

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (REV. 12/2013)

**ECONOMIC IMPACT STATEMENT**

DEPARTMENT NAME DEPT OF FISH AND WILDLIFE	CONTACT PERSON Christine Kluge	EMAIL ADDRESS Christine.Kluge@wildlife.ca.gov	TELEPHONE NUMBER (916) 327-0910
DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400 OIL SPILL CONTINGENCY PLANS (INLAND FACILITIES) & DEFINITIONS AND ABBREVIATIONS			NOTICE FILE NUMBER Z

**A. ESTIMATED PRIVATE SECTOR COST IMPACTS** *Include calculations and assumptions in the rulemaking record.*

1. Check the appropriate box(es) below to indicate whether this regulation:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> a. Impacts business and/or employees | <input type="checkbox"/> e. Imposes reporting requirements              |
| <input type="checkbox"/> b. Impacts small businesses                     | <input type="checkbox"/> f. Imposes prescriptive instead of performance |
| <input type="checkbox"/> c. Impacts jobs or occupations                  | <input type="checkbox"/> g. Impacts individuals                         |
| <input type="checkbox"/> d. Impacts California competitiveness           | <input type="checkbox"/> h. None of the above (Explain below):          |

See attachment for details regarding economic costs.

*If any box in Items 1 a through g is checked, complete this Economic Impact Statement.  
If box in Item 1.h. is checked, complete the Fiscal Impact Statement as appropriate.*

CDFW/OSPR

2. The \_\_\_\_\_ estimates that the economic impact of this regulation (which includes the fiscal impact) is:  
(Agency/Department)

- |  |
|--|
| <input checked="" type="checkbox"/> Below \$10 million   |
| <input type="checkbox"/> Between \$10 and \$25 million   |
| <input type="checkbox"/> Between \$25 and \$50 million   |
| <input type="checkbox"/> Over \$50 million <i>[If the economic impact is over \$50 million, agencies are required to submit a <u>Standardized Regulatory Impact Assessment</u> as specified in Government Code Section 11346.3(c)]</i> |

3. Enter the total number of businesses impacted: 40 - 50

Describe the types of businesses (Include nonprofits): Oil producers, oil pipelines, railroads transporting oil, refineries.

Enter the number or percentage of total businesses impacted that are small businesses: -0-

4. Enter the number of businesses that will be created: none eliminated: none

Explain: \_\_\_\_\_

5. Indicate the geographic extent of impacts:  Statewide  
 Local or regional (List areas): \_\_\_\_\_

6. Enter the number of jobs created: less than 50 and eliminated: none

Describe the types of jobs or occupations impacted: May be a slight increase in jobs for providers of services for oil spill planning, spill management, exercise planning, and spill cleanup.

7. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here?  YES  NO

If YES, explain briefly: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**ECONOMIC IMPACT STATEMENT (CONTINUED)**

**B. ESTIMATED COSTS** *Include calculations and assumptions in the rulemaking record.*

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? \$ See attachment
  - a. Initial costs for a small business: \$ none Annual ongoing costs: \$ none Years: n/a
  - b. Initial costs for a typical business: \$ 60,000 Annual ongoing costs: \$ 14,000 Years: annual
  - c. Initial costs for an individual: \$ none Annual ongoing costs: \$ none Years: n/a
  - d. Describe other economic costs that may occur: None; if all costs across industry are passed on to the consumer, the cost to operate a vehicle for a yr will increase 26 cents (in the first yr only; less in following years), which would not be detectable.

2. If multiple industries are impacted, enter the share of total costs for each industry: n/a

3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements. *Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted.* \$ n/a

4. Will this regulation directly impact housing costs?  YES  NO  
If YES, enter the annual dollar cost per housing unit: \$ \_\_\_\_\_

Number of units: \_\_\_\_\_

5. Are there comparable Federal regulations?  YES  NO

Explain the need for State regulation given the existence or absence of Federal regulations: See attachment.

Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: \$ none

**C. ESTIMATED BENEFITS** *Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment: See attachment.

2. Are the benefits the result of:  specific statutory requirements, or  goals developed by the agency based on broad statutory authority?

Explain: Statute requires best achievable protection of waters and natural resources. [Gov. C. §8670.28] These regulations implement this mandate.

3. What are the total statewide benefits from this regulation over its lifetime? \$ See attachment.

4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation: Response planning consultants, oil spill cleanup companies, and spill management teams may expand in order to assist the operators who must comply with these regulations.

**D. ALTERNATIVES TO THE REGULATION** *Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: The oil spill contingency plans are required by statute (Gov. C. §8670.28 and §8670.29), with OSPR to implement by regulation. There are no reasonable alternatives. These regulations are modeled from existing marine oil spill contingency plan regulations.

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**ECONOMIC IMPACT STATEMENT (CONTINUED)**

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation: Benefit: \$ See attachment. Cost: \$ See attachment.

Alternative 1: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

Alternative 2: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives: Estimated benefits are \$7.7 million/yr for all 4 related regulations.

Costs are estimated at \$2.66 million in the first year, \$617,093/yr thereafter. See attachment.

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs?  YES  NO

Explain: These regulations represent performance standards. The facts and circumstances of each spill are different. Facilities have some flexibility in how they meet the contingency plan requirements.

**E. MAJOR REGULATIONS** *Include calculations and assumptions in the rulemaking record.*

*California Environmental Protection Agency (Cal/EPA) boards, offices and departments are required to submit the following (per Health and Safety Code section 57005). Otherwise, skip to E4.*

1. Will the estimated costs of this regulation to California business enterprises exceed \$10 million?  YES  NO

*If YES, complete E2. and E3  
If NO, skip to E4*

2. Briefly describe each alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Alternative 1: \_\_\_\_\_

Alternative 2: \_\_\_\_\_

*(Attach additional pages for other alternatives)*

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 1: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 2: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

4. Will the regulation subject to OAL review have an estimated economic impact to business enterprises and individuals located in or doing business in California exceeding \$50 million in any 12-month period between the date the major regulation is estimated to be filed with the Secretary of State through 12 months after the major regulation is estimated to be fully implemented?

YES  NO

*If YES, agencies are required to submit a Standardized Regulatory Impact Assessment (SRIA) as specified in Government Code Section 11346.3(c) and to include the SRIA in the Initial Statement of Reasons.*

5. Briefly describe the following:

The increase or decrease of investment in the State: \_\_\_\_\_

The incentive for innovation in products, materials or processes: \_\_\_\_\_

The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency: \_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT**

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**FISCAL IMPACT STATEMENT**

**A. FISCAL EFFECT ON LOCAL GOVERNMENT** *Indicate appropriate boxes 1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

1. Additional expenditures in the current State Fiscal Year which are reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

a. Funding provided in \_\_\_\_\_

Budget Act of \_\_\_\_\_ or Chapter \_\_\_\_\_, Statutes of \_\_\_\_\_

b. Funding will be requested in the Governor's Budget Act of \_\_\_\_\_

Fiscal Year: \_\_\_\_\_

2. Additional expenditures in the current State Fiscal Year which are NOT reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

*Check reason(s) this regulation is not reimbursable and provide the appropriate information:*

a. Implements the Federal mandate contained in \_\_\_\_\_

b. Implements the court mandate set forth by the \_\_\_\_\_ Court.

Case of: \_\_\_\_\_ vs. \_\_\_\_\_

c. Implements a mandate of the people of this State expressed in their approval of Proposition No. \_\_\_\_\_

Date of Election: \_\_\_\_\_

d. Issued only in response to a specific request from affected local entity(s).

Local entity(s) affected: \_\_\_\_\_

e. Will be fully financed from the fees, revenue, etc. from: \_\_\_\_\_

Authorized by Section: \_\_\_\_\_ of the \_\_\_\_\_ Code;

f. Provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each;

g. Creates, eliminates, or changes the penalty for a new crime or infraction contained in \_\_\_\_\_

3. Annual Savings. (approximate)

\$ 3,750 (see attachment)

4. No additional costs or savings. This regulation makes only technical, non-substantive or clarifying changes to current law regulations.

5. No fiscal impact exists. This regulation does not affect any local entity or program.

6. Other. Explain See attachment.

**ECONOMIC AND FISCAL IMPACT STATEMENT**

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STD. 399 (REV. 12/2013)

**FISCAL IMPACT STATEMENT (CONTINUED)**

**B. FISCAL EFFECT ON STATE GOVERNMENT** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ 0 See attachment.

*It is anticipated that State agencies will:*

a. Absorb these additional costs within their existing budgets and resources.

b. Increase the currently authorized budget level for the \_\_\_\_\_ Fiscal Year

2. Savings in the current State Fiscal Year. (Approximate)

\$ 0 for OSPR; \$3,750 for other state agencies (see attachment)

3. No fiscal impact exists. This regulation does not affect any State agency or program.

4. Other. Explain See attachment.

**C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

2. Savings in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

3. No fiscal impact exists. This regulation does not affect any federally funded State agency or program.

4. Other. Explain \_\_\_\_\_

FISCAL OFFICER SIGNATURE

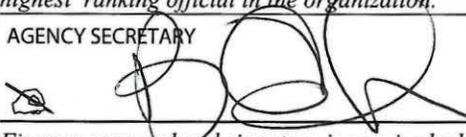


DATE

12/13/17

*The signature attests that the agency has completed the STD. 399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or departments not under an Agency Secretary must have the form signed by the highest ranking official in the organization.*

AGENCY SECRETARY



DATE

12/13/17

*Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD. 399.*

DEPARTMENT OF FINANCE PROGRAM BUDGET MANAGER



DATE

## **Attachment to Economic and Fiscal Impact Statement (STD 399)**

Title 14. California Code of Regulations  
Re: Oil Spill Contingency Plans for Inland Facilities  
and  
Definitions and Abbreviations  
to  
Adopt Section 817.04  
Amend Section 790

*The following information pertains only to the oil spill contingency plan regulations (§817.04). The changes to the definitions and abbreviations regulation (§790) do not have any economic or fiscal cost impacts.*

### **Economic Impact Statement**

#### **Page 1**

#### **A. Estimated Private Sector Cost Impacts**

These regulations will not have a significant statewide adverse economic impact. Based on OSPR's experience implementing the emergency regulations in 2015, about 45 companies are subject to these inland requirements. They will incur some costs of compliance, described in detail below. Because oil demand is highly inelastic, nearly all of these costs are expected to be passed on to consumers. Because there are millions of oil consumers in California, these costs will be spread so thinly across all of them that they will hardly be noticed. For example, the gasoline costs to operate a vehicle for a year is expected to increase 26 cents as a result of these regulations.

These are not considered "major regulations" because the economic impact assessment concludes that the impacts, summing both costs and benefits, will be considerably less than \$50 million dollars annually.

#### *Costs*

With respect to contingency plans, the following cost information was obtained by conversations between OSPR staff and industry representatives. However, there is some reluctance by industry to publicly disclose their costs.

There is an initial up-front cost for creating a contingency plan and a much smaller annual cost to maintain it. Nearly all of the plan holders affected by the proposed regulations prepared plans under the emergency regulations in 2015.

OSPR estimated those costs that have already been incurred during the emergency regulation phase, as well as the future costs of maintaining a plan.

Inland facilities are varied: oil well oil operators with a few wells, global oil companies with hundreds of wells, nationally-run oil transport pipelines, oil storage tank farms, refineries, and railroads. Due to this variability, costs were estimated according to the size of the inland facility, based on the Reasonable Worst Case Spill (RWCS) volume calculated in their contingency plan. Six orders of magnitude were considered, ranging from a RWCS volume of less than 10 barrels of oil to less than 1,000,000 barrels.

In addition to the RWCS volume, the costs of contingency planning vary depending on whether the inland facility has already developed a spill control plan and whether the plan is prepared by in-house staff or outside contractors. OSPR contacted and requested some facilities within each tier to provide the cost of preparing their contingency plan. In total, 11 of 43 inland facilities responded to OSPR's inquiry, allowing an average cost per plan to be estimated for each tier.

The average cost for each tier, based on the survey respondents, was multiplied by the number of plans within each tier, yielding a total estimated cost for all facilities within that tier. The total cost, across all tiers for all 43 facilities combined, for the preparation of a contingency plan to meet the emergency regulations, was \$2.24 million (*Table 1*).

<b>RWCS Volume</b>	<b>Number of Plans</b>	<b>Average Cost of Plan</b>	<b>Total Cost</b>
<10 Bbls	10	\$14,200	\$142,000
<100 Bbls	11	\$29,333	\$322,663
<1000 Bbls	7	\$45,000	\$315,000
<10,001 Bbls	3	\$80,000	\$240,000
<100,000 Bbls	10	\$114,500	\$1,145,000
<1,000,000 Bbls	2	\$38,000	\$76,000
<b>Total</b>	<b>43</b>		<b>\$2,240,663</b>

As expected, costs increase with each of the first five tiers. However, they decreased with the last tier. These are the largest companies, with large facilities, and they were able to build upon contingency plans they had already prepared under federal pipeline or facility regulations.

The preparation of these plans was essentially a one-time cost. Contingency plans must be re-submitted every five years if there are no updates after the date of approval. There is no charge to submit a plan. However, operators do periodically change their operations such as adding a pipeline, shutting down an oil well, or changing their clean up contractor. In such cases, plans must be updated, but the cost of a plan update is generally low compared to the original costs listed in Table 1. Based on discussions with industry, OSPR estimates that the cost of updating a plan averages about \$5,000 and occurs about once every three years, for an average of \$1,667/year. Across all 43 facilities, this totals \$71,667 per year.

In order to fulfill the goals of their contingency plans, all of the facilities contract with an oil spill response organization (OSRO) for either terrestrial cleanup or on-water cleanup capability. Based on discussions with industry, the cost of maintaining this retainer is approximately \$5,000/year. Applied to all 43 facilities, this totals to \$215,000/year.

All of the larger facilities and some of the smaller ones also have a retainer with a spill management team (SMT) to assist them in managing an oil spill response. Based on discussions with industry, this cost is approximately \$4,000/year. Conservatively, we applied this to all those companies with a RWCS volume greater than 100 barrels, as it is unlikely smaller operators would use an SMT. Thus, the \$4,000/year SMT cost is applied to 22 of the 43 plan holders, for a total cost of \$88,000/year.

Combining the cost of original plan development (Table 1) with these annual plan maintenance costs and retainers for OSROs and SMTs, we estimated the total up-front and annual costs (Table 2). For the purposes of this analysis, we adjusted all industry totals assuming there will be 45 plan holders (not 43 as there were when we conducted our inquiry).

<b>Table 2: Total Cost to Develop and Maintain Contingency Plans</b>		
	<u>First year</u>	<u>Annual</u>
C-Plan development	\$2,240,663	
C-Plan maintenance		\$71,667
OSRO retainers	\$215,000	\$215,000
SMT retainers	\$88,000	\$88,000
Sub-Totals	\$2,543,663	\$589,667
<b>Totals (45 plan holders)</b>	<b>\$2,661,973</b>	<b>\$617,093</b>

### *Cumulative Impact*

At this time, OSPR is also promulgating regulations for inland facilities regarding: 1) oil spill drill and exercise requirements, 2) demonstration of financial responsibility to pay for cleanup and damages, and 3) ratings of oil spill response organizations. The economic impact assessment for each of those requirements is addressed in the Initial Statement of Reasons (ISOR) for each of those rulemakings. Collectively, looking at the costs to comply with all aspects of these four rulemakings (contingency planning, drills and exercises, financial responsibility, and rating of oil spill response organizations) across all the affected operators (about 45 facilities), the total cost for industry-wide compliance is expected be about \$4 million (Figure 1) in the first year, and \$2 million annually in future years. For reasons described in this and each of the other ISORs, this is a high estimate.

**Figure 1: Total Cost of All New Oil Spill Preparedness Regulations**



*Definitions – Section 790*

The changes to the definition section do not result in any costs.

*Summary of Costs*

The estimated costs of all the regulations are described in detail in each of the respective ISOR's, but are presented here for summary purposes:

- Contingency plans: \$2.7 million in the first year; \$617,000/yr annually
- Drills and exercises: \$573,000 annually
- Financial responsibility: \$855,000 annually
- Oil spill response organizations: zero (captured under contingency plan analysis)

Total expected cost of the four packages combined: \$4 million in the first year; \$2 million/year thereafter.

Based on this analysis, the proposed regulations collectively will not have a significant adverse economic impact on businesses in California or their ability to compete with out-of-state businesses. The impacted companies are involved in oil production, oil transport, oil refining, and oil distribution within the state. California receives about two-thirds of its oil from out of state (mostly via tankers coming from Alaska or overseas) and a third of its oil from domestic production within California. Most of the domestic production is from inland locations. Nearly all of the oil consumed in California is refined in the state. All of it is then

distributed for sale throughout the state.

In general, businesses from outside of California do not compete with California refineries or transporters (although facilities within California may be owned by a larger corporation based outside of California). Inland producers do compete on the global market with all oil producers worldwide. However, because they are located locally, they have a strong economic advantage over out-of-state competitors due to minimal transport costs. All domestic California oil production is consumed within California.

The increased costs associated with preparing and maintaining contingency plans incurred by these companies is unlikely to affect their ability to compete with businesses from outside the state. While OSPR does not have data at the individual company level, we can examine the impact across the industry as a whole. Annual California inland production is approximately 170 million barrels. (California Department of Conservation Monthly Oil and Gas Production and Injection Report (October 2016)). Assuming a market value of \$50/barrel, the value of this annual production is \$8.5 billion. The estimated total cost of complying with these regulations, across all facilities and companies, is \$2,661,973 (in the first year, and substantially less thereafter). Assuming these costs are all incurred in one year (which is unlikely), this is 0.031% (just over three-hundredths of one percent) of the total revenues of oil production. If applied to the cost of production, these costs would add \$0.0157 (just over a penny and a half) to the price of a barrel of oil, and this would only be in the first year. Given the normal variability in the price of oil, and the transport price advantage that producers in California have over their overseas competitors (several dollars per barrel), the cost of demonstrating financial responsibility is unlikely to affect their ability to compete with other producers from out of state.

Note that, due to the promulgation of the emergency regulations, the first year of contingency plan development has already occurred. OSPR is not aware that compliance with this caused any effects on the ability of companies to compete with businesses from out of state.

Because the demand for gasoline and other oil products is highly inelastic in the short run, it is likely that nearly all of this cost would be passed on to consumers. Thus, the \$4 million born by 45 companies in the first year, and \$2 million annually after that, would be passed down to California's millions of households and businesses. Here we examine the likely increased cost of driving a car for a year.

The total high end estimated cost for all of the new regulations in the first year is \$4,090,297 across all affected companies. This is 0.048% (less than five-hundredths of one percent) of the total revenues of oil production. If applied to the cost of oil production, these costs would add \$0.0241 (a little more than two cents) to the price of a barrel of oil, and this would be only in the first year (which has already occurred under the emergency regulations) (Table 3). In future years, the cost would be less than half of that.

Again, the benefit to the State by having facilities with spill contingency plans should result in less damage to the environment and reduced response costs overall.

<b>Table 3: Total Estimated Cost of Proposed Regulations Across all Facilities in Year 1</b> (based on high-end estimates)			
Regulation	Cost	% of value of Inland oil production in California	Potential addition to price of a barrel of oil
Contingency Plans (mostly upfront costs)	\$2,661,973	0.031%	\$0.0157
Drills and Exercises (annual costs)	\$573,214	0.007%	\$0.0034
Financial Responsibility (annual costs)	\$855,110	0.010%	\$0.0050
<b>TOTAL</b>	<b>\$4,090,297</b>	<b>0.048%</b>	<b>\$0.0241</b>

To apply this total (an increase of \$0.0241/barrel) to the annual cost of driving a car, we assume a vehicle that is driven 12,000 miles/year, gets 17.5 miles per gallon, and thus requires 686 gallons of gasoline/year. A price increase of \$0.0241/barrel translates to \$0.00057/gallon (1 barrel = 42 gallons). Applied to the 686 gallons needed to drive for a year, this would add \$0.39 (or 39 cents) to the annual gas budget for the vehicle. Twenty-six of the 39 cents are due to the contingency plan regulations.

Given the normal variation in gas prices at the pump, it is unlikely that this change would be noticed by consumers, nor impact their economic decisions.

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**B. Estimated Costs**

- 1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime?*

See above for details. The total cost to businesses is \$2.66 million in the first year, \$617,093/year thereafter. Assuming this is passed on to consumers, the impact will be an increase in fuel expenditures of 39 cents per vehicle per year (across all four regulations).

- 5. Comparable Federal Regulations: Explain the need for State regulation given the existence or absence of Federal regulations.*

California's preparedness and response requirements are generally more comprehensive than those of the federal government. For example, OSPR has the following key requirements which are different from the federal government: sensitive site identification and protection, use of and rating of Oil Spill Response Organizations including minimum response times and minimum equipment requirements, and additional requirements for equipment deployment drills and tabletop exercises. There should be no additional costs due to the state-federal difference since the federal government accepts plans prepared to meet OSPR requirements.

## C. Estimated Benefits

These regulations will provide benefits to the health and welfare of California residents by ensuring a minimum level of resources will be used to cleanup oil spills in inland waterways, thus benefiting the communities affected by a spill. Oil spill contingency plans must include an organizational structure to safely manage response to oil spills thereby enhancing worker safety. Further, these regulations will benefit the state's environment. Plans ensure that the operators have pre-identified a competent cleanup contractor and a spill management team to promptly respond to an oil spill. The regulations establish planning standards for a minimum amount of equipment to arrive on-scene by a certain time. Plans must also identify response strategies for the waterways they pose a risk to. In the end, these regulations help facilitate quicker, more efficient responses to oil spills.

These regulations regarding contingency plans are part of a larger package of regulations that build upon OSPR's marine oil spill preparedness and response program to cover inland facilities that pose a threat to inland surface waters. Together, they are part of a four-pronged approach to improve preparedness and response capabilities across the inland oil production and transport industry. The following four components are new regulations for inland facilities with regard to:

1. Contingency plans
2. Drills and exercises
3. Financial responsibility
4. Rating of oil spill response organizations

While it is difficult to examine the economic benefits of any one component, we examined the overall benefit of the suite of the new regulations by focusing on the ultimate measure of program success: the number and volume of oil spills over time.

### *Cumulative Impact*

To examine the benefits of these regulations, we considered three factors:

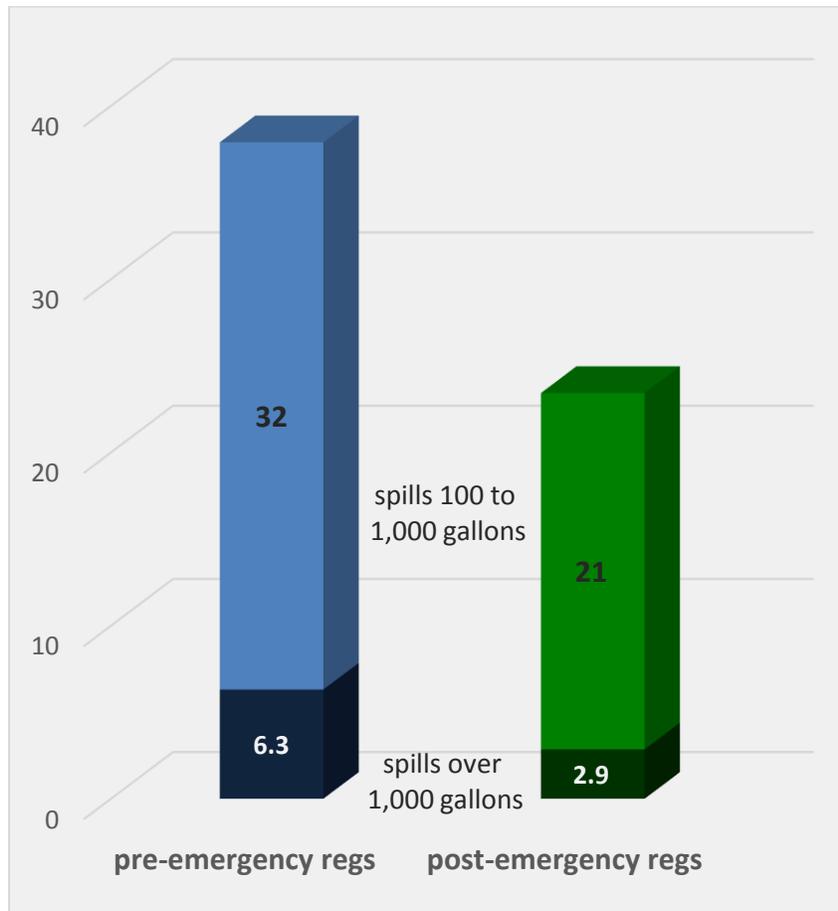
1. The reduction in small and medium-sized spills since the implementation of the emergency regulations.
2. The reduction in the risk of large spills.
3. The added risk of an oil spill due to an increase in the transport of crude by rail.

### *Reduction in Small and Medium-sized Spills*

OSPR has a database of spills, based on reports from the Office of Emergency Services. Smaller spills happen on a regular basis, allowing us to compare spill data since the initiation of the emergency regulations in September 2015. Here, we examined data regarding inland oil spills to water, comparing 21 recent months (September 2015 thru April 2017) under the emergency regulations to the previous 38 months (July 2012 thru August 2015) before the expansion to a statewide program. We included all spills of 10 gallons or more. There are hundreds of spills under 10 gallons but, for most of these, the response costs were negligible.

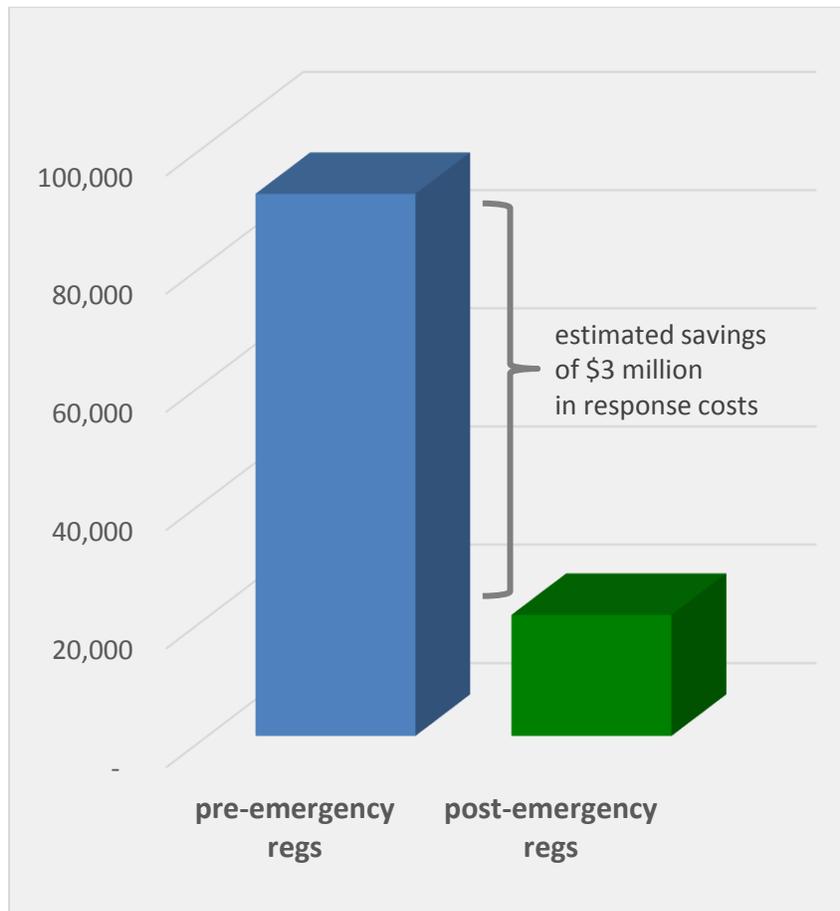
Normalizing to a 12-month period to use comparable annual figures, the total number of inland oil spills to water (of 10 gallons or more) has stayed about the same (123/year before the emergency regulations went into effect and 135/year after). However, the spills are now smaller than previously. The number of spills from 100 to 999 gallons fell a third (from 32 to 21/year), while the number of spills of 1,000 gallons or more dropped in half (from 6.3 to 2.9/year) and (Figure 2).

**Figure 2: Number of Inland Oil Spills to Water**



More significantly, the volume of oil spilled declined dramatically, from about 90,000 gallons/year before the establishment of the emergency regulations, to 20,000 gallons/year after (Figure 3). Based on an average response cost of \$1,779/barrel, or about \$42/gallon), this represents an annual savings of just over \$3 million/year. This response cost, provided to OSPR by a group of inland oil facilities who conducted their own internal survey, is intended to include cleanup costs as well as third party claims and natural resource damages.

**Figure 3: Gallons Spilled/Year (Inland Oil Spills to Water)**



An important caveat to this analysis is that significant oil spills are rare events, and large oil spills are even rarer, thus requiring long time frames to ensure enough data to paint a realistic picture. Furthermore, one large spill within the time period under examination can strongly bias results. In this instance, there were no exceptionally costly spills during the months under examination. Removing the largest spills from the 2012-2017 data would not meaningfully change the results presented above.

#### *Risk of a Large Spill*

Large spills are rare, occurring once every few years. Yet, because of their potential harm, preparing for them is one of the primary goals of OSPR. It is possible that the new planning regulations and increased attention, in the long run, will prevent a large spill, not yet detected in the data above. To assess the potential benefit of this, we can examine the likely cost of such a spill, its annual probability, and the degree to which the new regulations will lower that probability. The result will be an expected benefit, measured in terms of reduced annual expected costs. The following equation describes this analysis:

$$\text{Benefits/yr} = \text{cost} * \text{probability of a large inland spill/yr} * \text{reduction in probability}$$

In recent decades, there have been two large inland oil spills to water in California, the 1991 ExxonMobil spill and the 1994 ARCO spill, both pipeline breaks affecting the Santa Clara River. The response costs (including third party claims and natural resource damages) for these events were \$25 million and \$51 million respectively. These spills rank among the most expensive inland spills in United States history. For the sake of this analysis, we assume the cost of a large inland spill would be \$100 million and the probability has been once every 13 years (based on these two spills occurring in the past 26 years). This is an annual probability of 0.077.

The remaining question is how much the new regulations will reduce this probability. To answer that, we looked to OSPR's history with regard to its marine program. Before the beginning of OSPR's marine program in 1991, there were four large marine oil spills between 1986 and 1990 (four in five years). Since then, there have been 11 large spills (or 11 in 26 years). Thus, the annual probability of a large marine spill declined from 0.80 to 0.42. This reduction, by 47%, is similar to the reduction recently documented with regard to smaller inland spills. For the purposes of this exercise, we assume that these regulations will reduce the risk of a large inland spill by 47%. The expected annual benefit, with regard to reducing the probability of a large inland spill, are:

$$\text{Benefits/yr} = \text{cost} * \text{probability of a large inland spill/yr} * \text{reduction in probability}$$

$$\$3,624,260 = \$100,000,000 * 0.077 * 0.47$$

In summary, the new inland regulations should cut the probability of a large inland oil spill roughly in half. This will lower the risk of such an incident from once every 13 years to once every 26 years. The benefit of preventing such an event is \$100 million. The annual expected benefit, taking into the account the reduced probability, is over \$3.6 million.

#### *Risk of a Crude by Rail Spill*

Because the new inland regulations apply to railroads transporting oil, an additional benefit will be a reduction in the risk of spills by rail. This is not captured in the data analyzed above, as crude-by-rail has played a small part in the supply of California's oil historically. However, if market conditions change in the future, crude-by-rail could grow significantly. This section discusses that potential growth and the additional spill risk it brings, and thus the additional potential benefits of the proposed regulations in minimizing that risk.

Historically, crude-by-rail in California has been limited to a twice-a-week, 300-mile run from the San Ardo oil field to the Los Angeles area. There have been no significant spills associated with this. This train transports about 5 million barrels per year.

In recent years, crude-by-rail has been used to import oil into California from Canada, North Dakota, Wyoming, New Mexico, and several other production areas. This peaked in 2013 at just over 6 million barrels per year. There were plans to build crude-by-rail terminals to receive over 150 million barrels per year, but most of these were not built due to a combination of local opposition and market conditions. The only new rail terminals have been in the Bakersfield area. When the price of oil fell dramatically from around \$100/bbl to \$50/bbl

in the second half of 2014, transporting crude-by-rail to California became less attractive. Since then, crude-by-rail imports into the state have stayed below 2 million barrels per year.

For this analysis, we assume that 50 million barrels of crude could be transported each year by rail into California in the future, assuming that economic conditions change. This figure represents the likely rail terminal capacity in the Bakersfield area in the future and would represent approximately 9% of California's oil supply.

Based on an analysis of crude-by-rail nationwide in 2013, approximately 131 barrels (or 5,502 gallons) were spilled per million barrels transported. Thus, for the 50 million barrels potentially transported to California, about 275,000 gallons would be spilled. Since about 20% of the route lies within the state, about 55,000 of those gallons would be spilled in California. Assuming the same rate of reduction in spills as applied above for large spills (47%), about 26,000 of those gallons would not be spilled as a result of OSPR's program. Using the \$42/gallons cost estimate described above, this would imply a benefit of almost \$1.1 million per year.

### *Summary of Benefits*

The combined benefits of the regulations regarding contingency plans, drills and exercises, financial responsibility, and oil spill response organizations are considered jointly and summarized here:

- Expected annual benefit by reducing small and medium-sized spills: \$3 million
- Expected annual benefit by reducing large spills: \$3.6 million
- Expected annual benefit by reducing crude-by-rail spills: \$1.1 million

Total expected benefit for all regulations: \$7.7 million/year.

## **Page 3**

### **D. Alternatives to the Regulation**

- 2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:*

Estimated benefits are \$7.7 million/year. This is for all four related regulations.

Estimated costs for this regulation is \$2.66 million in the first year and \$617,093/year thereafter.

- 3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives:*

The costs of developing contingency plans are described in detail above and are estimated at \$2,661,973 for the initial year (already incurred during the emergency regulations) and approximately \$617,093/year annually across the affected industry. These costs will likely be

spread very thinly across millions of consumers, resulting in a very small increase in gasoline expenditures (e.g. 39 cents per vehicle per year).

The benefits are described above with respect to the all four regulations associated with oil spill preparedness. Across all four regulations, benefits, in terms of the cost of oil spills avoided or minimized, are estimated at \$7.7 million/year.

## **Fiscal Impact Statement**

### **Page 4**

#### **A.3. Annual savings**

The estimated \$7.7 million/year benefit from a reduction in oil spills refers to the economic benefit of reduced response costs, reduced environmental damages, and reduced third party injuries. None of that refers to fiscal savings by state or local governments.

In theory, all government response costs are reimbursed by the responsible party, resulting in no net costs. In practice, however, cost recovery is not 100%. Sometimes oil spills are caused by unknown sources, or sometimes the responsible party is not financially viable. In these cases, government agencies may end up incurring some of the response costs. OSPR estimates that their rate of cost recovery is approximately 90%. The remaining 10% goes unreimbursed and is borne by OSPR. Local governments would likely experience the same difficulties with cost recovery. To that extent, a reduction in spills will mean a reduction in unreimbursed response costs. OSPR's annual unreimbursed costs are about \$75,000/year. However, OSPR does not have data on local government response costs, whether reimbursed or not. It undoubtedly varies from year to year depending on spill activity. In general, local agency response costs are a small fraction of OSPR's. Assuming it was 10% of OSPR's, local agency unreimbursed costs would be \$7,500/year. If these declined by half (in keeping with Figures 2 and 3), local agencies would save \$3,750/year.

Local governments may realize savings in another way. In the aftermath of a spill, local governments are also allowed to make a legal claim for lost revenues. For example, if an oil spill results in the closure of a city park, and the city received revenues from users reserving the park or paying for parking spaces at the park, the city could make a claim for that lost revenue. In practice, such claims are rare and the local governments suffer the lost revenue. To the extent that spills are reduced, such losses will be reduced, which is a benefit to the local governments. OSPR does not have data on such claims and is not able to estimate the magnitude.

#### **A.6. Other**

The savings described above are expected annually. In summary, the annual savings to local government are at least \$3,750/year.

### **B.1. Fiscal Effect on State Government**

This regulation will be implemented using existing resources. Specifically, this regulation will be implemented by the California Department of Fish and Wildlife's Office of Spill Prevention and Response (OSPR). To do this, OSPR has added several new staff positions, which were funded through a fee on oil movement in California, authorized by SB 861 and implemented through a separate regulation, which became permanent on August 22, 2017. No additional funds are needed.

### **B.2. Savings in the current State Fiscal Year**

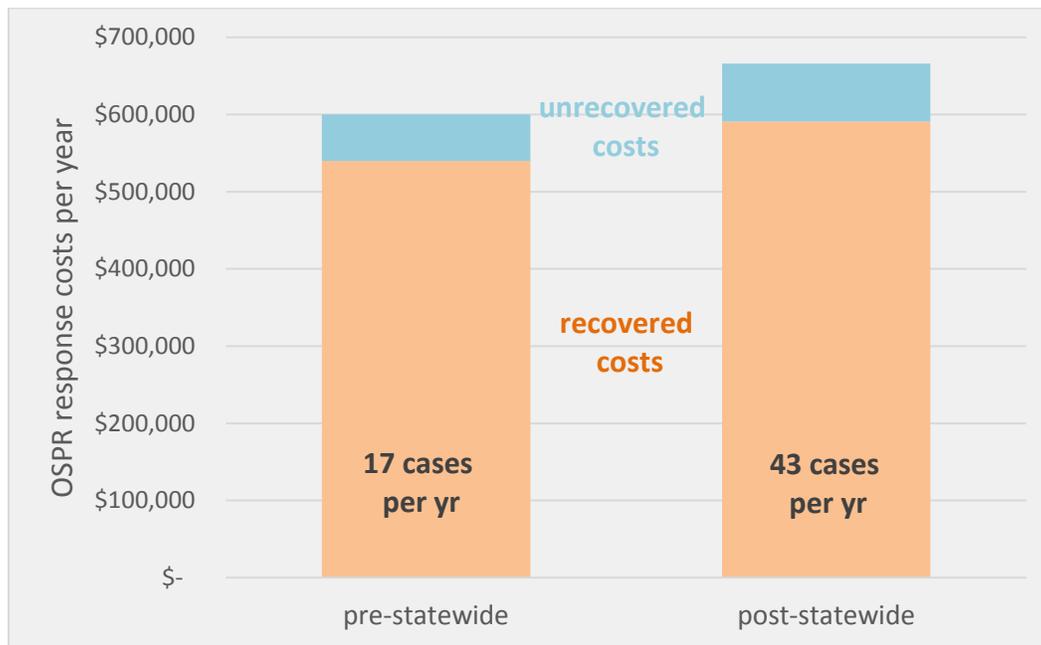
The estimated \$7.7 million/year benefit from a reduction in oil spills refers to the economic benefit of reduced response costs, reduced environmental damages, and reduced third party injuries. None of that refers to fiscal savings by state or local governments.

OSPR and other state government agencies may realize a fiscal benefit from a reduction in future oil spills (as illustrated in Figures 2 and 3 above). However, in OSPR's case, this will likely be offset by OSPR's increased responses to smaller inland spills which it had not previously responded to.

In theory, all government response costs are reimbursed by the responsible party, resulting in no net costs. In practice, however, cost recovery is not 100%. Sometimes oil spills are caused by unknown sources, or sometimes the responsible party is not financially viable. In these cases, government agencies may end up incurring some of the response costs. OSPR estimates that their rate of cost recovery is approximately 90%. The remaining 10% goes unreimbursed and is borne by OSPR. OSPR estimates that this amounts to about \$75,000/year (which is ideally offset by interest earned on the response trust fund). To the extent that inland spills, especially large ones, are reduced (see Figures 2 and 3), OSPR may see unreimbursed costs reduced.

However, under the emergency regulations OSPR is now responding to more spills. This is expected to continue. While these additional spills are smaller, and the response costs are much smaller than those for a large spill, this will add to unreimbursed response costs. That is to say, even though the total number of spills—especially large spills—is reduced, OSPR is responding to more of them than it had previously. Based on a review of OSPR cost recovery since the implementation of the emergency regulations, OSPR's unreimbursed cost recovery has remained at \$75,000/year. While the number of spills has declined significantly (Figures 2 and 3), OSPR is now responding to more small spills than previously. Before the emergency regulations, OSPR responded to and incurred response costs to 17 spills per year. After the implementation of the emergency regulations, that figure jumped to 43 spills per year. However, because most of the additional spills were small inland spills, total response costs to OSPR, and total unreimbursed response costs, did not change significantly (Figure 4).

**Figure 4: OSPR Cost Recovery Before and After Emergency Regulations**



Other state government agencies respond much less often than OSPR. Nevertheless, they would likely experience the same difficulties with cost recovery. To that extent, a reduction in larger spills, which they would be more likely to respond to, will mean a reduction in unreimbursed response costs.

OSPR's annual unreimbursed costs are about \$75,000/year. However, OSPR does not have data on other state agencies's response costs, whether reimbursed or not. It undoubtedly varies from year to year depending on spill activity. In general, other state agencies's response costs are a small fraction of OSPR's. Assuming they were 10% of OSPR's, other state agencies's unreimbursed costs would be \$7,500/year. If these declined by half (in keeping with Figures 2 and 3), other state agencies would save \$3,750/year.

OSPR is not aware of other state agencies making claims for lost revenue as described for local agencies under A.3., but such a situation is possible. A reduction in spills would make such losses in revenue less likely.

#### **B.4. Other**

The savings described above are expected annually. In summary, OSPR is expecting a decrease in unreimbursed response costs due to fewer spills, especially large spills, but these will largely be offset by an increase in the small spills that OSPR responds to. Based on an analysis of OSPR cost recovery before and after the implementation of the emergency regulations (Figure 4), OSPR expects to break even.

Other state agencies may experience a savings via a decrease in unreimbursed response costs of about \$3,750/year.

END