the primary protection of the state park system and preserving the peace through its public safety function. Therefore, it is not surprising that Parks' law enforcement statistics are higher than those of the local governments we surveyed.

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***Parks reported more modest increases in aquatic rescues and medical aids of 27 percent and 18 percent, respectively, from 2000 to 2004.***

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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.

According to Parks, increasing visitation places additional park visitors at risk from the environment in which they are recreating. Consequently, there is an increase in aquatic rescues. Although the data reported by the three local governments we surveyed included increases and decreases in aquatic rescues and medical aids, none of the percentage changes were as substantial as those Parks reported. These changes ranged from a 12 percent increase in the number of rescues at Huntington Beach to a 17 percent decrease in the number of medical aids at Los Angeles County.

Finally, although Table 1 includes data only for 2000 and 2004, our cursory review of Parks' data for other years in between identified instances in which the data were incomplete or inaccurate. For example, we found that one lifeguard district failed to report most of its statistics for 2001. According to Parks' aquatic safety specialist, this district did not have personnel in place to compile the statistics at the time. In addition, we found three other lifeguard districts that did not report swimming-related rescues for 2001. Once we brought this to the attention of the aquatic safety specialist, he contacted the districts and obtained the statistics. Further, we found that one lifeguard district reported certain duplicate statistics for 2001 and 2002. The aquatic safety specialist stated that the duplication was due to a data entry error. Later, he provided us this district's revised statistics for 2002. These kinds of problems raise questions about the reliability of the aquatic safety data that Parks reported. The aquatic safety specialist stated that data collection improvements, such as revising forms and providing training, are currently being implemented. Although we did not find an instance where the inaccurate data caused Parks to make an inappropriate management decision, if Parks 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.

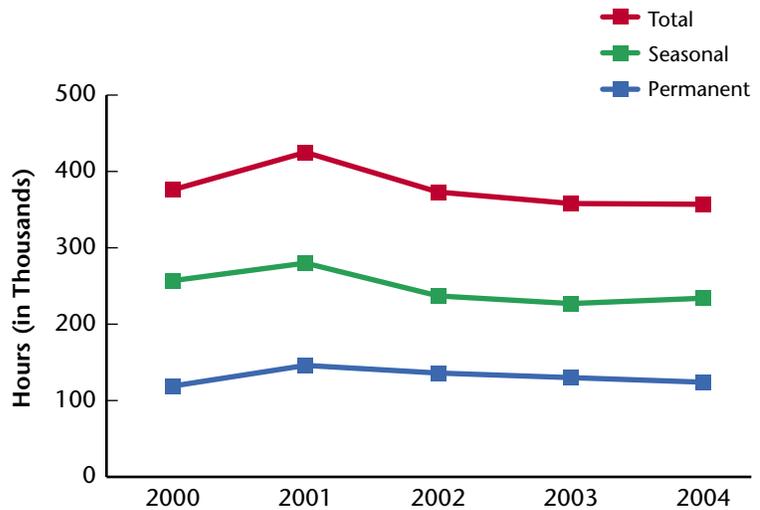
### **Parks' Lifeguards Worked Slightly Fewer Hours Overall in 2004 Than They Did Four Years Ago**

Despite a dramatic increase in 2001 followed by a similar decrease in 2002, Parks' lifeguards worked slightly fewer hours in 2004 than they did in 2000. Figure 2 provides a breakdown of the total hours we estimate permanent and seasonal lifeguards worked each year from 2000 through 2004, based on payroll

data we obtained from the State Controller’s Office. In 2000, lifeguards worked about 376,000 hours compared with 357,000 in 2004. That represents a decrease of 5 percent, or about 10 full-time lifeguards each working 1,778.5 hours, Parks’ standard measure of the annual hours a full-time employee works.

**FIGURE 2**

**After a Jump in 2001, Total Hours Worked by Lifeguards Have Declined to a Level Slightly Below That of 2000**



Source: Auditor’s estimate of hours worked based on regular pay and overtime pay from the State Controller’s Office payroll system.

Note: To provide a better indication of the number of hours lifeguards spent performing their duties in districts with aquatic safety programs, we reduced the hours paid to account for leave absences, such as vacation and sick leave, based on the leave hours lifeguards generally earned over the period. For permanent lifeguards, we used the Department of Parks and Recreation’s standard measure of the actual working time per year (1,778.5 hours). For seasonal lifeguards, we subtracted 18 hours for every 160 hours paid, which is consistent with the sick and vacation leave seasonal employees earn from their 37<sup>th</sup> month of service through their 10<sup>th</sup> year of service.

As Figure 2 shows, the number of hours lifeguards worked jumped by about 49,000 hours from 2000 to 2001. According to Parks, an anticipated increase in beach attendance led to this large increase. Beginning in fiscal year 2000–01, Parks decreased various fees, including parking and campsite fees, in an effort to make entrance into and use of state parks more affordable. As part of its fee reduction program, Parks received

additional funding for lifeguard staffing in fiscal year 2000–01 to accommodate an anticipated influx of visitors to state beaches. Although we did not verify how many additional lifeguards Parks actually hired in 2001, Figure 2 illustrates that hours for both permanent and seasonal lifeguards increased by similar amounts that year.

However, in 2002, lifeguards worked significantly fewer hours, and Parks reduced the hours worked by seasonal lifeguards much more than it reduced the hours worked by permanent lifeguards.

	Permanent	Seasonal
2000	31.5%	68.5%
2001	34.2	65.8
2002	36.4	63.6
2003	36.4	63.6
2004	34.6	65.4

In 2002, seasonal lifeguards worked about 42,000 fewer hours (15 percent) than they did in 2001, while permanent lifeguards worked only 10,000 fewer hours (7 percent). Permanent lifeguards actually worked 8,000 more regular hours in 2002 but saw an 18,000-hour drop in the number of overtime hours they worked, resulting in a net reduction overall. Thus, as shown in the text box, although the total number of hours lifeguards worked in 2002 was nearly the same as in 2000, the share of the total hours worked by permanent lifeguards increased from 31.5 percent in 2000 to 36.4 percent two years later. These trends are consistent with actions Parks told us it takes when facing budget reductions—

namely, it focuses on cutting seasonal staff and overtime and tries to avoid reducing permanent positions. Finally, after the decrease in 2002, Parks gradually reduced the number of hours worked by permanent lifeguards in 2003 and 2004, as shown previously in Figure 2. Meanwhile, after a slight reduction in 2003, the hours worked by seasonal lifeguards increased from 2003 to 2004.

We found that Parks’ staffing trends were generally consistent with the reported trends of the three local governments we surveyed. Huntington Beach reported that it had the same number of seasonal lifeguards and only one less permanent lifeguard in 2004 than it did in 2000. In addition, although Los Angeles County and San Diego each reported an increase in their numbers of permanent lifeguards from 2000 to 2004, these increases were not very significant when compared to the larger numbers of seasonal lifeguards they have which did not increase.

## **Parks' Lifeguard Staffing Patterns and the Mix of Permanent and Seasonal Lifeguards Seem Reasonable**

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*According to Parks, the peak attendance season at state beaches generally runs between April and October each year.*

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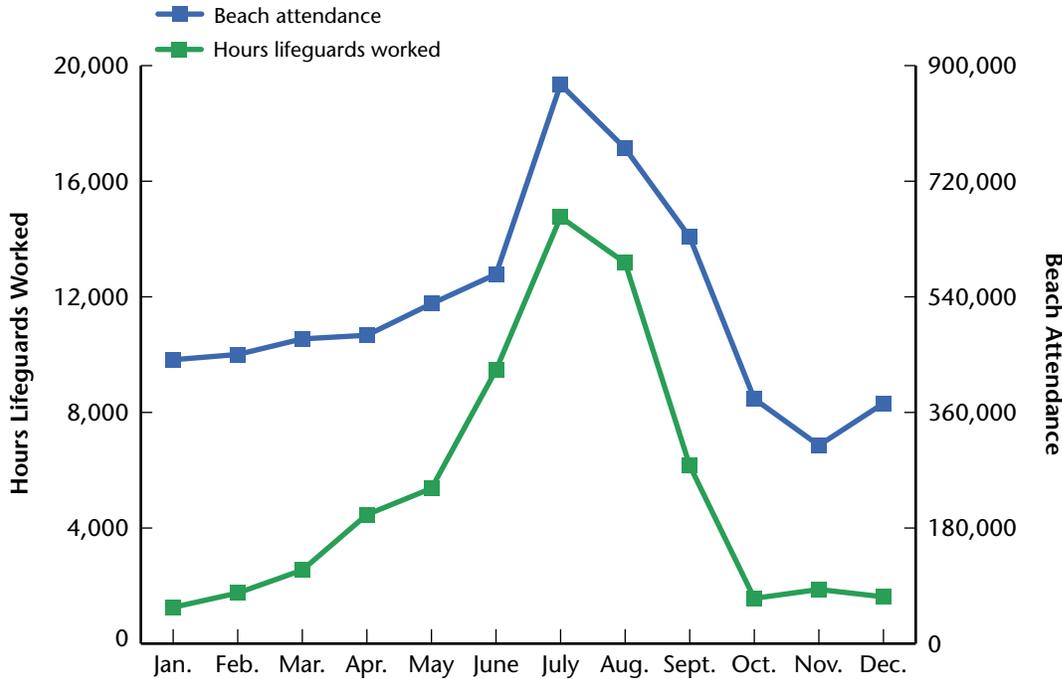
Parks appears to adjust its lifeguard staffing levels to deal with changes in beach attendance and to use a reasonable mix of permanent and seasonal lifeguards to provide public protection at state beaches. Parks indicated that it attempts to increase the staffing levels of lifeguards in the summer months to cope with increased attendance at state beaches. According to Parks, the peak attendance season generally runs between April and October each year.

One way to evaluate whether the allocation of lifeguard staffing is reasonable is to consider whether staffing levels vary with fluctuations in beach attendance. To make this assessment, we examined the estimated beach attendance and hours worked by lifeguards in the San Diego North sector in 2004. Although it is only one of Parks' many sectors, the San Diego North sector accounted for about 15 percent and 17 percent of the total reported beach attendance and hours worked by lifeguards, respectively, in 2004. As shown in Figure 3 on the following page, the total number of hours lifeguards worked in this sector generally fluctuated with changes in reported attendance. In addition, the San Diego North 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. According to the sector's lifeguard supervisor, the sector begins to increase its staffing for the summer months in June. This is also when new and returning seasonal lifeguards undergo training to obtain or renew their lifeguard certification. This explains the relatively larger increase in the number of hours worked by lifeguards from May to June.

Finally, after declining from a peak in July to a low in November, beach attendance reported by the San Diego North sector surged upward in December. However, lifeguards in the sector worked slightly fewer hours in December than they did in November. According to the sector's lifeguard supervisor, attendance increased in December 2004 because the weather was unseasonably warm, and less rain fell in December than in November. Based on historical weather data, we found this to be plausible, because although the average temperature in San Diego in December is 57 degrees, in December 2004, the temperature reached 75 degrees or more on several days.

**FIGURE 3**

**In 2004, Hours Spent Lifeguarding Beaches in the San Diego North Sector Generally Mirrored the Reported Attendance at Those Beaches**



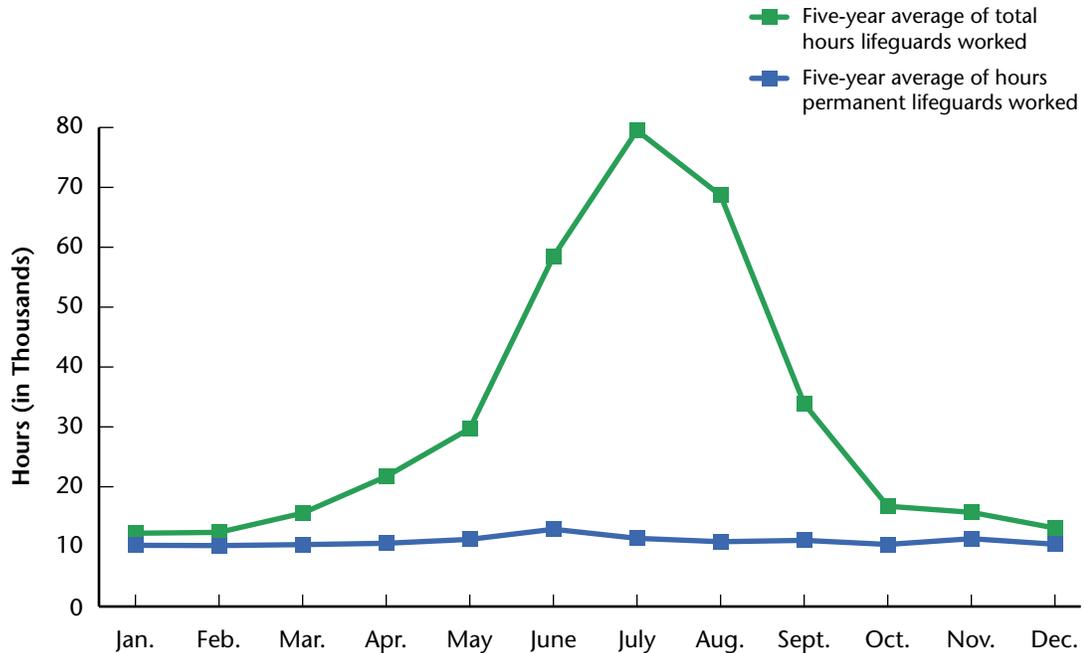
Source: Estimated hours worked based on payroll data from the State Controller’s Office and beach attendance statistics from the San Diego North sector.

Note: This figure includes two scales, one for the number of hours worked by lifeguards and one for reported attendance. Although the magnitude of the numbers on the respective scales varies considerably, combining the scales illustrates the correlation. In addition, as shown previously in Figure 2, we reduced the hours paid to account for leave absences, providing a better indication of the number of hours lifeguards spent performing their duties.

To achieve the increased staffing levels needed during the peak attendance season, Parks relies heavily on seasonal lifeguards. As shown in Figure 4, 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. Thus permanent lifeguards can focus on law enforcement and the provision of support and guidance for the seasonal staff during the summer months.

**FIGURE 4**

**On Average, the Department of Parks and Recreation Relied Heavily on Seasonal Lifeguards During the Peak Season From 2000 Through 2004**



Source: Auditor’s estimate of the average hours worked over a five-year period from 2000 to 2004, based on regular pay and overtime pay from the State Controller’s Office payroll system.

Note: To provide a better indication of the number of hours lifeguards spent performing their duties in districts with aquatic safety programs, we reduced the hours paid to account for leave absences, such as vacation and sick leave, based on the leave hours lifeguards generally earned over the period. For permanent lifeguards, we used the Department of Parks and Recreation’s standard measure of the actual working time per year (1,778.5 hours). For seasonal lifeguards, we subtracted 18 hours for every 160 hours paid, which is consistent with the sick and vacation leave seasonal employees earn from their 37<sup>th</sup> month of service through their 10<sup>th</sup> year of service. Finally, the area in the figure between the two lines reflects the monthly average hours worked by seasonal lifeguards.

Parks uses several methods to assign its seasonal lifeguards, which enable it to deal with changing circumstances. In some cases, sectors hire seasonal lifeguards for the months of June, July, and August and ask them to report to a beach 40 hours per week. In other cases, Parks relies on a group of certified lifeguards who do not necessarily work every day but can be called on an “as-needed” basis. Specifically, according to Parks’ aquatic safety specialist, lifeguard sectors maintain updated telephone lists of their staff for call-in purposes. If there is a vacancy due to an unexpected injury or illness or if there is a need to fill additional shifts due to conditions, the dispatch or supervisor will call each lifeguard on the list until the shift is filled. This allows Parks to deal with fluctuating conditions that

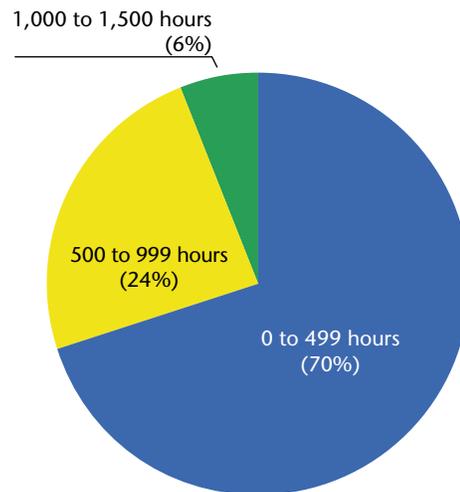
can arise on any given day. For example, Parks can increase staffing when faced with hazardous ocean conditions or in anticipation of increased attendance based on the weather forecast. Conversely, should the need for lifeguards taper—for instance, when rain is predicted—Parks can reduce the number of seasonal staff by sending them home early.

Although seasonal lifeguards contribute heavily during the peak attendance season, some do work a small number of hours during the rest of the year. However, in 2004, no seasonal lifeguard worked as many hours as a permanent lifeguard did. As shown in Figure 5, none of the 643 seasonal lifeguards who worked in 2004 worked more than 1,500 hours. In fact, only 6 percent even approached the 1,500-hour mark by working 1,000 hours or more over the course of the year. The remaining 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.

**FIGURE 5**

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**Most Seasonal Lifeguards Worked Fewer Than 1,000 Hours in 2004**



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Source: Actual hours paid to seasonal lifeguards for regular hours worked, leave balances used, and overtime, based on payroll data from the State Controller’s Office.

Note: Percentages represent the number of seasonal lifeguards who received compensation in 2004 for the ranges of hours indicated. To be conservative and to emphasize that no seasonal lifeguards worked a number of hours equivalent to the 1,778.5 hours permanent lifeguards generally worked, we did not deduct any hours for leave that seasonal lifeguards may have used in 2004.

Finally, although Parks reduces the overall number of hours worked by lifeguards and relies heavily on permanent lifeguards during the nonpeak season, this practice appears reasonable given the nature and number of drownings it has reported. As we mentioned previously, Parks reported that no drownings occurred in its guarded waters during 2004. According to Parks, 31 drownings occurred in its unguarded waters that year. Only nine of those incidents, however, occurred during the nonpeak months from January through March and November and December, when Parks relies primarily on permanent lifeguards to protect the public. Further, although we acknowledge that every drowning is a tragedy, we believe that the circumstances surrounding these incidents do not suggest an overall need for more lifeguards. We discuss this issue more fully later in the chapter.

### **Parks Appears to Benefit by Requiring Its Permanent Lifeguards to Be Peace Officers**

Parks requires all its permanent lifeguards to be peace officers. As previously mentioned, Parks reported that it has experienced an increase in each of the key activities of its lifeguards. Among those activities, the workload levels related to the three law enforcement aspects of the job—issuing warnings, writing citations, and making arrests—have increased dramatically. Further, as we just discussed, Parks relies primarily on permanent lifeguards for about five months of the year during the nonpeak attendance season. Thus, it seems important for Parks' permanent lifeguards to be peace officers. These workload trends suggest that if additional lifeguard positions are created, the peace officer status of permanent lifeguards will continue to be very valuable.

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*Parks asserted that a lifeguard with a badge, providing both aquatic safety and law enforcement services, is invaluable to both Parks and the public.*

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Parks reached a similar conclusion in a study it performed in 2003 to determine whether to create a classification of permanent lifeguards who were not required to be peace officers. Conducted as part of the 2001 through 2003 agreement between the State and the union representing lifeguards, the study found no overwhelming evidence to support the creation of such a classification. Instead, Parks determined that the greater area of concern had to do with staffing levels, not the nature of lifeguards' assigned duties, and that the proper way to deal with staffing concerns was through the budget process. Moreover, Parks asserted that a lifeguard with a badge, providing both aquatic safety and law enforcement services, is invaluable to both Parks and the public. The districts that Parks surveyed in developing the report supported this assertion by responding

that they were not willing to give up a peace officer position for a lifeguard position without a badge. Finally, Parks concluded that given the State's current budget crisis, the versatility of the current permanent lifeguard classification, with staff working as generalists, is an asset at a time when money and positions are at a premium.

### **The Factors Considered by Lifeguard Sectors When Determining Their Need for Lifeguards Are Consistent With Professional Standards**

In response to our survey, lifeguard sectors cited several factors, based on their unique situations, which they consider when determining their need for lifeguards. Although some mentioned more factors than others, the lifeguard sectors generally use criteria consistent with those mentioned in the USLA's *Open Water Lifesaving* manual (lifesaving manual), published in 2003, and the CDC's 2001 *Lifeguard Effectiveness: A Report of the Working Group* (lifeguard effectiveness report). The USLA's lifesaving manual states that attendance, water hazards, and past rescue experience, among other factors, should be used to help determine the number of lifeguards, their deployment, and daily scheduling. In addition, the lifesaving manual states that when weather draws unusually large crowds, lifeguard management must be prepared with plans to handle increased beach activity or hazards. Further, in distinguishing between water conditions at pools and waterparks with open water conditions, the USLA points out that water temperature and clarity can be controlled at pools and waterparks but are subject to natural conditions in open water. Also, while wave action and currents can be controlled in pools and waterparks, the USLA indicates that surf and currents may present the most significant source of swimmer distress and difficulty of rescue in open water.

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*The USLA's lifesaving manual states that attendance, water hazards, and past rescue experience, among other factors, should be used to help determine the number of lifeguards, their deployment, and daily scheduling.*

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The CDC's lifeguard effectiveness report states that the number of people using the beach in past years, the incidence of water-related injuries, and the number of drownings at the beach during the same period, among other factors, should be used to evaluate the need for providing lifeguards at a beach. Finally, the lifeguard effectiveness report contains a section outlining the steps decision makers should take to assess the need for lifeguards or other aquatic safety precautions. Although it does not specifically highlight budgetary constraints as a factor to consider, the CDC's lifeguard effectiveness report does mention the need to assess the cost-effectiveness of proposed alternatives. This suggests that monetary resources, or a lack thereof, play a role in determining the need for lifeguards.

Table 2 shows that lifeguard sectors consider various factors when determining their need for lifeguards. In particular, with the exception of the San Mateo sector, all lifeguard sectors we surveyed consider beach attendance when determining their need for lifeguards. For example, one lifeguard sector stated, “peak attendance periods see the greatest staffing level.” Another lifeguard sector indicated “since we know with rather strong certainty when our peak versus off-peak attendance occurs, our staffing plan adjusts accordingly.”

**TABLE 2**

**Lifeguard Sectors Consider Criteria That Are Consistent With Professional Standards When Determining Their Need for Lifeguards**

Lifeguard Sectors	Beach Attendance	Historical Knowledge*	Weather Conditions	Water Conditions	Drowning Statistics	Natural or Man-Made Hazards	Access to the Beach
<b>Coastal</b>							
Russian River	X	X			X		
San Mateo <sup>†</sup>							
Pajaro Coast	X	X	X	X			
Monterey	X		X	X			
Malibu	X	X	X	X	X	X	X
Santa Barbara	X	X	X				
Ventura	X	X	X	X		X	
Orange Coast North	X	X	X	X	X	X	X
Crystal Cove	X	X	X	X	X	X	X
Orange Coast South	X	X	X	X	X	X	X
San Diego North	X	X	X	X	X	X	X
San Diego South	X	X	X	X			
Oceano Dunes <sup>‡</sup>	X	X	X	X	X	X	X
<b>Inland</b>							
Folsom	X	X	X	X	X	X	
Delta	X	X					
San Joaquin	X		X	X			
Four Rivers	X	X					
Silverwood	X	X	X	X			
Perris	X	X	X		X		

Source: Survey responses from sectors with aquatic safety programs.

\* Historical knowledge includes historical attendance and/or staffing levels.

<sup>†</sup> According to the San Mateo sector, it staffs two full-time lifeguards who work year-round, regardless of these factors.

<sup>‡</sup> Oceano Dunes is an off-highway-vehicle district that has an aquatic safety program and is located along the coast in the San Luis Obispo Coast district.

At least 13 lifeguard sectors also consider weather conditions, water conditions, and historical knowledge, which includes past attendance and staffing levels. For example, one lifeguard sector commented that its staffing plan is “[p]rimarily based on past staffing history (since 1973) in relation to the amount of public safety risk, number of rescues, accidents and fatalities.” Another lifeguard sector noted that factors it considered include “water level and potential hazards relating to the water level, water temperature and air temperature. The biggest factor affecting us is probably the water level . . . as it dictates visitor attendance and usage.” All these factors are consistent with those mentioned by the USLA and CDC.

Fewer than half the lifeguard sectors consider other factors, such as drowning statistics, natural or man-made hazards, and access to the beach, in making their staffing decisions. However, given the different circumstances each lifeguard sector faces in operating its aquatic safety program, it seems reasonable that lifeguard sectors might weigh the factors differently.

Notwithstanding the factors listed in Table 2, all lifeguard sectors we surveyed, with the exception of the San Mateo sector, stated that budgetary constraints impact lifeguard-staffing decisions. Parks indicated that although the factors in Table 2 are used to determine the sufficient or ideal lifeguard staffing levels needed to provide adequate public safety, budgetary constraints are carefully considered when it comes to the actual staffing and scheduling of lifeguards. For example, one lifeguard sector stated that staffing levels “are driven primarily by budgets, and alternatively by visitor attendance and historic fatality levels.” Another lifeguard sector stated that the basis for its staffing plan “is balancing visitor safety needs against state budget allocations.” A third lifeguard sector stated that the rationale behind its staffing levels “is to provide maximum public safety within the constraint [of] fiscal realities.”

The three local governments we surveyed also use approaches that are consistent with professional standards when determining lifeguard staffing needs. Huntington Beach stated that it uses historical knowledge and staff input to determine what constitutes a sufficient number of on-duty lifeguards. Los Angeles County considers weather conditions and crowds in determining the need for hiring seasonal lifeguards. These factors are consistent with those recommended by the USLA and

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*Parks indicated that budgetary constraints are carefully considered when it comes to the actual staffing and scheduling of lifeguards.*

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CDC. Further, San Diego described its method of determining a sufficient number of lifeguards as having one staffed lifeguard tower every one-tenth of a mile (10 towers per mile) on oceanfront beaches during the peak season. In nonpeak times, San Diego staffs only its 10 permanent lifeguard towers. This method is consistent with one example of a lifeguard coverage system described in the USLA's lifesaving manual.

### **ALTHOUGH PARKS HAS REPORTED AN INCREASE IN THE 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.

### **The Number of Drownings in Unguarded Waters Has Generally Increased Since 2000**

The number of drownings in unguarded waters within lifeguard districts has increased by more than 60 percent over the last five years according to Parks' aquatic safety statistics. As we mentioned earlier, the number of drownings in guarded waters has remained at a low level, averaging less than 1.5 per year from 2000 through 2004. However, as shown in Figure 6 on the following page, the number of drownings in unguarded waters within lifeguard districts has generally been on the rise, from 13 incidents in 2000 to 21 in 2004, peaking at 23 incidents in 2002. In addition, drownings in districts without aquatic safety programs have increased from four in 2003 to 10 in 2004. Parks did not track drownings in districts without lifeguards before 2003.

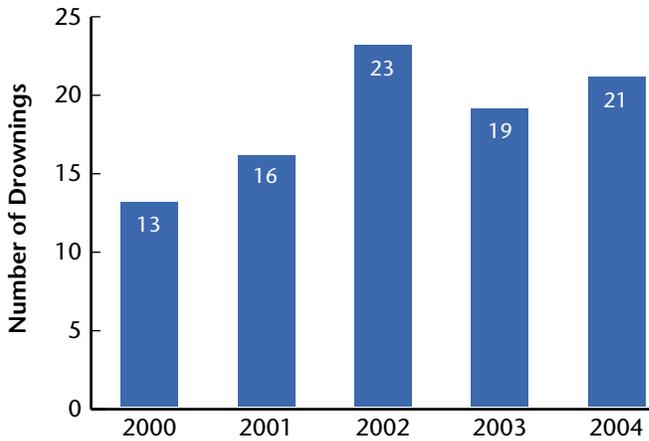
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*The number of drownings in unguarded waters has generally been on the rise from 2000 through 2004.*

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**FIGURE 6**

**Unguarded-Water Drownings in Districts With Aquatic Safety Programs Increased From 2000 to 2004**



Source: Department of Parks and Recreation (Parks) aquatic safety statistics for 2000 through 2004.

Note: In addition to the 2003 and 2004 figures, four drownings occurred in the Mendocino and Northern Buttes districts in 2003, and 10 drownings occurred in the Mendocino, North Coast Redwoods, and Northern Buttes districts in 2004. We did not include these additional drownings in this figure because these three districts do not have aquatic safety programs. Additionally, Parks did not provide information on drownings in districts without an aquatic safety program prior to 2003. However, we discuss all 31 drownings in 2004 in our analysis.

As we mentioned earlier, Parks defines guarded-water drowning as a drowning death that occurs within the viewing area of a staffed lifeguard tower or station, which is consistent with the USLA definition. On the other hand, a drowning in unguarded water takes place outside a lifeguard's normal view, or during occasions when a tower or station is not staffed. In addition, unguarded waters include areas not covered by an aquatic safety program, such as the Mendocino district, and areas that have a lifeguard presence but are not monitored by a staffed lifeguard tower or station. For example, based on its response to our survey, the San Diego North sector oversees Torrey Pines State Beach, which is 4.3 miles long. However, those areas of the beach with no lifeguards present in towers are considered unguarded waters. Similarly, during the rest of the year when there are no lifeguards in towers, the entire beach is considered to be unguarded waters even though lifeguards provide vehicle patrol.

## **Most of the Unguarded-Water Drownings Reported in 2004 Occurred in North Coast and Inland Districts**

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*The south coast districts combined reported receiving almost 60 percent of the total beach attendance but had only three unguarded-water drownings in 2004.*

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In 2004, the majority of the 31 drownings in unguarded waters occurred in the inland and north coast districts, although they estimated receiving significantly lower beach attendance compared with the south coast districts during that period. Of these drownings, 21 took place within eight districts that operate aquatic safety programs, while another 10 took place in three districts without such programs. As Table 3 on the following page shows, 14, or 45 percent, of the 31 drownings that occurred in unguarded waters in 2004 took place in four inland districts that received only about 11 percent of total reported beach attendance. Another 14 drownings occurred in north coast districts. On the other hand, the south coast districts combined reported receiving almost 60 percent of the total beach attendance but had only three unguarded-water drownings, or about 10 percent of the total. In fact, three of the five south coast sectors did not report any drownings in unguarded waters within their jurisdictions in 2004.

As we mentioned earlier, beach attendance is one of the main factors that lifeguard sectors consider when determining the number of lifeguards to staff on state beaches. For instance, the south coast sectors, with the warm water and sandy beaches that attract visitors, generally have more densely populated beaches. Therefore, it is reasonable for these sectors to staff more lifeguards in towers. On the other hand, the north coast sectors, with cooler climates, colder water, and more rocky cliffs, generally have lower beach attendance than the south coast sectors. Thus, the north coast sectors, with fewer lifeguards, tend to rely more on vehicle patrols that are able to cover a wider span of coastline than are lifeguards posted in stationary towers. Additionally, a review of the staffing and estimated attendance data reported by the lifeguard sectors confirms that Parks generally stations more lifeguards at its heavily populated beaches. Three of the four districts that reported the highest estimated beach attendance in 2004 also accounted for the greatest number of hours worked by lifeguards during that year.

**TABLE 3**

**Most Unguarded-Water Drownings in 2004  
Occurred in North Coast and Inland Districts  
That Had Lower Beach Attendance**

Lifeguard Districts	Drowning Incidents	Estimated Annual Beach Attendance* (In Thousands)
<b>North Coast</b>		
Mendocino <sup>†</sup>	5	Not reported
Monterey	1	2,900
North Bay	2	3,400
North Coast Redwoods <sup>†</sup>	4	Not reported
Santa Cruz	2	6,200
<b>North Coast Subtotals</b>	<b>14</b>	<b>12,500</b>
<b>South Coast</b>		
Angeles	0	1,800
Channel Coast	0	3,000
Oceano Dunes <sup>‡</sup>	0	900
Orange Coast	1	12,600
San Diego	2	6,600
<b>South Coast Subtotals</b>	<b>3</b>	<b>24,900</b>
<b>Inland</b>		
Central Valley	4	1,100
Gold Fields <sup>§</sup>	5	2,500
Inland Empire	4	400
Northern Buttes <sup>†</sup>	1	600
<b>Inland Subtotals</b>	<b>14</b>	<b>4,600</b>
<b>Totals</b>	<b>31</b>	<b>42,000</b>

Source: Auditor generated based on information received from the Department of Parks and Recreation.

Note: This table contains only the districts where a drowning incident occurred and/or an active aquatic safety program exists.

\* Except for the Northern Buttes district, beach attendance was reported only by a district's sectors with aquatic safety programs.

<sup>†</sup> District without an aquatic safety program.

<sup>‡</sup> Oceano Dunes is an off-highway-vehicle park located in the San Luis Obispo Coast district and has an aquatic safety program.

<sup>§</sup> Three of the drownings in the Gold Fields district occurred in its Auburn sector, which does not have an aquatic safety program.

However, similar to the concerns we raised earlier about the accuracy of Parks' data on lifeguards' workload and estimated beach attendance, we have concerns regarding the accuracy of the data Parks collects on unguarded-water drownings. Parks originally reported to us and to the USLA that 36 unguarded-water drownings occurred within state park boundaries in 2004. After we reviewed a summary of these incidents and a sample of the related public safety reports it provided, Parks revised the number and reported 31 unguarded-water drownings to us. Because drowning statistics are an important factor to consider in making decisions about the administration of its aquatic safety program, Parks needs to ensure that these data are accurate.

### **Adding More Lifeguards May Not Be Appropriate Based on the Nature of the Unguarded-Water Drownings Reported in 2004**

Based on the circumstances surrounding the 31 reported drownings in unguarded waters during 2004, adding more lifeguards may not be an appropriate response. 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. When we asked for its reaction to the increasing number of drownings in unguarded waters, Parks told us that it addresses aquatic safety concerns through various strategies, including tower-based operations, roving vehicle patrols, and vessel-based operations. To enhance these operations, including areas with no aquatic safety program, Parks indicated that it works in partnership with concerned citizens and local agencies to identify aquatic safety needs and prevent further loss of life through public information programs, such as visitor pamphlets and news releases, as well as through the use of signs and interpretive panels. In addition, Parks' aquatic safety specialist said that given additional lifeguard staffing and resources, Parks would be able to improve overall aquatic safety for visitors in state parks and address the increasing rate of unguarded-water drownings. However, it would be unrealistic to think that Parks could ever prevent all drownings within its jurisdiction, no matter how many lifeguards it assigned to protect the public along state waterways.

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*It would be unrealistic to think that Parks could ever prevent all drownings within its jurisdiction, no matter how many lifeguards it assigned to protect the public along its waterways.*

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Finally, Parks' aquatic safety specialist indicated that the allocation of money and staff resources must be based on statewide needs and balanced with statewide priorities while facing mandated limitations on spending and staffing. He said current budget considerations are very serious, and Parks is

doing everything it can to hold the line from further erosion of seasonal funding and money to cover operating expenses. We acknowledge that Parks must make difficult management decisions about allocating its resources to maximize public safety within the constraints of the State's current fiscal situation. However, as described in the subsections that follow, it does not seem likely to us that Parks would choose to add more lifeguards in response to the 31 drownings that happened in unguarded waters in 2004.

***In 17 of the 31 Unguarded-Water Drownings, the Level of Lifeguard Staffing Did Not Appear to Be an Issue***

We determined that additional lifeguards probably would not have been able to rescue at least 17 of the 31 victims of unguarded-water drownings in 2004 because of factors such as the time of year, time of day, and location. In particular, nine of the 31 drownings occurred within the nonpeak season between November and March, when fewer people are on the beaches and lifeguard sectors generally staff fewer lifeguards and have shorter hours of operation. In fact, sectors that provide tower coverage generally do not staff their portable towers during the nonpeak season, and rely primarily on vehicle or boat patrols during those months. Additionally, all nine drownings in the nonpeak season took place within north coast or inland districts. Further, at least two of the nine occurred in places not generally accessed by the public, and another two occurred during the early morning hours. We reviewed a public safety report concerning two drownings that took place near a rocky cliff at a state reserve in a north coast district—an area that one lifeguard described as not generally used by the public because it is in a gated residential area with no authorized trails. We also reviewed the public safety report describing two other drownings resulting from a boating accident that happened early on a Sunday morning. Although the nearby park headquarters was closed at the time, a lifeguard responded from his residence after being notified by state park dispatch, which learned of the incident from a security guard patrolling the area. According to the public safety report, the boaters had violated state regulations by not having life jackets on board and by overloading the boat.

***Although they occurred in the spring and summer months, each of four other drownings took place early in the morning or late at night, when no lifeguards would likely have been in the area.***

Although they occurred in the spring and summer months, each of four other drownings took place early in the morning or late at night, when no lifeguards would likely have been in the area. Three drownings happened a little after 6 a.m., while the fourth incident took place at about 8:30 p.m. According

to Parks' summary of the drowning incidents, one of the early morning deaths occurred in a north coast district when a boat became lost in the fog and overturned. Even if lifeguards had normally been stationed in towers at the sites of these three drownings, they would not likely have been working at the times of these drownings.

The four remaining incidents involved bodies that washed ashore or were found drifting in the water. According to Parks, the circumstances of these drownings were unknown. Since it is unclear how these bodies ended up in the water originally, these drownings may not support the need for more lifeguards.

### **Ten of the 31 Unguarded-Water Drownings Occurred Primarily at Lakes Within Inland Districts During the Peak Season**

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*Of the eight drownings at lakes, three appeared to involve victims who drowned while swimming or wading in the water, and five were boating-related drownings.*

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Of the 14 unguarded-water drownings that Parks reported taking place in its inland districts, 10 occurred during the peak season at times of the day when lifeguards typically perform their duties. Eight of the 10 drownings took place at lakes, and two occurred along one river. Of the eight drownings at lakes, three appeared to involve victims who drowned while swimming or wading in the water, and five were boating-related drownings. We reviewed the public safety reports for two of the victims who drowned while swimming or wading and found that lifeguards were in the general areas where the drownings took place. In one instance, a family member of the victim located a lifeguard who was patrolling the area and requested assistance. Several additional lifeguards in the vicinity were contacted and arrived to provide assistance. In the second instance, both the lifeguards on patrol and officers from the local sheriff's department arrived on the scene within about five minutes after a witness called 911. Although these drownings occurred in unguarded waters, Parks had lifeguards in close enough proximity to respond.

Among the eight drownings at lakes, four were boating-related incidents and a fifth involved a victim who drowned while swimming to a boat. While inland districts provide lifeguard services at towers along the shore in the peak season, they generally use vehicle and boat patrols, which may be a more effective way for them to protect the public over a large area. Many lakes within the inland sectors are popular areas for boating activities, and according to the USLA, lifeguards patrolling by boat are effective at helping boaters in distress and enforcing safe boating regulations. For example, the Four Rivers sector within the Central Valley district oversees three lakes and operates three

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*The Four Rivers sector reported that boat patrol is the most effective form of lifeguard coverage at two of its lakes.*

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boats, two portable towers, and one vehicle. That lifeguard sector considers boat patrol the most effective form of lifeguard coverage at two of the lakes because one lake has innumerable areas where visitors can access the water and the other lake is surrounded by steep cliffs. Further, since Parks already had vehicle and/or boat patrols on duty when these five incidents occurred, it is not clear that it would choose to add more lifeguards at these locations if it received additional resources.

The remaining two drowning incidents occurred along the American River within the Auburn sector. Although two other sectors within the Gold Fields district operate aquatic safety programs, the Auburn sector does not. According to Parks' aquatic safety specialist, it would be technically challenging and costly to provide lifeguard coverage along the river. For instance, the swiftly moving cold water at the river offers challenges that would require lifeguards to take additional training and have equipment specially designed for those conditions, such as wet suits and swift water personal floatation devices. However, according to the chief of Parks' Public Safety Division, rangers in the Auburn sector routinely make safety and law enforcement contacts with the public, especially in the confluence area of the north and middle forks of the American River. The confluence area is popular with the public because of its easy access compared with other portions of the American River in the Auburn sector. Rangers make law enforcement contacts to prevent the use of alcohol and drugs and to inform the public about the dangers of the river, especially for small children. Since Parks indicated that it would be challenging and costly to provide lifeguards in the Auburn sector and that its rangers are already performing some preventive actions, it appears unlikely that Parks would provide lifeguard coverage in this area if it were given additional resources.

#### ***The Remaining Four Unguarded-Water Drownings Occurred in a Variety of Coastal Settings***

Three of the remaining four drownings in unguarded waters occurred within two north coast sectors with either limited or no lifeguard coverage. Two victims drowned while diving for abalone together in the Mendocino district. This district does not have an aquatic safety program, but the Department of Fish and Game has wardens who patrol the coast to regulate abalone diving activities. These wardens must be physically fit, able to swim, and trained in cardiopulmonary resuscitation. Some wardens are also certified scuba divers. We are not suggesting

that wardens either are or should be trained as certified lifeguards. However, wardens could warn divers about dangerous conditions or assist divers in distress by throwing a rescue line or calling for assistance should they lack the requisite training to perform an aquatic rescue. Because another state department routinely patrols this area, it seems reasonable that Parks has no aquatic safety program in the Mendocino district. However, Parks asserted that this is not a factor it would consider when deciding where to allocate aquatic safety resources because wardens may not have the requisite training and expertise to adequately address the public's aquatic safety needs.

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*The Russian River sector superintendent said he emphasizes vehicle patrol because a stationary tower guard typically cannot effectively respond to multivictim vehicle accidents, cliff rescues, or other aquatic emergencies within the sector's 30-mile patrol zone.*

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The third drowning in north coast sectors occurred in the Russian River sector of the North Bay district. Witnesses who reported the incident said the victim had been in the water for approximately half an hour before a state lifeguard, paramedics, and various other safety and law enforcement officers arrived at the location. According to its survey response, the Russian River sector does not have portable towers but covers its 30 miles of coastline using vehicle patrol. According to the sector's superintendent, the topography, including steep cliffs, no road access, and individual pocket beaches, dictate the most efficient manner of patrol. Accordingly, given the sector's current staffing levels and its extended patrol area, the most effective lifeguard model emphasizes mobility and the ability to bring the necessary assets, such as cliff rescue gear, first aid gear, and extrication devices, to the location where they are most needed. In addition, the superintendent said he emphasizes vehicle patrol in his sector because a stationary tower guard typically cannot effectively respond to multivictim vehicle accidents, cliff rescues, or other aquatic emergencies within the sector's 30-mile patrol zone.

Although the remaining drowning occurred in an area that was not guarded at the time, lifeguards from surrounding areas responded immediately. The drowning occurred at Huntington State Beach within the Orange Coast North sector, in an area bordering a nearby city beach. Parks' aquatic safety specialist categorized this incident as a drowning in previously guarded water and stated that it occurred within the viewable area of a lifeguard tower that was not staffed. According to the public safety report, the drowning took place in mid-April. According to the sector, it does not staff all its lifeguard towers year-round. Although this sector provides the bulk of its lifeguard coverage at towers between Memorial Day and Labor Day, when attendance is heaviest, it provides only minimal tower coverage in the first and last months of its peak

season, April and September. Further, the lifeguard sector does not staff any of its towers between October and March but relies solely on vehicle patrols. Although the tower in the area was not staffed, we found from the public safety report that lifeguards from both Huntington State Beach and an adjacent city beach arrived at the drowning site within two minutes of receiving a dispatch.

## **RECOMMENDATIONS**

To help it determine the amount and best allocation of resources sufficient to protect the public at beaches and waterways within state parks, Parks should do the following:

- Make certain that 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.
- Monitor the circumstances surrounding drowning incidents that occur in unguarded waters. ■

## CHAPTER 2

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### ***Continued Deferral of Equipment Repair and Maintenance May Eventually Have a Negative Impact on the Department of Parks and Recreation's Ability to Adequately Protect the Public***

#### CHAPTER SUMMARY

The Department of Parks and Recreation's (Parks) districts with aquatic safety programs (lifeguard districts) significantly decreased their spending on equipment and facility operations, which are components of operating expenses, and increased their spending on personal services from fiscal years 1999–2000 to 2003–04. As a result, according to the sectors within the lifeguard districts that actually operate an aquatic safety program (lifeguard sectors), some of their lifeguard equipment and facilities are in poor condition and in need of repair or replacement. According to the Parks' budget office, when it faces budget cuts for operating expenses, it starts by cutting back on equipment and facility maintenance because they are nonfixed or discretionary expenses. Additionally, several lifeguard sectors also reported that spending on equipment, facility maintenance, or both has been decreased when faced with budget reductions. Both Parks' budget office and its lifeguard sectors also said spending on staffing costs, such as seasonal lifeguard positions, has been targeted for reductions. However, our review of spending on total lifeguard salaries showed that there was not an overall decrease from fiscal years 1999–2000 to 2003–04.

The effects of decreased spending on equipment and facilities are reflected in the lifeguard sectors' responses to our survey regarding their equipment conditions and requirements. Almost all the lifeguard sectors reported a need to repair or replace most of their existing emergency vehicles, rescue boats, and portable towers; to acquire additional units of these types of equipment; or both. However, according to its management, Parks must balance the needs of all its programs in making resource allocation decisions.

Further, Parks' management believes that it has allocated a sufficient amount of resources to adequately protect the public at state beaches and waterways.

Overall, it will be important for Parks to monitor how long it can continue to curtail spending on lifeguard districts' equipment and facilities. Although we did not find any instances in which the poor condition of equipment affected the lifeguard sectors' ability to provide aquatic safety, and we did not perform a physical inventory of all the vehicles and boats in the sectors, we observed a few examples of equipment in poor condition at two of the sectors we visited. However, we were unable to assess whether the additional equipment needs reported by the lifeguard sectors were necessary because we are aware of no standard specifying the amount of equipment lifeguards must have to perform their duties. Finally, although Parks plans to replace two of its permanent lifeguard facilities and expand another, lifeguard sectors reported that several other lifeguard facilities are in poor condition.

### **LIFEGUARD DISTRICTS HAVE REDUCED EQUIPMENT AND FACILITY OPERATIONS EXPENDITURES**

Although staff at Parks' budget office and most lifeguard sectors we surveyed told us that recent budget cuts have caused reductions in both staffing and equipment and maintenance expenses, the lifeguard districts have recorded reductions primarily in expenditures for equipment and facility operations from fiscal years 1999–2000 to 2003–04. As Figure 7 shows, our review of the districts' records revealed that their spending on total support costs for the lifeguard districts peaked at \$97 million in fiscal year 2001–02 and then dropped back to \$86 million in fiscal year 2003–04, slightly lower than the \$86.5 million spent for support costs in fiscal year 1999–2000.

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*After peaking at \$97 million in fiscal year 2001–02, total support costs for the lifeguard districts dropped back to \$86 million in fiscal year 2003–04, slightly lower than the \$86.5 million spent in fiscal year 1999–2000.*

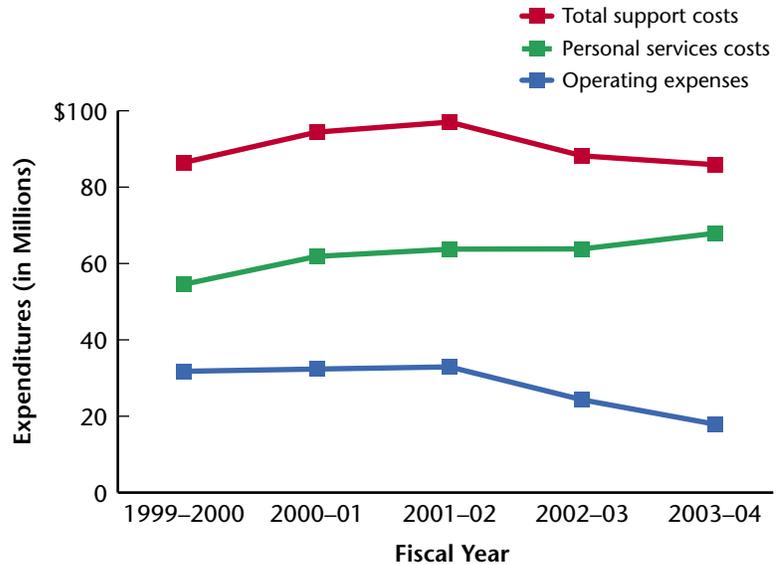
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Total support costs consist primarily of personal services and operating expenses. Personal services costs consist mainly of salaries, wages, and benefits paid to Parks' employees. Operating expenses, on the other hand, include costs for facility operations, equipment, utilities, office supplies, printing, training, professional services, and other expenses associated with administrative operations. Figure 7 indicates that spending for operating expenses at lifeguard districts decreased from \$32 million in fiscal year 1999–2000 to about \$18 million in fiscal year 2003–04, a 44 percent decline. Meanwhile, personal services costs increased by about 24 percent over the same period, from \$55 million to

\$68 million. In addition, as a share of total support costs, operating expenses dropped from 37 percent in fiscal year 1999–2000 to 21 percent in fiscal year 2003–04.

**FIGURE 7**

**Operating Expenses for Lifeguard Districts Decreased Significantly From Fiscal Years 2001–02 to 2003–04, While Personal Services Costs Increased**



Source: Auditor’s analysis of the Department of Parks and Recreation’s (Parks) year-end expenditure reports.

Notes: The annual expenditures are categorized by the fiscal year in which funds were appropriated. Although the majority of the funds were spent in the year they were appropriated, Parks actually spent some of these funds in subsequent years. Additionally, operating expenses for fiscal years 2002–03 and 2003–04 include amounts encumbered but not yet spent.

In addition, these are annual support expenditures for Parks’ districts that have at least one sector with an aquatic safety program. Some of these districts may also have sectors without an aquatic safety program. However, our analysis includes all the lifeguard districts’ sectors. Further, these support expenditures include only those paid from the General Fund and the State Parks and Recreation Fund.

Reduced spending on facilities operations and equipment by the lifeguard districts accounted for most of the decline in operating expenses during the five-year period. Parks’ budget office indicated that among operating expenses, Parks would target maintenance costs for reductions during years with budget cuts. Further, 11 of the 19 lifeguard sectors stated that their spending for equipment purchases and repair, facility maintenance, or both were either permanently reduced or postponed during years of

reduced budgets. Therefore, we determined how much Parks' lifeguard districts spent on facility operations and equipment, which are part of operating expenses, over the past five years.

Facility operations expenses include costs for maintenance, repairs and alterations, janitorial and security services, and rent. Equipment expenses include purchase of vehicles and other equipment and the cost of operating vehicles, such as gas, oil, tires, and maintenance services. We determined that these two types of expenses combined made up the majority of operating expenses. Over the five-year period we reviewed, expenditures on facility operations and equipment ranged from a high of 78 percent to a low of 69 percent of total operating expenses. Similar to the 44 percent decline in spending on total operating expenses, spending for facility operations dropped by 48 percent from the first year to the fifth year of our review, but had a peak in spending in fiscal year 2001–02. Equipment spending also fell by approximately 50 percent from the first year to the fifth year.

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*Equipment spending fell by approximately 50 percent from fiscal years 1999–2000 to 2003–04.*

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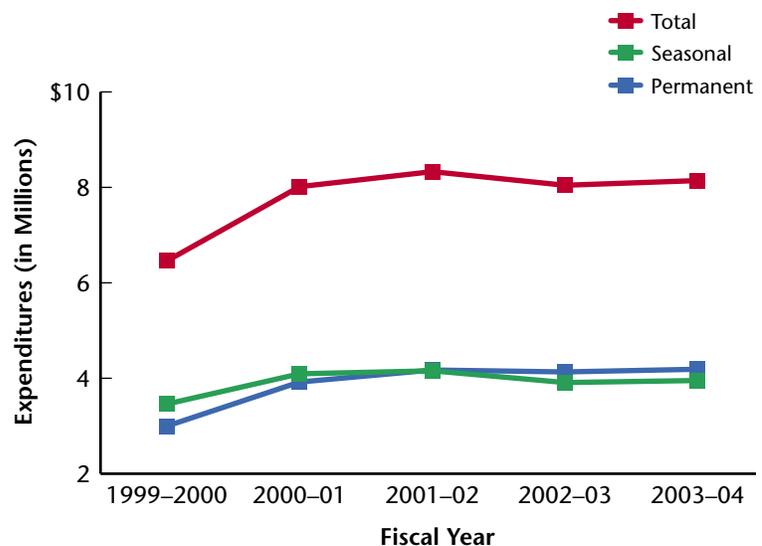
In contrast to their reductions in operating expenses overall, the lifeguard districts spent more on lifeguards' salaries and wages in fiscal year 2003–04 than they did in fiscal year 1999–2000, even though, as we noted in Chapter 1, the actual hours lifeguards worked were slightly lower in fiscal year 2003–04 than in fiscal year 1999–2000. Parks' budget office said that, in addition to operating expenses, it made cuts in paid overtime and temporary staffing during years of decreased budget allocations. Additionally, 15 of the 19 sectors we surveyed indicated that spending for seasonal staffing was usually reduced when they were faced with budget cuts, and some permanent lifeguard positions were eliminated due to a departmentwide reorganization during the period we reviewed. Nevertheless, overall spending on personal services rose each year from fiscal years 1999–2000 through 2003–04, as shown previously in Figure 7. The personal services data in Figure 7 include salaries, wages, and benefits for all lifeguard district employees, such as park rangers and administrative staff who are not directly responsible for providing aquatic safety.

When we focused only on lifeguard staffing, we found that spending on lifeguard salaries and wages has generally remained stable after a sharp increase in fiscal year 2000–01, as shown in Figure 8. The increase in fiscal year 2000–01 was due in part to an increase in overtime pay for lifeguards. Another cause was a 4 percent cost-of-living adjustment in lifeguard pay rates and the addition of about four permanent lifeguard positions. Spending

for permanent lifeguard salaries increased slightly from fiscal year 2001–02 to 2003–04, while spending for seasonal lifeguard wages decreased slightly. Figure 8 shows that lifeguard districts decreased their spending for seasonal lifeguard salaries only slightly, from \$4.2 million in fiscal year 2001–02 to \$4 million in fiscal year 2003–04, a decrease of about 5 percent.

**FIGURE 8**

**After a Sharp Increase in Fiscal Year 2000–01,  
Expenditures for Lifeguards’ Salaries and Wages  
Have Remained Relatively Steady**



Source: Auditor’s analysis of the State Controller’s Office payroll records for the Department of Parks and Recreation.

Note: These expenditures are salaries and wages paid to lifeguards who worked in sectors with aquatic safety programs where lifeguards worked performing their duties. They do not include districts without aquatic safety programs that paid lifeguards for certain administrative tasks and training.

**LIFEGUARD SECTORS SAID THEY NEED ADDITIONAL RESOURCES TO MAINTAIN AND AUGMENT THEIR LIFEGUARD EQUIPMENT AND FACILITIES**

In responding to our survey, many lifeguard sectors expressed a need to replace or add equipment, while some sectors even stated that they need new headquarters facilities. Regarding lifeguard equipment, the United States Lifesaving Association (USLA) distinguishes between standard and specialized rescue equipment. According to the USLA, standard lifeguard rescue equipment

includes rescue floatation devices, swim fins, rescue boards, and spinal stabilization devices. Although we did not specifically ask them about their standard equipment needs, most lifeguard sectors appear to have sufficient standard rescue equipment, because many did not specify a need for these pieces in their survey responses. In fact, only two sectors mentioned needing standard equipment. Instead, the majority of the equipment mentioned, such as vehicles and boats, is considered to be specialized lifeguard rescue equipment by the USLA. We focused our analysis on the types of equipment that sectors commonly reported they needed.

The three local governments we surveyed—the cities of Huntington Beach and San Diego and Los Angeles County—reported having sufficient and operable equipment. In contrast, many of Parks’ lifeguard sectors cited a need for various types of equipment. The pieces of equipment most often cited as inadequate were vehicles, such as trucks and all-terrain vehicles; boats, such as personal watercraft; portable lifeguard towers; and automatic external defibrillators, which are medical devices lifeguards can use to rescue victims of sudden cardiac arrest. Almost all lifeguard sectors indicated a need to either repair or replace some of their vehicles and boats, purchase additional units, or both.

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*The deputy director of park operations commented that in making resource allocation decisions, Parks must weigh the needs of all of its programs, not just aquatic safety.*

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However, although officials at Parks’ headquarters agree that reductions in operating expenditures have taken place, including spending for lifeguard equipment, the officials assert that Parks has spent enough on equipment to ensure that the public is adequately protected. The deputy director of park operations commented that in making resource allocation decisions, Parks must weigh the needs of all its programs, not just aquatic safety.

### **Many Lifeguard Sectors Expressed a Need for Rescue Vehicles and Boats**

Many lifeguard sectors noted in their survey responses that they do not have enough vehicles and boats and that half the ones they have are in need of repair or replacement. Although we did not find standards for the number of vehicles and boats lifeguard agencies should have, the USLA provides some guidance regarding vehicle and boat usage. The USLA categorizes emergency vehicles and rescue boats as pieces of specialized

rescue equipment that offer many advantages, such as speed and mobility, over some standard equipment used in rescue and patrolling activities. For example, emergency vehicles and boats may be used for patrolling activities and can serve as mobile lifeguard stations. Additionally, rescue boats can respond to victims and boaters in distress far out in the water faster than swimming lifeguards can, and rescue boats can also be used for general law enforcement, including enforcement of boating safety and environmental regulations. The USLA states that some agencies expect lifeguards in rescue boats to patrol unguarded beaches that, due to remoteness and low attendance, lack on-site lifeguard supervision.

Because of their functionality in lifeguard rescue and patrolling operations, we believe it is reasonable for lifeguard sectors to use rescue vehicles and boats in conditions that warrant it, such as having to patrol a large beach area. Almost all the lifeguard sectors told us that they perform some type of patrol by vehicle or boat. For instance, the Monterey sector has 42 miles of coastline in its territory, 28 miles of which are state beaches. It patrols the Monterey County coastline by vehicle year-round.

The USLA considers rescue vehicles to include trucks, sport utility vehicles, and all-terrain vehicles. As Figure 9 on the following page indicates, all but two lifeguard sectors reported a need to replace or repair at least some of their existing rescue vehicles, purchase additional vehicles, or both. In their responses to our survey, the Delta sector indicated that it does not have or need any vehicles, and the Folsom sector reported its two vehicles are in good working condition. In total, the lifeguard sectors indicated that they have 41 vehicles in good working condition, which is roughly one-third of the total number they say they need. Another 38 vehicles owned by the lifeguard sectors are reportedly in need of repair or replacement, representing about another third of their indicated total need. For example, the San Diego North sector indicated that most of its 11 patrol vehicles are more than eight years old, and two are more than 10 years old with odometer readings exceeding 110,000 miles. Finally, all sectors combined reported a need for an additional 43 vehicles.

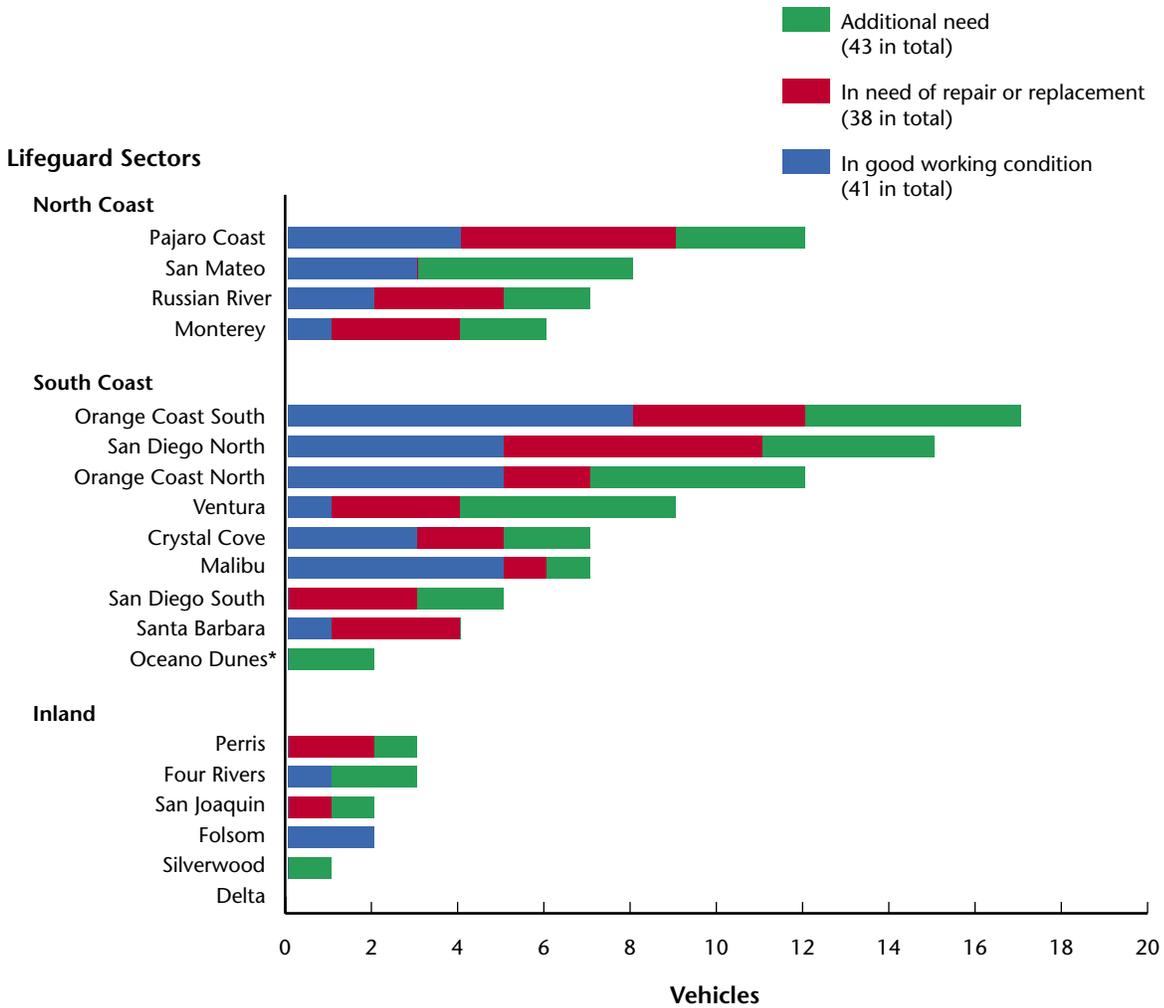
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***Lifeguard sectors reported that they have 38 vehicles in need of repair or replacement, representing about one-third of their indicated total need for vehicles.***

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**FIGURE 9**

**Lifeguard Sectors on the South Coast Expressed a Greater Need for Vehicles Than Did North Coast and Inland Sectors**



Source: Survey responses from sectors with aquatic safety programs.

\* Oceano Dunes is an off-highway-vehicle district with an aquatic safety program.

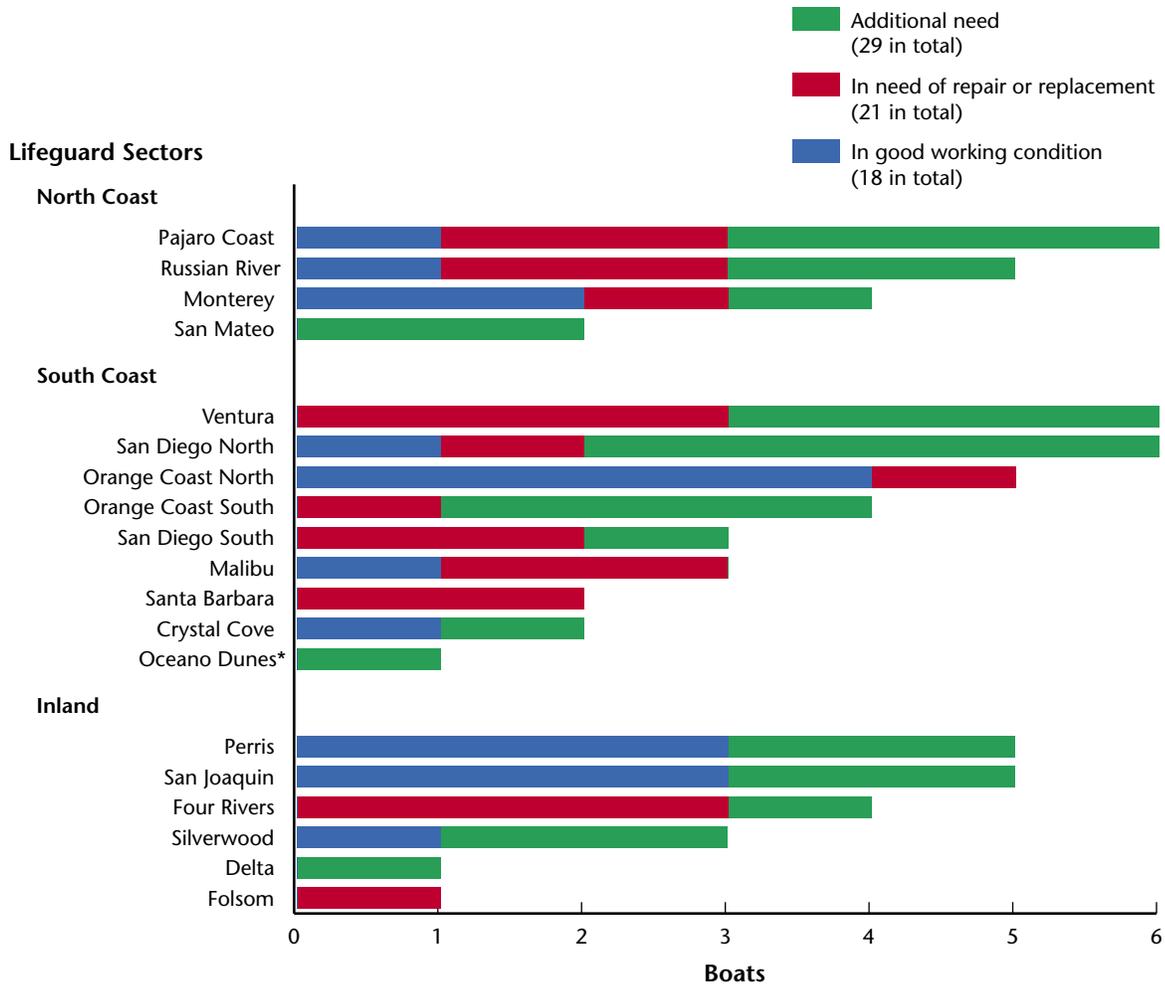
Although the south coast sectors reported needing a greater number of vehicles, the north coast and inland sectors combined had a greater proportion of their vehicle needs still unmet. In considering the data by region, we found that the south coast lifeguard sectors account for 78 of the 122 total vehicles all sectors reported needing, or about 64 percent. This is

generally consistent with the higher estimated beach attendance these sectors reported, as shown in Table 3 on page 38. The south coast accounted for nearly 25 million, or almost 60 percent, of the total 42 million in beach attendance. Therefore, not taking into account any other factors, such as the water conditions at the beaches, it is reasonable that the south coast sectors would need more vehicles in total than the other sectors. However, when comparing the ratio of the total number of vehicles reportedly needed to the total number of vehicles reportedly in good condition, we found that the north coast and inland lifeguard sectors together have a slightly smaller proportion of needed vehicles in good working condition than the south coast lifeguard sectors. Specifically, north coast and inland lifeguard sectors have only about 30 percent of the vehicles they need in good working condition, while the south coast lifeguard sectors have 36 percent.

In addition, all lifeguard sectors said they need to repair or replace some of their existing boats, need additional boats, or both, as shown in Figure 10 on the following page. The USLA describes several varieties of rescue boats, including inshore or inflatable rescue boats; personal watercraft or Jet Skis; rigid-hull vessels, which are large vessels with motors; rowboats; and kayaks. In total, the lifeguard sectors reported a need to acquire 29 additional boats and to repair or replace 21 of their existing boats, and they reported only 18 boats in good condition. Similar to the data regarding vehicle needs, the south coast lifeguard sectors reported a need for a larger total number of boats (32) than either the inland sectors (19) or the north coast sectors (17). However, in contrast to their reported vehicle needs, both the south coast and north coast lifeguard sectors reported having a lesser proportion of needed boats in good condition than did the inland lifeguard sectors. The south coast and north coast sectors indicated that they have about 21 percent and 23 percent, respectively, of the number of boats they need in good working condition, while the inland sectors reported having about 36 percent. For example, the Ventura sector on the south coast said in its survey response that the two boats it currently has at one of the three state beaches within its jurisdiction are either unreliable or inoperable and in need of repair or replacement. The sector believes that three additional boats are needed to maintain a safe recreational environment.

**FIGURE 10**

**The Need for Additional Boats and for Repair or Replacement of Existing Boats as Reported by Lifeguard Sectors Exceeds the Number of Boats in Good Condition**



Source: Survey responses from sectors with aquatic safety programs.

Note: This figure includes a variety of rescue boats, including inshore or inflatable rescue boats, rigid-hull vessels, and personal watercraft.

\* Oceano Dunes is an off-highway-vehicle district with an aquatic safety program.

Based on our observations at some sectors, we believe there is a need to repair or replace some vehicles and boats if sectors continue to rely on the ones in need of repair or replacement to carry out their lifeguard duties. Although we did not perform a physical inventory of all the vehicles and boats in the lifeguard

sectors, during our site visits to 11 sectors, we observed some examples of equipment in poor condition at two of the sectors. At the San Diego South sector, we saw that some of its vehicles were old and in poor condition, and one of its boats was inoperable. In the San Mateo sector, we observed that one of its three lifeguard-outfitted trucks was inoperable and a second had significant rust damage and was in poor condition.

### **Replacing Portable Towers Is Another Need Many Lifeguard Sectors Cited**

Many lifeguard sectors indicated that they do not have sufficient numbers of portable lifeguard towers in good working condition, primarily because so many need to be repaired or replaced. According to the USLA, lifeguard towers serve many important functions. They act as stations from which lifeguards carry out emergency services operations. For instance, the towers provide lifeguards with an elevated position from which they can observe both the beach and the water beyond, and they serve as central points to store lifeguard equipment for immediate use. As highly recognizable features, lifeguard towers enable beachgoers to find assistance easily, making the towers focal points for summoning help.

Seventeen of the 19 lifeguard sectors reported a need to repair or replace portable towers, acquire additional towers, or both, as indicated in Figure 11 on the following page. Although the Delta sector has two permanent lifeguard towers, it also said it does not have any portable towers and does not have a need for any, and the Folsom sector reported that its eight towers were in good working condition. In addition, three sectors indicated that they currently do not have any towers but would like to be able to provide lifeguard coverage from portable towers at their beaches. The need to repair or replace existing towers is much greater than the need to purchase additional towers. Thirteen lifeguard sectors reported that they need to repair or replace a total of 91 portable towers, while 10 sectors indicated a need to add a total of 33 more towers.

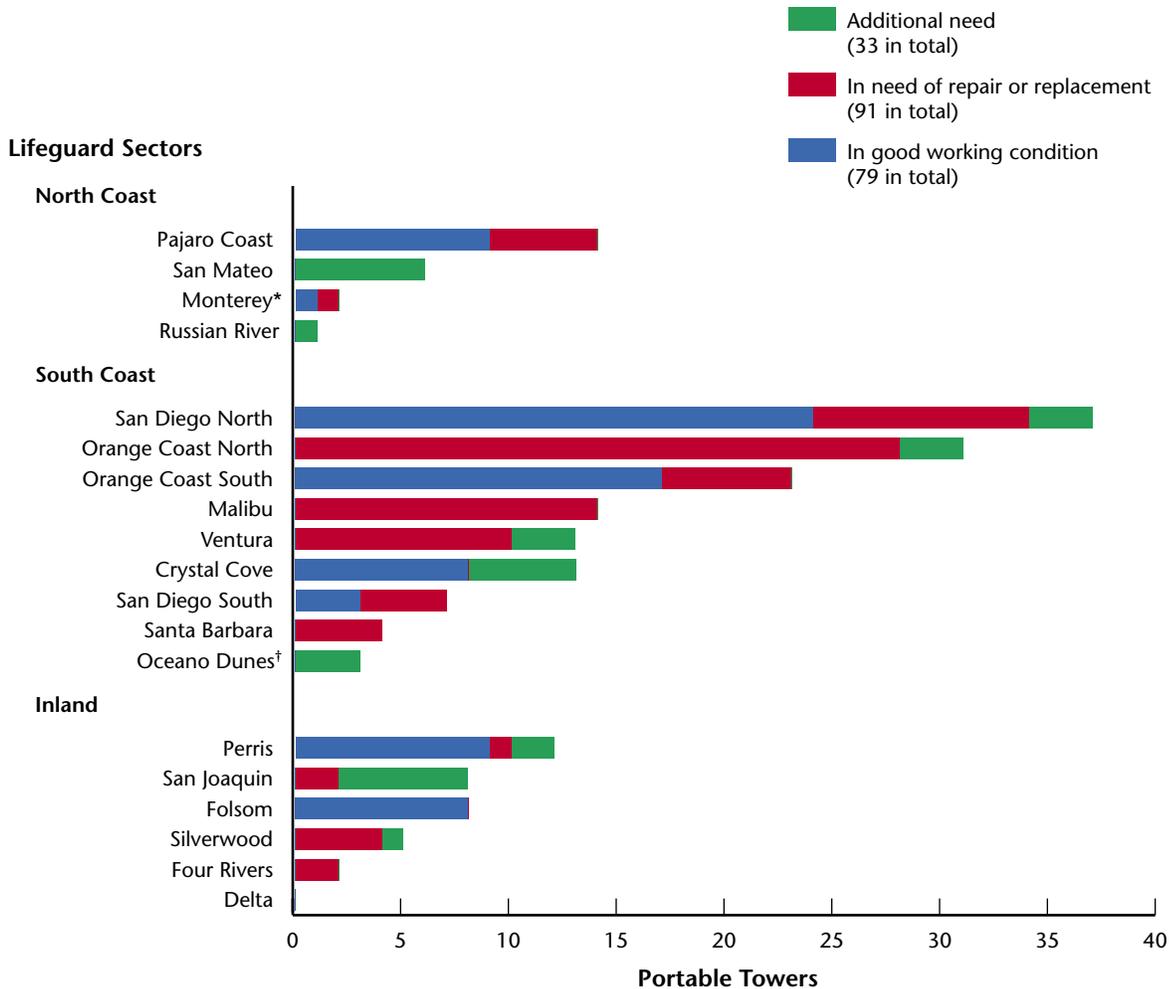
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*There is a much greater reported need to repair or replace existing towers than to purchase additional towers.*

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**FIGURE 11**

**Lifeguard Sectors Reported That the Need to Repair or Replace Existing Portable Towers Is Greater Than the Need to Acquire Additional Towers**



Source: Survey responses from sectors with aquatic safety programs.

Note: Sectors that indicated a need for additional towers want either to increase coverage at beaches already guarded by lifeguards in towers or to expand tower coverage into beaches not currently guarded by lifeguards in towers.

\* The Monterey district provides lifeguard coverage at two portable towers through a contract with the city of Monterey. These towers are stationed on a state beach within the city's jurisdiction.

† Oceano Dunes is an off-highway-vehicle district with an aquatic safety program.

The south coast sectors reported needing 145 towers, including those in good working condition, accounting for roughly 71 percent of the total need expressed by the sectors we surveyed. South coast sectors need more towers because, as we mentioned earlier, their estimated beach attendance is higher

and they perform more monitoring on towers, while the north coast and inland sectors have lower beach attendance and perform more monitoring in vehicle and boat patrols. When we look at the combined need for repair or replacement of existing towers and for additional towers, we see that within the south coast sectors, 81 percent of the reported needs are for repair or replacement. For example, the Orange Coast North sector reported that its 28 lifeguard towers were built in the late 1970s and mid-1980s. Because of significant rust and erosion to the bases of their towers, the San Diego North sector indicated a need to immediately replace three of its portable lifeguard towers, one of which is scheduled for replacement within one year.

On the other hand, the need for repair or replacement compared to the need for additional towers is roughly equal in the north coast and inland sectors. The north coast sectors reported needing to repair or replace six towers and purchase seven new ones, while the inland coast sectors reported needing to repair or replace nine towers and purchase nine more. For example, the San Joaquin sector said its lifeguard towers need to be replaced because they are 30 or more years old. Additionally, the San Mateo sector indicated that it currently has no portable towers but would like to put up six towers on its beaches. Although we did not see any portable towers in poor condition during our limited observations at 11 sectors, it appears that, given their reported age and condition and the value the USLA places on lifeguard towers, there is a need to repair or replace some towers when lifeguards rely on them to maintain aquatic safety.

### **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. As we mentioned earlier, an AED is a piece of medical equipment that lifeguards can use to rescue victims of sudden cardiac arrest. In total, the sectors reported having 47 AEDs and expressed a need for 59 additional units, which represents a 126 percent increase. However, some lifeguard sectors indicated in their survey responses that 22 of the 59 AEDs requested are not needed immediately but are desirable.

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***Parks does not have sufficient data to justify its need for additional automatic external defibrillators.***

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Further, Parks does not have sufficient data to justify its need for additional AEDs. 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.

### **Parks Plans to Replace or Expand Some Facilities That Lifeguard Sectors Identified as in Poor Condition**

In addition to needs they would pay for with support funds, lifeguard sectors that discussed their headquarters facilities reported a need to replace or repair at least 11 facilities, which would likely be paid for with capital outlay funds. In our review of the State's *Five Year Infrastructure Plan* for fiscal years 2003–04 through 2007–08, we found that Parks plans to replace two lifeguard headquarters facilities and expand another at a total cost of \$6.1 million.

Nevertheless, lifeguard sectors expressed a need for repairs or replacement of headquarters facilities beyond the three scheduled for work. For instance, the San Diego North sector said it operates five state beaches, two of which have lifeguard headquarters. It noted that the two existing facilities are more than 40 years old and in poor condition, and only one is scheduled to be rebuilt within five years. Our limited observations at the San Diego North sector confirm that one of its headquarters is at the edge of a cliff that appears to be continually eroding.

In another example, the Gold Fields district's Folsom sector wants to relocate or repair two headquarters, citing faults that include a hole in the floor on the second-story of one building, backups in the sewer pumps in that building several times a year, and water damage from a leaky roof in the second building. Further, both the Santa Barbara and Ventura sectors of the Channel Coast district said they have one headquarters facility each that is threatened with coastal bluff erosion, among other problems. In its survey response, the Santa Barbara sector

stated that the lifeguard headquarters at El Capitan State Beach was budgeted for replacement in fiscal year 2000–01, but the funding was redirected to complete a rehabilitation project in the Orange Coast district. The sector indicated that the project of replacing its headquarters facility is currently the number one priority in the district’s capital outlay program.

**If Parks Allocates Additional Funding to Its Aquatic Safety Programs in the Future, It Should Ensure That the Lifeguard Districts Spend the Funding for the Intended Purposes**

Although we did not perform a physical inventory of equipment or facilities and no instances of inadequate equipment threatening public safety came to our attention, we believe it is reasonable to conclude that Parks will soon need to repair and replace some of its vehicles, boats, and towers for a variety of reasons. The overall decline in spending for equipment from fiscal years 1999–2000 to 2003–04 lends credibility to the lifeguard sectors’ assessments of their need to repair or replace equipment. In addition, our limited observations at two lifeguard sectors confirmed the poor condition of some vehicles and boats. Further, the reported age and the useful life of some equipment—five years for depreciation of cars and trucks, for example—suggest that older vehicles are due for replacement. Given the value the USLA attaches to this equipment and its use in saving lives, keeping the equipment in reliable condition is important.

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*A continued trend of decreased spending on repair and maintenance of its aquatic safety equipment could ultimately impact the ability of Parks lifeguards to adequately protect the public.*

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We acknowledge that Parks must balance the needs of its aquatic safety programs with the needs of its other programs; however, a continued trend of decreased spending on repair and maintenance of its aquatic safety equipment could ultimately impact the ability of its lifeguards to adequately protect the public. On the other hand, in the absence of minimum standards for the quantity of equipment lifeguard sectors reported needing—for example, a recommended number of towers or boats for each mile of shoreline—we were unable to assess how much, if any, of their expressed additional needs are truly necessary.

If Parks allocates additional funding to address its equipment needs in the future, it should ensure that the districts use the money for the intended purposes. Although sectors in most lifeguard districts said they need additional funds to maintain their equipment, we are uncertain whether the districts, if given more money, would spend the additional funds to fulfill those needs. The reason for our doubt is that, according to

Parks' budget office, the districts have some control over their spending for nonfixed or discretionary costs, such as equipment and facilities maintenance, overtime, and temporary staffing.

For example, in fiscal year 2003–04, the Orange Coast district reported that it used approximately \$360,000 of its budgeted amounts for personal services, mostly in the temporary help category, to fund its operating expenditures. On the other hand, the San Diego district reported significant equipment needs and provided many examples of equipment in poor condition. However, from fiscal years 1999–2000 through 2003–04, its spending on equipment purchases and maintenance items accounted for only about 3 percent of its spending for total support costs, while the other lifeguard districts combined spent an average of 6 percent over the same five-year period. Had San Diego spent 6 percent rather than 3 percent, it would have spent an additional \$1.3 million on equipment purchases and maintenance expenses over the period.

Similarly, as we discussed in Chapter 1, Parks' aquatic safety specialist believes that additional funding for lifeguard staff would enable Parks to address the increasing number of drownings in unguarded waters over the last five years. After a review of the circumstances surrounding the reported drownings in unguarded waters during 2004, which included 21 drownings in eight districts with lifeguards and 10 drownings in three districts without lifeguards, we believe that adding more lifeguards may not be called for. However, 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.

## **RECOMMENDATIONS**

To avoid a potentially negative impact on its ability to protect the public, Parks needs to monitor how long it can continue to curtail spending on lifeguard districts' equipment and facilities.

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.

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.

We conducted this review under the authority vested in the California State Auditor by Section 8543 et seq. of the California Government Code and according to generally accepted government auditing standards. We limited our review to those areas specified in the audit scope section of this report.

Respectfully submitted,



ELAINE M. HOWLE  
State Auditor

Date: August 2, 2005

Staff: John F. Collins II, CPA, Audit Principal  
Jerry A. Lewis  
Joe Azevedo  
Fae Li  
Kevin Lopez

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*Agency's comments provided as text only.*

California Resources Agency  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

July 18, 2005

Ms. Elaine M. Howle, State Auditor\*  
Bureau of State Audits  
555 Capitol Mall, Suite 300  
Sacramento, California 95814

Dear Ms. Howle,

Thank you for the opportunity to review the draft copy of your report on the Department of Parks and Recreation's lifeguard program. We are appreciative of the efforts of your audit team to assist the Department in improving its processes.

As you are aware, the Department of Parks and Recreation manages more than 300 miles of California's coastline and more than 625 miles of rivers and lake shoreline. Consistent with their mission to create opportunities for high-quality outdoor recreation and to provide the utmost in public safety, the Department operates a statewide, comprehensive aquatic safety/lifeguard program. Given the importance that water-related activities play in attracting visitors to our beaches and state parks, having a well-run lifeguard program is very important to the health, image and vitality of the state.

Overall, I am pleased with the findings of your audit team. It is gratifying to read that the Department's lifeguard program is comparable in terms of results with other large lifeguard programs in the state.

The Department has responded to the audit's specific comments and recommendations. These responses are enclosed. I trust these responses from the Department are satisfactory.

If I can be of further assistance, please let me know.

Sincerely,

*(Signed by: Mike Chrisman)*

Mike Chrisman  
Secretary for Resources

Enclosures

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\* California State Auditor's comment appears on page 69.

## Memorandum

**Date** : July 13, 2005

**To** : Mike Chrisman  
Secretary of Resources  
The Resources Agency

**From** : **Department of Parks and Recreation**  
**Ruth Coleman, Director**

**Subject**: Audit of Department Lifeguard Programs

Attached please find a copy of the Bureau of State Audits' (BSA) draft audit report on the Department's lifeguard program and a diskette containing the Department's formal response to the audit. In general, I am pleased by the audit's findings as they confirm that we run a solid, professional lifeguard program — one that delivers quality and value to users of the State Park System. This fact is summed up by the following from the audit report:

“The total number of drownings in its waterways where there is a staffed lifeguard tower (guarded water) managed by the Department of Parks and Recreation (Parks) has remained at a little over one per year for each of the last five years. This rate is comparable to the number of drownings at beaches controlled by the three local governments we surveyed (local beaches — cities of San Diego, Huntington Beach and Los Angeles County).”

Additionally, three other important findings of the auditors are noteworthy:

- 1) Lifeguard staffing has been adequate to protect the public at state parks;
- 2) State Parks' lifeguard staffing patterns and the mix between permanent and seasonal lifeguards seems reasonable;
- 3) State Parks appears to benefit by requiring its permanent lifeguards to be peace officers.

While generally praising the Department's lifeguard program, the report raises concerns about the reliability of the Department's data collection and decreased spending on equipment and facilities. We have addressed each of these concerns in our formal response, but I will provide you with a summary of our response at this time.

While the audit report has identified errors in the statistical data collected as a part of our lifeguard program, I am very pleased that the auditors' review found no instances in which less than accurate data negatively affected our decision making. Nonetheless, the Department recognizes the importance of accurate statistical data collection. As the audit report noted,

Memorandum to Mike Chrisman  
July 13, 2005  
Page Two

Parks has already made improvements in the forms used in the collection of aquatic safety statistics. These improvements will ensure the accuracy of the various aquatic rescues that are documented. In addition, the Department's aquatic safety specialist has begun providing increased assistance to our park districts in the training, use and implementation of these forms. Currently the Department's Operation Manual, Chapter 1200, requires each chief ranger or chief lifeguard to be responsible for summarizing the Districts Aquatic Activity Reports and forwarding them to our Public Safety Division. As a follow-up to this audit, senior staff will re-emphasize this responsibility.

With regards to the spending concerns raised by the BSA report, State Parks appreciates the vital role that equipment and facilities have in the delivery and effectiveness of our aquatic safety program. We recognize that continuing reductions in spending could have potential impacts on public safety and we will continue to monitor the effects of spending reductions on all of our core programs. We will continue to use systems such as our Computerized Asset Management Program to help us prioritize maintenance and to justify additional funding for critical projects. However, given the state's current fiscal challenges and the Department's need to balance its resources across all of its core programs, it should be apparent that oftentimes critical projects cannot always be completed, or funded, in the manner or time we would prefer. By allowing our park districts to direct funding to those areas most in need, we allow the park managers to work with field staff to prioritize where the funding is best spent in delivering services, including aquatic safety, to our customers.

Attachments:

- 1) Copy of Draft Audit
- 2) Diskette: #2004-124

## Bureau of State Audits Recommendations:

### STATISTICS:

- **Make certain that districts required to track and report aquatic safety statistics are submitting them as required.**
- **Require its staff to review the statistics for accuracy and completeness.**
- **Monitor the circumstances surrounding drowning incidents that occur in unguarded waters.**

### State Parks Response:

We are very pleased that the Audit review found no instances in which less than accurate data negatively affected our decision making. Nonetheless, the Department recognizes the importance of accurate statistical data collection, as this is an area that is vital in justifying and accounting for the delivery of a comprehensive public safety program that includes aquatic safety.

As the audit report noted, Parks has already made improvements in the forms used in the collection of aquatic safety statistics that will ensure the accuracy of the various aquatic rescues that are documented. The Department's Aquatic Safety Specialist has begun providing increased assistance to Districts with the training, use, and implementation of these forms. Currently the Department's Operation Manual, Chapter 1200, requires each Chief Ranger or Chief Lifeguard (who may be described, or known as, the Park Superintendent) to be responsible to summarize the Districts Aquatic Activity Reports and forward them to the identified Superintendent in our Public Safety Division. This responsibility will be re-emphasized by the Aquatic Safety Specialist overseeing the collection of aquatic safety statistics. California State Parks continues to closely monitor all drownings occurring in waters within the operational boundaries of the Department to ensure the accuracy of our reporting (among other purposes).

Parks continues to closely monitor all known or reported drownings occurring in waters within the operational boundaries of California State Parks. The reporting requirements are clearly identified on page 13 of the audit report.

- **Track not only the usage of AED's, but also the number of times AED's were needed but they were unavailable.**

### State Parks Response:

According to the ninth edition of Emergency Care by Brady publishing, automated external defibrillators (AED's) are recognized as the "single most important factor in determining survival from cardiac arrest." The Department is very supportive of implementing these lifesaving devices in the field to its trained staff when feasible. Each year - more AED's are being deployed to the field where they may be most effectively used. AED's used by park staff have already proven to have saved lives.

As is required by the State Emergency Medical Services Authority (EMSA), California State Parks reports all AED usage in the field to EMSA. The Department will review the recommendation of the AED data collection identified by Audits and implement this change where feasible.

**SPENDING:**

- **Parks needs to monitor how long it can curtail spending on lifeguard districts' equipment and facilities.**

**State Parks Response:**

In terms of spending concerns raised by the Bureau of Audits, Parks appreciates the vital role that equipment and facilities have in the delivery of our aquatic safety programs to the public. We recognize that continuing reductions in spending could have potential impacts on public safety and we will continue to monitor the effects of spending reductions on all of our core programs.

We will continue to use systems such as our Computerized Asset Management Program to help us prioritize maintenance and to justify additional funding for critical projects. Given the State's current fiscal challenges, however, we would hope that the Auditor and others recognize that those critical projects cannot always be completed, or funded, in the manner or time we would prefer.

- **If Parks decides to allocate additional funding to its aquatic safety programs in the future, it should work closely with its lifeguard districts to clarify the intended purpose of any proposed changes in spending.**

**State Parks Response:**

We will continue to work closely with Districts, providing assistance and guidance in the delivery of their Aquatic Safety Programs. The role of the Public Safety Chief and the Aquatic Safety Specialist includes the ongoing monitoring of the lifeguard programs, the levels of service provided, and compliance with established standards. By allowing Districts to direct funding to those areas most in need, we allow the Superintendent of the District to work with field staff to prioritize where the funding is best spent in delivering services, including aquatic safety, to our customers—the park visitors and citizens of California.

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# COMMENT

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## ***California State Auditor's Comment on the Response From the Department of Parks and Recreation***

To provide clarity and perspective, we are commenting on the Department of Parks and Recreation's (Parks) response to our audit report. The number below corresponds to the number we have placed in the margin of Parks' response.

- Parks' response suggests that it may not fully understand our recommendation that it, "monitor the circumstances surrounding drowning incidents that occur in unguarded waters." Specifically, we do not believe it is sufficient for Parks to simply continue accumulating information in various reports as described on pages 9 and 10 of our report. In our view, appropriate monitoring includes an analysis of the circumstances surrounding the drowning incidents similar to what we describe on pages 39 through 44 of our report. This type of monitoring could help Parks determine the amount and best allocation of resources sufficient to protect the public at beaches and waterways within state parks. Moreover, while preparing our draft audit report for publication, page numbers changed. Therefore, the reporting requirements Parks refers to appear on pages 9 and 10 of our report.

cc: Members of the Legislature  
Office of the Lieutenant Governor  
Milton Marks Commission on California State  
Government Organization and Economy  
Department of Finance  
Attorney General  
State Controller  
State Treasurer  
Legislative Analyst  
Senate Office of Research  
California Research Bureau  
Capitol Press