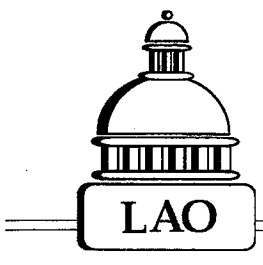
REPRINT

The 1990-91 Budget:
Perspectives and Issues

State Oil Spill Preparedness and Response



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State Oil Spill Preparedness and Response

How Can the State Better Address the Problem of Small, Chronic Oil Spills?

Summary

A major offshore oil spill near the California coast is a very real possibility. Historically, however, few such events have occurred since the 1969 Santa Barbara platform blowout. Even so, the environmental and economic consequences of just one "catastrophic" spill likely would be very severe, so steps have been taken to help prevent offshore oil spills and to improve response capability to contain and clean up a major spill. New proposals at the state and federal level aim to strengthen prevention and response in this area even more.

A related but lower profile problem also needs attention from the state. Available information indicates that there are a substantial number of small oil spills that occur frequently throughout California, mostly in onshore areas. As a whole, these spills also result in significant environmental damage. The state's current system to deal with this problem may not be adequate, either for prevention or response. There are several factors the Legislature needs to consider in attempting to address the problem, including reporting systems, preventive measures (such as regulation and law enforcement), increased or redirected state resources for response and the role of local agencies in response efforts.

Since the accidental release of a large quantity of oil from the tanker *Exxon Valdez* in March 1989, much attention has been focused on the possibility of another major offshore oil spill near the United States coastline. Although California has not experienced a spill of this magnitude, the extensive amount of oil development and transport off the state coast certainly raises the question of whether such an event could happen here and what

its consequences would be. The potential environmental and economic effects of this kind of accident clearly warrant serious concern and require substantial preventive and preparedness efforts.

Even before the Alaskan mishap, however, the state, local governments and private industry had begun to put significant effort into improving systems for major oil spill prevention, preparation and response. Since the consequences of a "catastrophic" spill would be quite large, this problem appears to have overshadowed a related, but less visible one: the chronic, sometimes undetected discharge of much smaller quantities of oil, often in onshore areas. Given that these smaller spills are known to occur more frequently and, in the aggregate, pose significant problems to the environment, the Legislature should consider ways to better address this problem.

In this analysis, we review the history of major *offshore* oil spills near California and the efforts to ensure a reasonable level of safety and environmental protection in this area. We then contrast this with the current system to handle smaller, mostly *onshore* oil spills in the state. Finally, we present some alternatives to consider in attempting to improve this system.

MAJOR OFFSHORE OIL SPILLS HAVE BEEN RELATIVELY FEW

Although each incident received substantial notoriety at the time, historically there have been only a few oil spills in the Pacific Ocean that can be considered "major." Apart from the *Valdez* spill, involving the release of over 11 million gallons of crude oil, the largest and most infamous was the platform blowout in the Santa Barbara Channel in 1969. Although the actual amount is uncertain, according to some estimates this accident released about 3 million gallons of crude oil into ocean waters, resulting in significant environmental damage.

Since 1969, however, there have not been any spills of this magnitude off the California coast. The next largest spill occurred in 1971, when two tankers collided in dense fog just outside of San Francisco Bay, spilling a total of 800,000 gallons of crude oil. This accident led to the use of radar as part of the onshore Vessel Tracking System. In 1984, the tanker *Puerto Rican* exploded 12 miles west of the Golden Gate Bridge, spilling 1.3 million gallons of fuel oil at sea. Although considered a major spill, its environmental impact was considered minimal, relative to its size, because there was relatively little impact on wildlife or the coastal area.

In 1987, two cargo ships collided in the Santa Barbara channel, with one of them, the *Pacbaroness*, spilling about

150,000 gallons of its own fuel oil before sinking. In 1988, a barge collided with its tug off the Washington state coast, leaking about 230,000 gallons of fuel oil into the water, much of which eventually washed up on hundreds of miles of beaches in Washington and Canada.

Most recently, the tanker *American Trader* spilled an estimated 400,000 gallons of crude oil in attempting to unload at a marine terminal near Huntington Beach in February 1990. At the time of our review, the effects of this spill had not yet been determined.

MEASURES HAVE BEEN TAKEN TO ADDRESS MAJOR SPILLS

As the preceding brief history indicates, large offshore oil spills--while posing a very real threat to the coastline--have not been common. Nevertheless, it is clear that, under certain conditions, even *one* major spill could be disastrous for the marine and coastal environments, fishing, tourism and the oil industry itself.

Recognizing this situation, governments and industry have taken steps since 1969 to (1) improve operational safety in offshore oil development and transport and (2) establish adequate preparedness and response plans aimed at cleaning up a major oil spill. For example, the State Lands Commission (SLC), which manages oil and gas leases in state waters (zero to three miles offshore), has an extensive regulatory program designed to prevent spills at platforms, marine terminals, processing facilities and pipelines within this jurisdiction. Various state and federal agencies also conduct surprise "spill drills" to test the adequacy of the industry operators' spill containment and cleanup plans. In addition, new technologies have been put into place to improve the safety of platform drilling and tanker transport.

Although it is difficult to determine how much of the safety record for offshore oil in recent years is attributable to these measures or simply to good luck, the vast majority of offshore spill incidents during this time have been very small. The SLC indicates that, during the past three years, only 21 such incidents were reported at oil facilities leased in state waters, totaling 267 gallons of oil, primarily from routine offshore oil operations. The federal Minerals Management Service, which manages oil and gas leases in Outer Continental Shelf (OCS) waters (3 to 12 miles offshore), reports that over the past 10 years, about 90 percent of oil spills from these operations in the OCS region were less than one barrel (42 gallons), averaging about five gallons each. The largest single recorded spill during this period was about 700 gallons. These amounts seem even less significant when compared to *natural* seepage of oil, occurring along fault lines under

coastal waters, at an estimated rate of 2,500 to 25,000 gallons per day in Southern California alone. (There is, however, a difference ecologically between oil seeping through the ocean floor and oil spilled on surface waters.)

State Oil Spill Response Measures

A 1972 amendment to the California Emergency Services Act of 1970 allows the Governor to establish a state oil spill contingency plan. Pursuant to this authority, the State Interagency Oil Spill Committee (SIOSC) was created during the 1970s, with the aim of developing a coordinated state plan for responding to oil spills, both onshore and offshore, but primarily those from offshore oil platforms, pipelines or tankers. As described in the state's Oil Spill Contingency Plan, the SIOSC consists of representatives of 13 state agencies that are responsible for various aspects of oil spill response in the state. The SIOSC itself is responsible for: (1) establishing and maintaining liaison with federal and local agencies and with public and private organizations engaged in oil pollution prevention and control and (2) coordinating day-to-day procedures between state agencies and other organizations regarding prevention and mitigation of oil pollution.

The committee meets formally at least once a year, in part to ensure that the contingency plan is up to date. The plan was last officially revised in May 1983, and a new revision is now under way.

The SIOSC made the administrative decision to make the Department of Fish and Game (DFG) the lead state agency for oil spills, mainly because of the threat spills pose to the state's natural resources. As such, the DFG is responsible for directing the overall operations of all state agencies engaged in combating an oil spill. In addition to day-to-day response coordination, the DFG has contracted on behalf of the SIOSC for a study evaluating current oil spill response plans and technology to deal with *offshore* oil spills, as required by Government Code Section 8574.6 (Ch 1251/86--SB 2495, Marks). The DFG expects to present this study to the Legislature in March 1990.

Other Response Plans

The DFG is also the state's representative on the federal Regional Response Team (RRT), established to provide a coordinated federal response to major oil spills. The RRT also includes the U.S. Coast Guard and the U.S. Environmental Protection Agency. The Coast Guard usually is on the scene of a major offshore spill, even if it occurs in state waters.

In addition, members of the oil industry have created several privately funded cleanup cooperatives located along the California coastline, due in part to state agency requirements. Each has personnel and equipment available around the clock to respond to a major offshore spill in certain coastal areas.

Legislative Proposals

One reaction to the *Exxon Valdez* accident has been a number of state and federal proposals to address the risk of a major oil spill, in the hopes of preventing another such accident and minimizing the problems experienced with the cleanup efforts in Alaska. These are summarized in Figure 1.

SOME POSSIBILITY OF MAJOR OFFSHORE OIL SPILL WILL REMAIN

Many of those involved in spill prevention planning agree that steps such as the ones described here can and will help to lessen the risks presented by everyday oil production and transport. Despite all these efforts, however, it is also accepted that, short of halting all coastal oil activities--including drilling, extraction and transport--it would be virtually impossible to eliminate *completely* the possibility of an accidental discharge of a large amount of oil into California coastal waters.

In addition, state officials involved in oil spill response planning indicate that, if a major offshore spill does occur (that is, a release greater than 100,000 gallons), no reasonable level of preparedness would prevent at least some of the oil from reaching the beaches or other shoreline, especially given the complex variables of oil trajectory, weather and geography. As a recent California Coastal Commission staff report states, "Although improvements have been made [since its 1979 study], the Commission has found repeatedly that effective prevention of spills, or containment and cleanup of spills that do occur, cannot be provided with existing technology . . . [S]horeline impacts from a large spill heading toward shore cannot be eliminated."

RELATED ISSUE OF SMALL SPILLS NEEDS ATTENTION

Because several significant accidents in the past 20 years resulted in the release of oil into state coastal waters and the possibility of another such event remains, the state and other entities appropriately have taken steps to address the issue of "catastrophic" or major offshore oil spills. However, a related but less visible problem has not received the same kind of scrutiny: that is, the chronic discharge in *onshore* areas of *smaller* quantities of oil, much of which is not contained or cleaned up and which can end up in the state's streams, rivers, and eventually

Figure 1

State and Federal Measures Would Address Major Oil Spill Issue

MEASURE	STATUS (as of February 1, 1990)	MAJOR PROVISIONS
State Proposals		
AB 2603 (Lempert)	Pending (A) Natural Resources Committee	Expands the SLC's regulatory and inspection authority to improve prevention of offshore oil spills; creates a specific Office of Oil Spill Response within the DFG to direct cleanup operations and training; establishes an oil transport fee to fund $500 million oil spill "Superfund" as potential source for cleanup costs; and adds civil fines and potential criminal penalties for oil spills.[a]
SB 1194 (Marks)	(A) Inactive file	Prohibits large oil tankers from entering state bays and harbors unless accompanied by tugboat.
AB 893 (O'Connell)	Pending (S) Governmental Organization Committee	Adds areas in state waters off the Santa Barbara Coast to an existing sanctuary.
AB 36 (Hauser)	Pending (S) Governmental Organization Committee	Adds state waters off the coasts of Mendocino and Humboldt Counties to existing sanctuaries.
Environmental Protection Act of 1990--Initiative Statute	In circulation for Nov. 1990 statewide ballot	Oil spill prevention and response provisions similar to AB 2603. Also creates a Marine Resources Sanctuary in all state waters along the coast, in which any new oil or gas leasing would be prohibited.[b]
Federal Proposals		
HR 1465 (Jones)	Conference (with S 686)	Oil spill liability and compensation legislation: creates a $1 billion oil spill cleanup fund from oil fees; requires double hulls on oil tankers; and continues to allow states to set their own liability standards.
S 686 (Mitchell)	Conference (with HR 1465)	Contains many provisions similar to those in HR 1465.

[a] A virtually identical bill, SB 1482 (Keene), failed to clear the Senate before the first-house deadline. The author's office indicates that he will introduce a modified version of the bill by the end of February 1990.

[b] In December 1989, the SLC *administratively* established such a sanctuary zone, covering all state coastal waters not currently leased or already within existing sanctuary zones. In addition, the President now is considering a recent federal task force report on options for a possible leasing moratorium in *federal* coastal waters.

coastal waters. These small spills result in water and air pollution, death of fish and wildlife, damage to natural habitat, and human health and safety problems. Neglect of such spills leads to continual, incremental damage to the environment. These spills are not just isolated incidents; they occur on a daily basis, throughout the state.

Extent of Small Oil Spills

Although the nature of these small spills makes it difficult to get a precise picture of the extent of the problem, the available data from two main sources suggest the general magnitude of the problem.

OES Warning Center. First, the state's Office of Emergency Services (OES) operates an emergency warning center, which receives notification of--among other things--hazardous material incidents in the state. Most of these notifications are telephoned in by the parties responsible for hazardous material discharges, as required under existing law, or by local response agencies such as fire departments. During calendar year 1988, the warning center received over 4,000 such calls. Of these, approximately one-half involved petroleum and related products (mostly diesel fuel, gasoline, or petroleum oil lubricants).

These numbers, however, understate the total number of spills. OES staff believe that many other small hazardous material spills were *not* reported to the warning center by responsible parties or local agencies. In addition, state and federal agencies that respond to such incidents, often the DFG and the Coast Guard, are not required to contact the OES warning center about these spills.

Hazardous Incident Reporting. In addition to the immediate OES spill notification required of the responsible party, a designated "administering agency" within local government is required to send a detailed form to the OES after each spill in the agency's jurisdiction. The OES compiles this data in its California Hazardous Material Incident Reporting System (CHMIRS). The draft of the latest CHMIRS summary cites 2,756 such forms filed during calendar year 1988. Although many incidents conveyed to the OES warning center clearly are not being reported through the CHMIRS, the draft report does provide revealing information on common types of conditions under which hazardous materials, including oils, are spilled. According to the summary report, about two-thirds of all the reported incidents involved a spill in one of the following circumstances: unauthorized dumping or abandonment; motor vehicle accident; in storage; normal manufacturing or end use; or loading and unloading. Assuming petroleum product incidents occur in the same proportions as other

hazardous materials, it would appear that most small, onshore oil spills occur under fairly routine conditions.

The DFG, which is the state agency charged with responding specifically to petroleum product discharges (both onshore and offshore), received notification from the OES on all the over 4,000 hazardous material spills reported to the warning center in 1988. DFG staff estimate that about one-half of these incidents involved petroleum products. One hundred or so of these were large (over 1,000 gallons), and about one-half of the remainder were less than one barrel (42 gallons). The largest onshore oil spill in the state in recent years took place at a Shell Oil storage tank in Martinez in April 1988. The spill involved over 200,000 gallons of crude oil that drained into a nearby slough and then the Carquinez Strait, near San Francisco Bay.

Small, Chronic Spills Are a Serious Problem

Even if small quantities of oil are spilled in most of the reported (and unreported) incidents, the sheer number of spills inevitably means that a substantial amount of harmful materials is released into the environment every year. While data are not available for California or the United States specifically, *worldwide* data largely extrapolated from United States sources illustrate the seriousness of the problem. Figure 2 shows the total average annual amounts of petroleum products that end up in the worldwide marine environment from various sources. The single largest contribution is from onshore discharges (including municipal and industrial wastes, and urban and river runoff), followed by routine offshore operations (including oil production and transport).

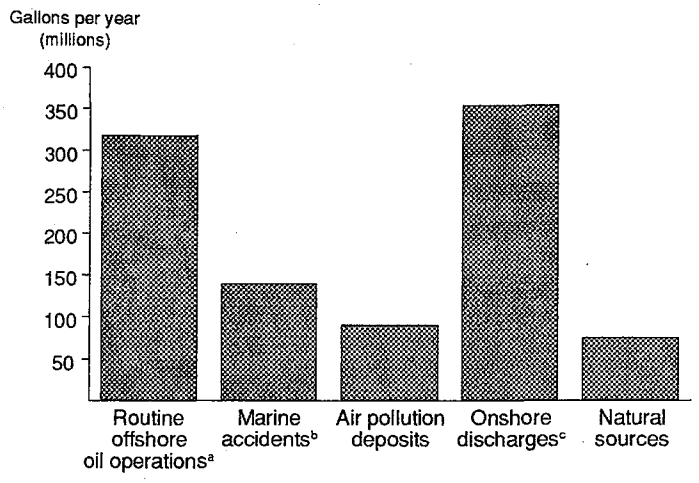
Based on this data, it appears that in an average year, the aggregate amount of petroleum products that make their way to the state's coastal waters from onshore discharges probably is comparable to the total amount from routine offshore oil production and transportation.

In addition, it is safe to assume that at least some of the oil that is spilled onshore remains on land or in inland waters (as opposed to ending up in state coastal waters). In these cases, the long-term environmental damage could be greater than from an offshore spill, since the oil is less likely to be diluted, dispersed, or evaporated than in the ocean. If an onshore oil spill is not contained or cleaned up, the possible results include pollution of surface water and groundwater. Unfortunately, information on these sorts of onshore spills is very incomplete at present.

The overall hazards posed by these ongoing small oil spills can have serious effects in many areas: contamination of water

Figure 2

Chronic Onshore Oil Spills Are a Significant Marine Pollution Source



Source of Petroleum in Ocean Waters (Worldwide)

[a] Includes: offshore oil production (platform drilling and extraction); tanker operations; marine terminals; and bilge and fuel oils.

[b] Includes: oil platform, marine terminal, tanker and other offshore accidents.

[c] Includes: municipal wastes; refineries; other industrial wastes; urban and river runoff including spills; and dumping of wastewater sludge.

Source: *Oil In The Sea* (National Research Council, 1985). Amounts are for worldwide sources, but largely were extrapolated from data for United States only.

and air; loss of fish and other wildlife; and even threats to human health and safety, especially on land.

CONCERNS WITH THE CURRENT SYSTEM'S ABILITY TO DEAL WITH THIS PROBLEM

Our review of the state's current process to respond to small spills indicates several problem areas.

Communication and Reporting Shortcomings

As noted above, the state's current system to gain knowledge of small oil spills has some significant gaps. The OES warning

center is not informed of every spill by the responsible party, as required by law, or by local, state or federal agencies (which are currently exempt from this reporting requirement). In addition, the affected local response agencies that eventually will have to respond at the scene of the spill (such as a fire department) often are not immediately notified of the incident. Furthermore, in some--perhaps many--cases, local agencies do not file the required CHMIRS forms with the OES after a spill, which makes later statistical analysis incomplete. Finally, while records exist in its field offices, the DFG does not keep a central record and summary of its reactions to OES warning center notifications--what was the nature of the spill, to what extent did the field staff respond, and so on. This makes it difficult to determine accurately the magnitude of the small spill problem and the overall level of state resources required for an adequate statewide response.

Lead Agency Has Few Resources

Although small onshore oil spills are a problem which is considered in the state's official Oil Spill Contingency Plan, in practice the state has allocated few resources to respond to them. As indicated earlier, the DFG is the state's lead agency for response to oil spills threatening to affect *any* waters of the state. However, the department currently has only two permanent positions dedicated to this responsibility--one for northern California and one for southern California. These two staff members rely on DFG wardens and other field personnel for most on-the-scene activities, such as the initial investigation and coordination of cleanup efforts by other entities. (Currently, the department also has one temporary position which primarily is involved in specific projects such as the contract for the oil spill report required by Chapter 1251. The department has requested in the 1990-91 budget that this position be made permanent and that two additional positions be provided to help manage oil spill response, specifically for small onshore spills.)

Because of the number of reported oil spills--again, more than 2,000 in 1988--and the other ongoing workload demands on the field staff, the DFG is able to respond only to the larger or more environmentally hazardous spills. Consequently, they must leave many "minor" spills to take care of themselves. Finally, DFG staff also believe that a number of small oil spills are not discovered at all.

Difficulty in Funding Cleanup Costs

The DFG mainly attempts to make the party responsible for a spill clean it up. Under existing law, the principle of strict

liability requires the responsible party to pay for cleanup, even if another entity has done the actual work. However, in many situations, the responsible party is not always known or is not financially able to pay. In this event, the DFG may draw upon its Fish and Wildlife Pollution Cleanup and Abatement Account, funded from any recovered cleanup payments and civil penalties and continuously appropriated to the department. At the end of 1988-89, the account held about $600,000, an amount which could be depleted in cleaning up one major spill.

Other State Agencies Have Limited Involvement

In relation to the DFG, other departments currently have limited roles in responding to the small spills problem.

State Water Resources Control Board (SWRCB). The SWRCB and the regional water boards provide technical assistance on the potential impact of an oil spill on water resources, and may provide cleanup funding from several special funds under SWRCB control if surface or ground waters are threatened.

Department of Health Services (DHS). The DHS may become involved in the response to an incident if it poses an immediate threat to public health, and may contribute cleanup funds from the state Hazardous Substance Account if the oil is contaminated with a state-designated hazardous substance.

California Highway Patrol (CHP) and Department of Transportation (Caltrans). The CHP acts as the state's on-scene coordinator for oil spills on freeways, state highways, and on roadways in most unincorporated areas of the state. In addition, the CHP provides traffic control at these spills. Caltrans is responsible for ensuring spill cleanup on state roadways and their rights-of-way.

Other Agencies. Other state agencies, such as the SLC, the Division of Oil and Gas (DOG), or the Attorney General's Office, provide advice or legal assistance to the DFG in the event of a spill.

Lack of Emphasis on Prevention

Looking at the problem from the other end, it appears that the state has made relatively little effort to increase *prevention* of these kinds of oil spills. The DFG's responsibility is effectively limited to assessing a spill *after the fact* and coordinating the cleanup work of others if it deems this work necessary. Other state agencies involved in oil and gas industry safety regulation, such as the SLC, DOG or Coastal Commission, do not have the

resources (or often the jurisdiction) to monitor a large number of potential sources of small oil spills. There are also a large number of potential sources that are not directly related to the oil and gas industry, such as manufacturing plants, trucking, and small storage tanks. Finally, since a sizeable portion of actual spills appear to be intentional but surreptitious, much of the burden of prevention falls on local and state law enforcement, which may not have sufficient resources to adequately serve as a deterrent.

Local Agencies Not Always Adequately Involved

Small local governments usually do not have the personnel or technical resources that would enable them to help prevent or respond effectively to small oil spills and minimize environmental damage. Additionally, local agencies do not commonly have their own specific oil spill response plans (as part of their overall emergency planning), nor do they often participate with state and federal agencies in oil spill response planning drills that can help improve interagency coordination in actual spills where this becomes necessary. Furthermore, in cases where the local response agency is not the first to learn of a spill, it sometimes is not informed of the incident until a significant amount of time has lapsed.

HOW CAN THE STATE IMPROVE SMALL OIL SPILL PREVENTION AND RESPONSE?

In addition to measures to address the possibility of another major offshore oil spill, the Legislature should give some attention to the more common, but less visible problem of chronic, relatively small oil spills. In so doing, the Legislature first needs to address the following questions:

- Is the *current* system essentially sound, needing only marginal changes to improve the state's role in preventing and responding to this problem; *or*
- Is the current system ineffective, warranting a closer look at alternative systems for small spill prevention and response?

In either case, the Legislature has options to improve small oil spill prevention and response.

Changes to the Current System

If the current system is retained, the Legislature may wish to consider the following possible changes to address the system's shortcomings.

More Emphasis on Small Spill Prevention. As in the area of major offshore oil spills, one focus of state activity should be lessening the number of actual spills to which the state needs to respond by strengthening ways to prevent small oil spills from occurring. Toward this end, it is critical that individuals and firms face strong incentives to prevent spills. This could be achieved through various means: tougher enforcement by various state agencies (such as the DFG and the SWRCB) of existing regulations and statutes concerning oil discharges; more field patrol and surveillance; and the active use of existing state liability laws to prosecute for damages when a responsible party can be identified.

Improved Communication and Reporting. As described above, complete information on the extent and magnitude of the small oil spill problem is not available under the current system. In part, this could be improved by: (1) more publicity about and enforcement of existing law requiring responsible parties to report spills immediately to the OES warning center; and (2) requiring all state agencies involved in oil spill response to report incidents to the OES, since the OES already is set up to act as a communications center. These steps would provide more timely notice of spills.

In addition, efforts to (1) increase local agency understanding of and compliance with the CHMIRS reporting requirements and (2) ensure that all DFG field reports on spills are forwarded to DFG headquarters for summation would provide better data on which to base decisions to adjust the state's response systems. Finally, for those cases where a local agency is not the first on the scene, the OES should contact the proper local agency as quickly as possible to inform it of the incident.

More Resources for Response. Although the DFG is the lead state agency for oil spill response, it lacks sufficient resources to perform this function effectively. Additional field staff would give the the DFG the ability to require the cleanup of many spills that it now must trust nature alone to take care of, and to discover spills that now go undetected. Funding for this staff could come from increased penalty revenues to the DFG's Pollution Cleanup and Abatement Account or from assessments on producers, transporters and users of specified kinds of oil. Regardless of the methods used, however, any proposals to improve the DFG's response to oil spills should include specifically the *small* spill issue as part of the plan, so that, in addition to resources to address the possibility of major offshore oil spills, resources can be focused on *this* issue.

Alternatives to the Current System

If, on the other hand, the Legislature concludes that the current system is inadequate, it may wish to consider the following alternatives.

Change in Lead Response Agency. The current organizational structure, designed primarily to cope with large coastal spills, may not be the appropriate one for coordinating a statewide response to daily small spills. The State Interagency Oil Spill Committee (SIOSC) made an administrative decision to select the DFG as the lead agency for both purposes. The Legislature, however, has not expressed its preferences. In our view, the DFG may not be the most fitting lead agency for this purpose, since fish and wildlife and their habitat is only one concern out of many. (In addition, in our review of the DFG in the *Analysis of the 1990-91 Budget Bill,* we note that the department is having some severe fiscal problems. These problems are likely to affect the department's ability to direct resources to small spill response.) Other possible lead agencies include the SLC, the OES, the SWRCB, or the Environmental Affairs Agency. Alternatively, the SIOSC could be charged with developing a new, more effective state organizational structure to improve response to small spills.

Increased Local Response Efforts. The local level may be the most appropriate one for many small oil spill prevention and response activities, since most incidents of this type begin in and often are confined to a relatively small area, and do not cross jurisdictional boundaries. The state could provide increased training and technical assistance to local agencies to help improve their efforts in the areas of prevention and response preparedness. In addition, it may be appropriate to require local governments to (1) incorporate a specific *oil* spill response plan into their local contingency planning and (2) participate in oil spill response planning drills with state agencies, to help ensure timely and suitable measures in the event of a spill. Such requirements potentially would constitute state-reimbursable mandates.

SUMMARY

Major offshore oil spills are a very real concern in California, and steps can be and are being taken to address this issue. However, the less visible issue of chronic, small oil spills, many of which occur onshore, also warrants attention because of the cumulative environmental consequences. There are several alternatives for the Legislature to consider that would improve the state's role in preventing and responding to these small spills.

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