Katherine Douglas Supervisor Hartmann Ex Parte # 3

LATE DIST

From: Gina Fischer
Sent: Tuesday, November 4, 2025 11:33 AM
To: Rachel Van Mullem; Joan Hartmann
Cc: sbcob
Subject: RE: Attorney/Client Privilege
Attachments: doc03013920251104113019.pdf

Hi Rachel and Clerk:

Please see attached for a copy of Supervisor Hartmann's research on this item.

From: Rachel Van Mullem <Rvanmull@countyofsb.org>
Sent: Tuesday, November 4, 2025 10:46 AM
To: Joan Hartmann <jHartmann@countyofsb.org>
Cc: Gina Fischer <gFischer@countyofsb.org>
Subject: Attorney/Client Privilege

Attorney/Client Privilege

Supervisor Hartmann,

In your ex parte, you mentioned research on state and federal funds for oil spill response. Are there any specific documents that you reviewed that should be made available online or in the room before public comment?

Thanks,

Rachel

Rachel Van Mullem
County Counsel
Santa Barbara County Counsel
105 East Anapamu Street, Room 201
Santa Barbara, California 93101
(805) 722-4740

one COUNTY one FUTURE

OSPR Funding

OSPR has two main funds: The Oil Spill Prevention and Administration Fund and the Oil Spill Response Trust Fund.

Oil Spill Prevention and Administration Fund (OSPAF)

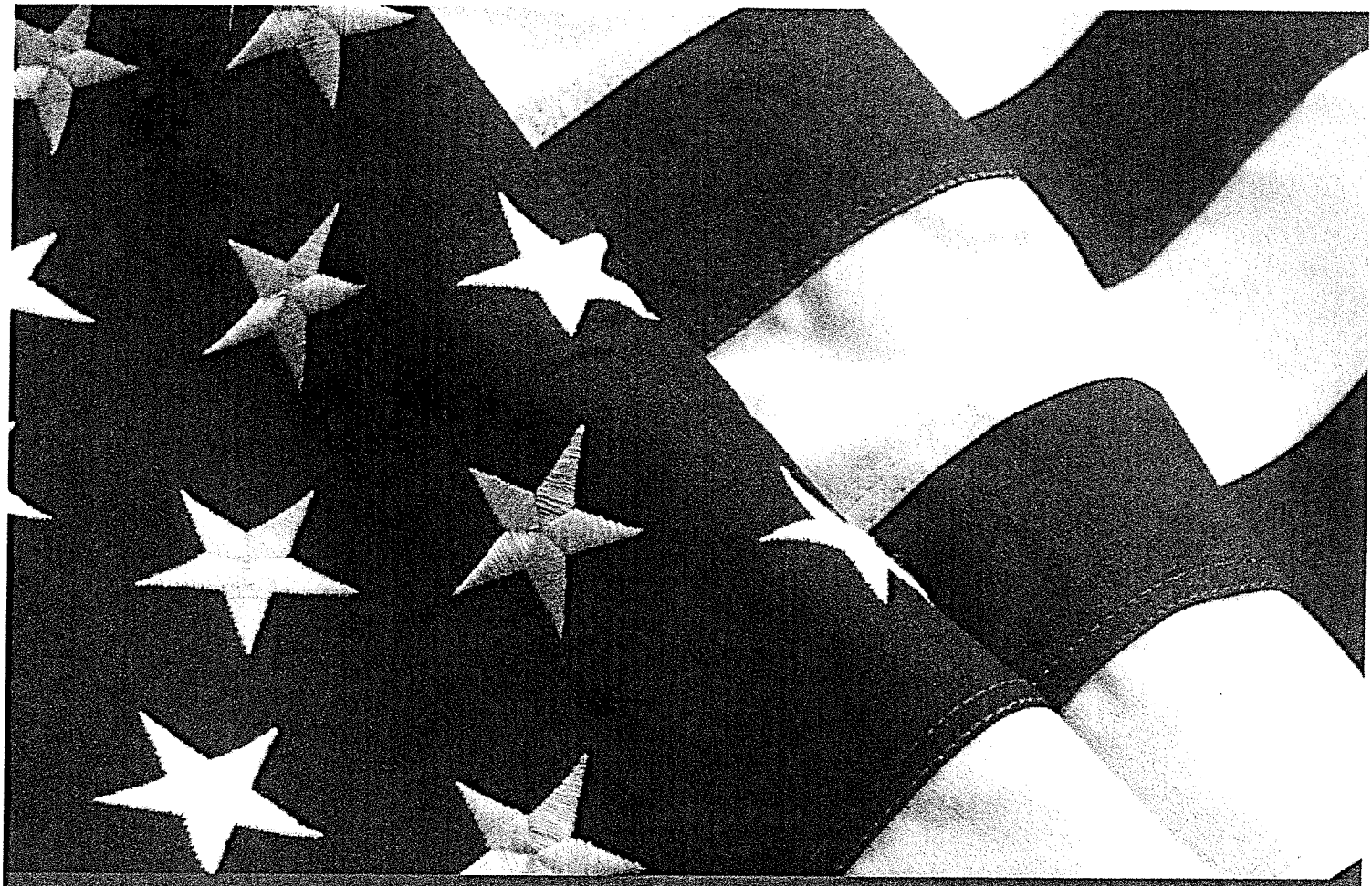
The OSPAF is funded by a fee of 9.1 cents per barrel (42 gallons) on crude oil and petroleum products received at marine terminals and refineries in the state. The fee collection at refineries began with the expansion of the OSPR program in 2014, and includes oil produced within the state, or imported into the state and renewable fuels. The OSPAF is also supported by a fee on non-tank vessels (vessels of 300 gross tons or more that do not carry oil as cargo). This Fund supports the day-to-day operations of the OSPR program, primarily spill prevention, preparedness, and readiness activities, as well as the Oiled Wildlife Care Network, a program housed at the University of California at Davis for recovering and rehabilitating oiled wildlife. The OSPAF also supports oil spill prevention programs within the California State Lands Commission.

The Oil Spill Response Trust Fund (OSRTF)

The OSRTF is used by OSPR to fund response activities in the event of an oil spill that impacts state waters, or in the event of an imminent threat of an oil spill. By law, the responsible party is liable for response costs and other spill-related expenditures from the Fund.(see Cost Recovery and Financial Responsibility below). In 1991, this Fund reserve was created through the collection of a 25-cents-per-barrel fee on crude oil and petroleum products received at California marine terminals from a point of origin outside of California. It currently has a cap of $55 million. An additional $55 million in the form of financial security is available should there be an extremely significant spill.

Cost Recovery – OSPR is required to seek reimbursement of all of its costs incurred responding to spill incidents. This includes response, containment, cleanup, and natural resource damage assessment activities. There are several methods of cost recovery that include: 1) including costs with legal actions; 2) submitting costs directly to the responsible party; and 3) submitting a claim to the Federal Oil Spill Liability Trust Fund if no responsible party exists or is unable to pay (see https://www.uscg.mil/Mariners/National-Pollution-Funds-Center/About_NPFC/OSLTF/).

Financial Responsibility – OSPR ensures that vessels and facility owner/operators have adequate financial resources to pay cleanup and damage costs arising from an oil spill. To do this, OSPR requires they submit an application for a Certificate of Financial Responsibility (COFR), showing evidence of adequate coverage.



Oil Pollution Act Liability Limits in 2021

Report to Congress
March 8, 2023

U.S. Coast Guard

Foreword

March 8, 2023

I am pleased to present the following report, "Oil Pollution Act Liability Limits in 2021," as prepared by the U.S. Coast Guard.

The Coast Guard and Maritime Transportation Act of 2006 directs the submission of an analysis of the extent to which oil discharges from vessels and non-vessel sources have, or are likely to result in, removal costs and damages for which no defense to liability exists and that exceed the established liability limits.

Pursuant to congressional requirements, this report is being provided to the following Members of Congress:

The Honorable Maria Cantwell
Chair, Senate Committee on Commerce, Science, and Transportation

The Honorable Ted Cruz
Ranking Member, Senate Committee on Commerce, Science, and Transportation

The Honorable Sam Graves
Chairman, House Committee on Transportation and Infrastructure

The Honorable Rick Larsen
Ranking Member, House Committee on Transportation and Infrastructure.

I am pleased to answer any further questions you may have, or your staff may contact my Senate Liaison Office at (202) 224-2913 or House Liaison Office at (202) 225-4775.

Sincerely,

Linda L. Fagan
Admiral, U.S. Coast Guard
Commandant

Oil Pollution Act Liability Limits in 2021

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I. Legislative Language

This report responds to the language set forth in section 603(c) of the *Coast Guard and Maritime Transportation Act of 2006*, (Pub. L. 109-241), as amended by section 601(b) of the *Coast Guard Authorization Act of 2016* (Pub. L. 114-120), which states:

SEC. 603. LIMITS ON LIABILITY.

(c) REPORT.—

(1) Initial Report. – Not later than 45 days after the date of enactment of this Act, the Secretary of the department in which the Coast Guard is operating shall submit a report on liability limits described in paragraph (2) to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

(2) Contents. – The report shall include, at a minimum, the following:

(A) An analysis of the extent to which oil discharges from vessels and nonvessel sources have or are likely to result in removal costs and damages (as defined in section 1001 of the Oil Pollution Act of 1990 (33 U.S.C. § 2701)) for which no defense to liability exists under section 1003 of such Act and that exceed the liability limits established in section 1004 of such Act, as amended by this section.

(B) An analysis of the impacts that claims against the Oil Spill Liability Trust Fund for amounts exceeding such liability limits will have on the Fund.

(C) Based on analyses under this paragraph and taking into account other factors impacting the Fund, recommendations on whether the liability limits need to be adjusted in order to prevent the principal of the Fund from declining to levels that are likely to be insufficient to cover expected claims.

(3) Annual Updates. – The Secretary shall provide an update of the report to the Committees referred to in paragraph (1) not later than January 30 of the year following each year in which occurs an oil discharge from a vessel or nonvessel source that results or is likely to result in removal costs and damages (as those terms are defined in section 1001 of the Oil Pollution Act of 1990 (33 U.S.C. § 2701)) that exceed liability limits established under section 1004 of the Oil Pollution Act of 1990 (33 U.S.C. § 2704).

II. Background

The *Oil Pollution Act of 1990* (OPA) was enacted in the wake of the T/V EXXON VALDEZ oil spill to promote measures for the prevention of oil spills on navigable waters, the adjoining shorelines, and the exclusive economic zone. It provided a more robust federal response to spills, increased the liability of polluters (Responsible Parties (RPs)) for such spills, and provided for compensation to those that incurred removal costs and damages as a result of these spills.

The OPA provides that RPs are strictly liable for removal costs and damages resulting from a discharge up to statutory liability limits. In general, RPs are liable without limit when the discharge results from gross negligence or willful misconduct or a violation of operation, safety, or construction regulations (OPA 1004 (33 U.S.C. § 2704)).

In 1986, Congress established within the Treasury the Oil Spill Liability Trust Fund (the Fund);[1] however, it was not until after the 1989 *Exxon Valdez* oil spill that under the OPA, Congress transferred monies into the Fund and authorized its use. The National Pollution Funds Center (NPFC) was created and delegated authority by the Commandant, via re-delegations of authority vested in the Secretary of the department in which the Coast Guard was operating at the time, to manage the Fund. The Fund plays a critical role in the OPA regime. It pays federal costs for oil removal when a discharge occurs and reimburses third-party claims for uncompensated removal costs and damages when a RP does not pay or is not identified. The types of damages compensable under the OPA include damages to natural resources, loss of subsistence use of natural resources, damages to real or personal property, loss of profits or earning capacity, loss of government revenues, and increased cost of public services. In addition, the Fund is an important source of annual appropriations to various federal agencies responsible for administering and enforcing a wide range of oil pollution prevention and response programs addressed in the OPA (OPA 1012 (33 U.S.C. § 2712)).

Specific to this report, the Fund is available, as provided by the OPA, to pay claims for removal costs and damages resulting from an oil discharge that exceeds the RP's liability limits. This includes payment of claims from RPs who pay or incur removal costs or damages in excess of their liability limits and can establish their entitlement to the limits under the circumstances of the discharge (OPA 1008 (33 U.S.C. § 2708)).

Claims to the Fund are payable only from the Fund, and payments are limited by the available balance. For any single discharge incident, the Fund is authorized to pay no more than $1 billion, of which no more than $500 million may be paid for natural resource damages (OPA 9001(c) (26 U.S.C. § 9509)).

Pursuant to section 603 of the *Coast Guard and Maritime Transportation Act of 2006*, liability limits for vessel discharges were substantially increased. In that same section, Congress requested this analysis and report.

[1] Omnibus Budget Reconciliation Act of 1986 (P.L. 99-509)

III. Analysis of Discharges

This section provides an analysis of the extent to which oil discharges from non-vessel and vessel sources have resulted, or are likely to result, in removal costs and damages, as defined in the OPA, that exceed liability limits established in the OPA, as amended by the *Coast Guard and Maritime Transportation Act of 2006.*

A. Non-vessel Sources

When the liability limits under the OPA apply, RPs for an offshore facility will be liable for all removal costs plus up to $137,659,500 for damages with respect to each incident. This limit of liability was adjusted by the U.S. Department of the Interior's Bureau of Ocean Energy Management on January 18, 2018, to reflect inflation occurring since the previous adjustment in 2014.[2] The incident involving the DEEPWATER HORIZON drilling rig and its Macondo Prospect well, (DEEPWATER HORIZON incident) is the only incident to have resulted in damages known to exceed the statutory liability limit for an offshore facility.[3] In response to this incident, on May 12, 2010, the Administration proposed raising the limitation of liability for all RPs, including those responsible for offshore facilities[4]. BP estimated that the cost of the incident totaled $65 billion. As the background data for all offshore incidents since the enactment of the OPA show, the DEEPWATER HORIZON discharge is a catastrophic incident not typical of historical offshore facility incidents. The Coast Guard and the Department of the Interior (DOI) are taking a closer look at the oil spill liability limits for offshore facilities in order to provide a more in-depth analysis to Congress in a future report. DOI supports making adjustments to the liability limits, at a minimum adjusting for inflation, and will work with the Coast Guard to further examine the issue and make a recommendation moving forward.

With respect to offshore facility incidents (other than the DEEPWATER HORIZON and Taylor Energy incidents), the best available data indicate there have been 60 incidents since the enactment of the OPA that have resulted in removal costs and damages (6 Mobile Offshore Drilling Units and 54 Offshore Platforms).[5] Figure 1 shows the frequency of these incidents by year and facility type.

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[2] *See* 83 Fed. Reg. 2540 (January 18, 2018). The OPA (33 U.S.C. § 2704(d)(4)) requires that the OPA limits of liability be adjusted "not less than every 3 years... to reflect significant increases in the Consumer Price Index."

[3] In addition to the Deepwater Horizon incident, in 2004 an oil leak from a Taylor Energy oil platform commenced and the response to those leaks is ongoing. The RP has indicated that it and its insurers have spent over $485 million for the incident. As of May 1, 2021, the data snapshot date for this report, the Fund has spent $70.85 million. There is no limit of liability under OPA for removal costs when responding to discharges or threats of discharge from offshore facilities. However, it is possible that in the future, damages, particularly natural resource damages, could exceed the limit of liability amount for this incident.

[4] See 33 U.S.C §2701(32)(C).

[5] These numbers do not include the DEEPWATER HORIZON incident nor the Taylor Energy incident, as these incidents may exceed OPA liability limits.

Figure 1: Number of Offshore Facility Incidents by Year and Facility Type (Excludes 2010 Deepwater Horizon and Taylor Energy Oil Spills)

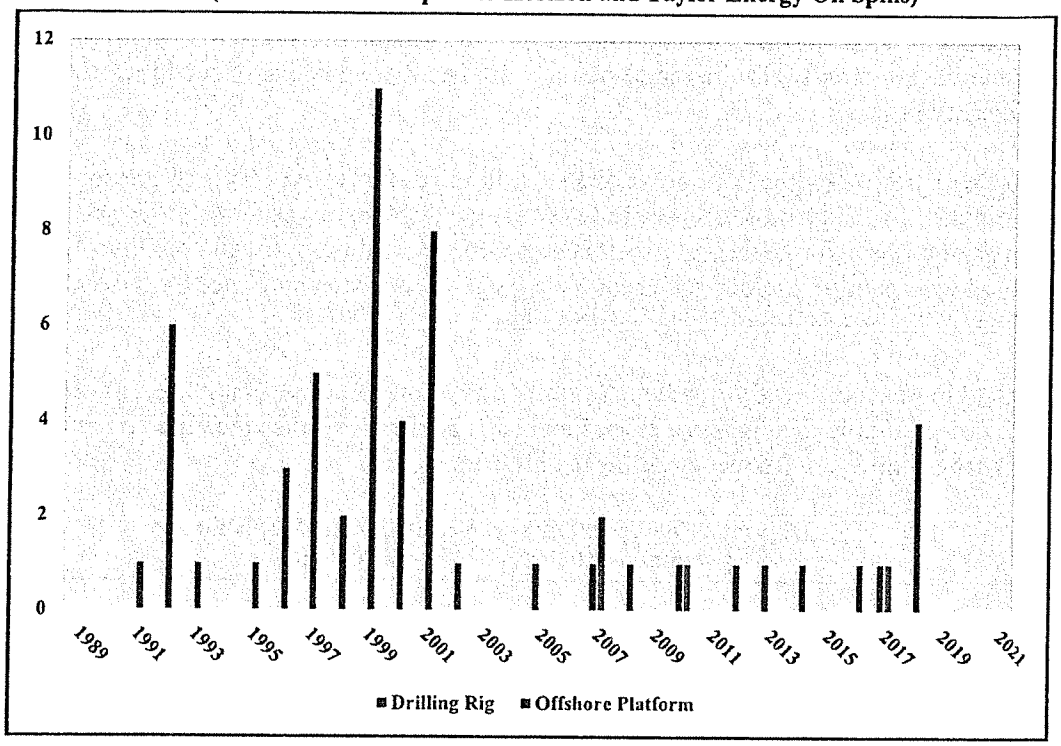
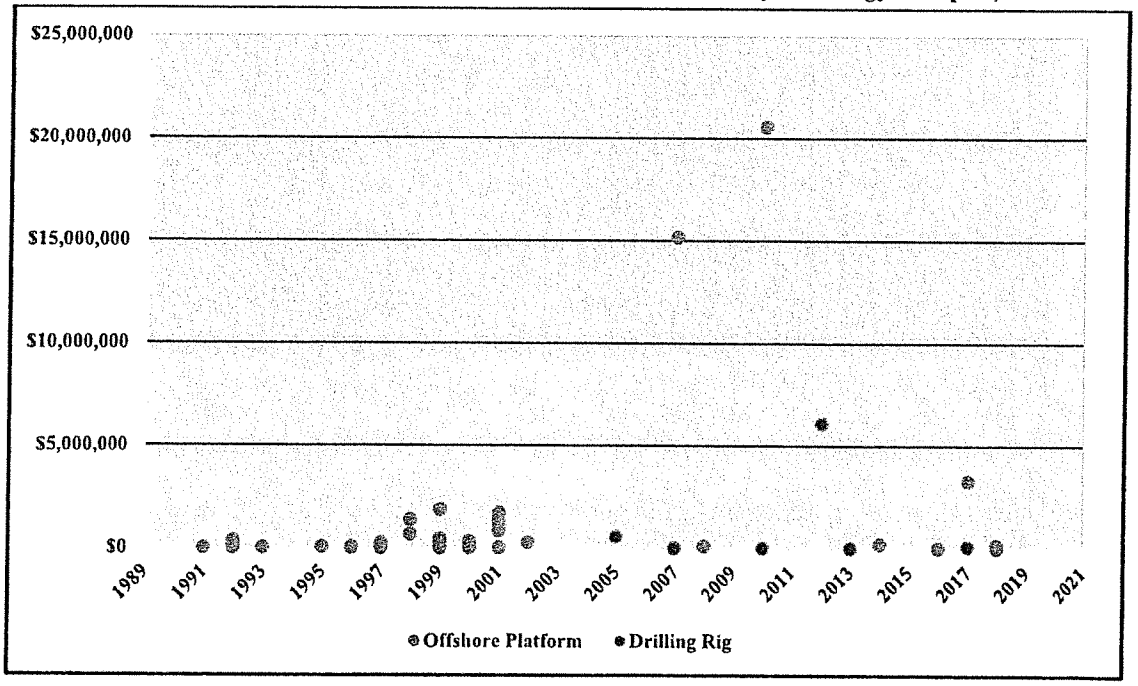


Figure 2 shows the total incident cost for each of these incidents. As depicted, the highest cost incident, at approximately $20.6 million (in 2021 dollars), does not meet the statutory limit of liability of all removal costs (plus $137,659,500 for damages).

Figure 2: Total Incident Cost of Offshore Facility Incidents by Facility Type (2021 Dollars / Excludes Deepwater Horizon and Taylor Energy Oil Spills)



For incidents involving discharges from onshore facilities, the OPA limit of liability is $672,514,900 per incident, inclusive of both removal costs and damages.[6] The 2010 Enbridge Energy Partners Lakehead Line 6B pipeline oil spill in Michigan is the sole onshore facility incident that has reportedly resulted in removal costs and damages that exceed the onshore facility liability limit.

Enbridge Energy Partners reported costs of $1.2 billion resulting from its pipeline spill. As the background data for all onshore facility incidents since the enactment of the OPA show, the Enbridge Energy Partners Lakehead Line 6B discharge is a catastrophic incident not typical of historical onshore facility incidents. There have been no other onshore facility incidents that approach the $672,514,900 limit under existing law.

With respect to onshore facility incidents (other than the incident involving the Enbridge pipeline), best available data indicate there have been 5,312 incidents since the enactment of the OPA. Figure 3 shows the frequency of these incidents by year.

Figure 3: Number of Onshore Facility Incidents by Year
(Excludes 2010 Enbridge Pipeline Oil Spill)

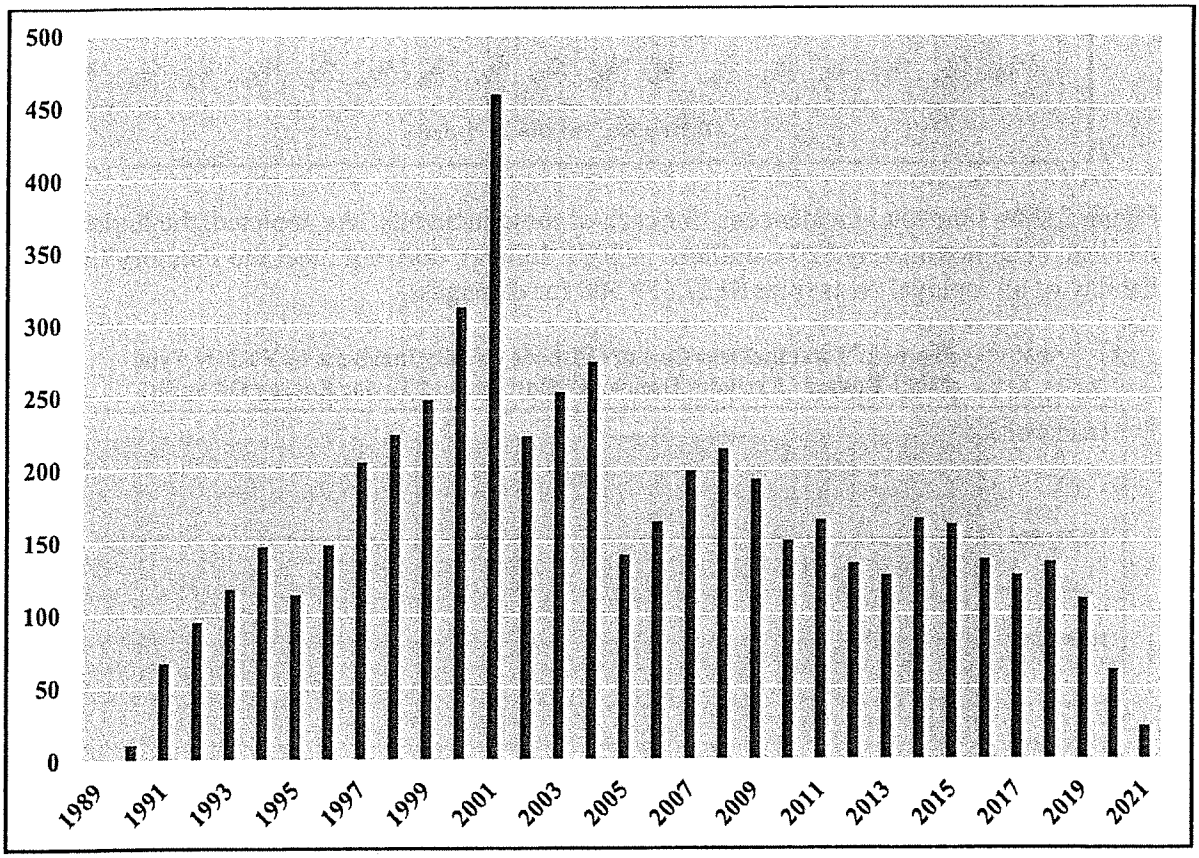


Figure 4 shows the total incident cost of the five most expensive onshore facility incidents per year. As depicted, the highest cost incident, at approximately $45.7 million (in 2021 dollars), does not meet the statutory $672,514,900 limit of liability.

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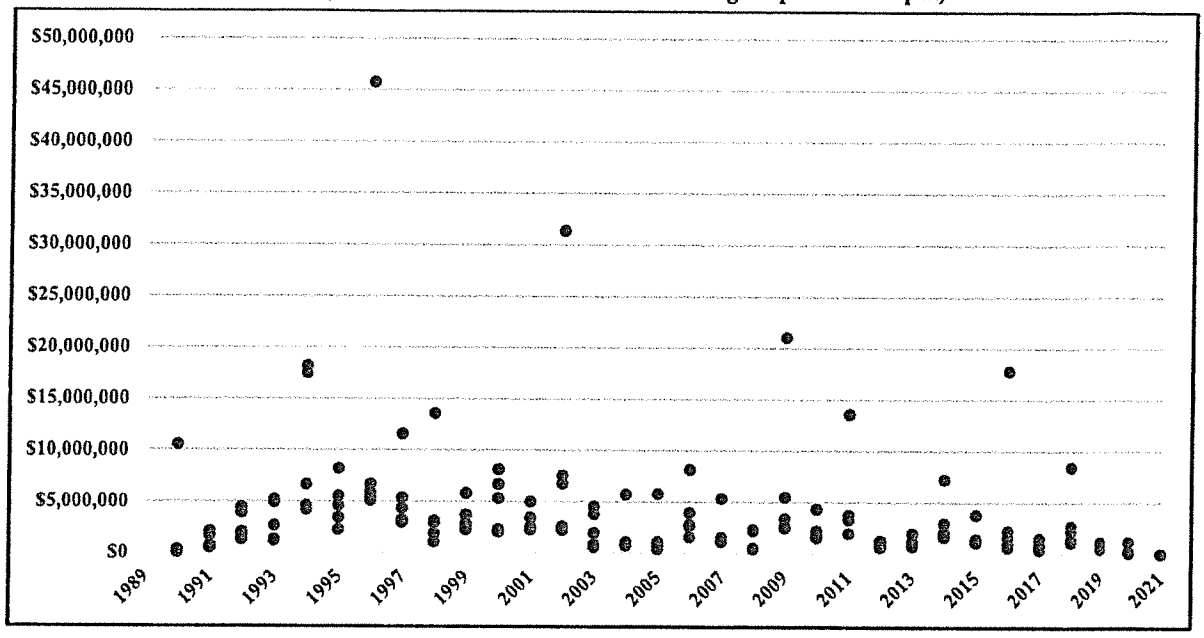
[6] 33 U.S.C. § 2704 (a)(4) and 33 C.F.R. § 138.230. The onshore facility limit of liability is subject to adjustment by regulatory action to reflect significant increases in the Consumer Price Index under 33 U.S.C. § 2704(d)(4) and may also be adjusted for risk under 33 U.S.C. § 2704(d)(1).

Figure 4: Total Incident Cost of the Five Most Expensive Onshore Facility Incidents per Year (2021 Dollars / Excludes 2010 Enbridge Pipeline Oil Spill)



B. Vessel Sources

After being adjusted for inflation, the OPA provides the following liability limits for vessels, inclusive of both removal costs and damages:[7]

(1) For a single-hull tank vessel greater than 3,000 gross tons, the greater of $3,700 per gross ton or $27,422,200.

(2) For a tank vessel greater than 3,000 gross tons, other than a single-hull tank vessel, the greater of $2,300 per gross ton or $19,943,400.

(3) For a single-hull vessel less than or equal to 3,000 gross tons, the greater of $3,700 per gross ton or $7,478,800.

(4) For a tank vessel less than or equal to 3,000 gross tons, other than a single-hull tank vessel, the greater of $2,300 per gross ton or $4,985,900.

(5) For any other vessel, the greater of $1,200 per gross ton or $997,000.

The best available data indicate 89 oil discharges from vessels since the enactment of the OPA have resulted in removal costs and damages that exceed the amended liability limits. The data have been updated to incorporate new incidents, and reflect revised estimates of costs and damages associated with previously reported incidents.[8,9] Discharge incidents are listed by vessel type in Attachment A and by incident date in Attachment B.

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[7] 33 C.F.R. § 138.230.

[8] References throughout this report to data for the year 2021 are partial year data ending on May 1, 2021.

[9] We note that, under 46 U.S.C. § 3703a, it is illegal to operate "single hull" tank vessels in U.S. waters, with the exception of those vessels described under 46 U.S.C. 3703a(b)(4), as of January 1, 2015. The OPA, however, still specifies limits of liability for these vessels. Therefore, we continue to discuss the single hull tank vessel limits of liability in this report.

Figure 5 depicts the number of such discharges per year. The elevated total for 1999 is the result of a hurricane in American Samoa, which resulted in oil discharges from eight damaged fishing vessels. The figure illustrates the variance in numbers of incidents from year to year.

Figure 5: Number of Incidents Exceeding Limits of Liability

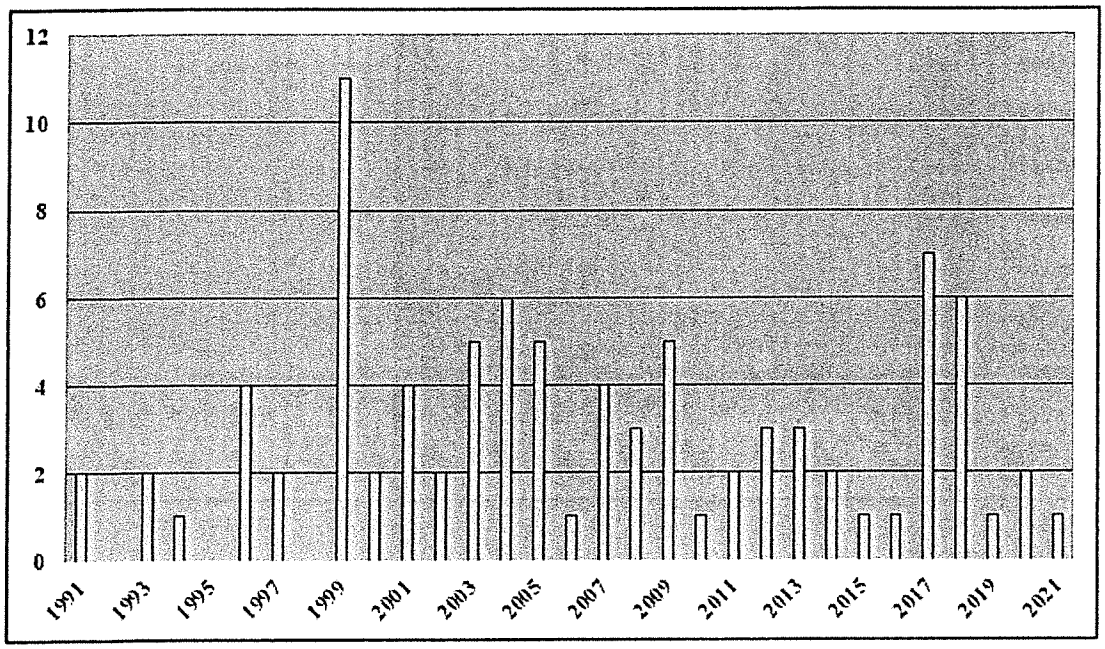
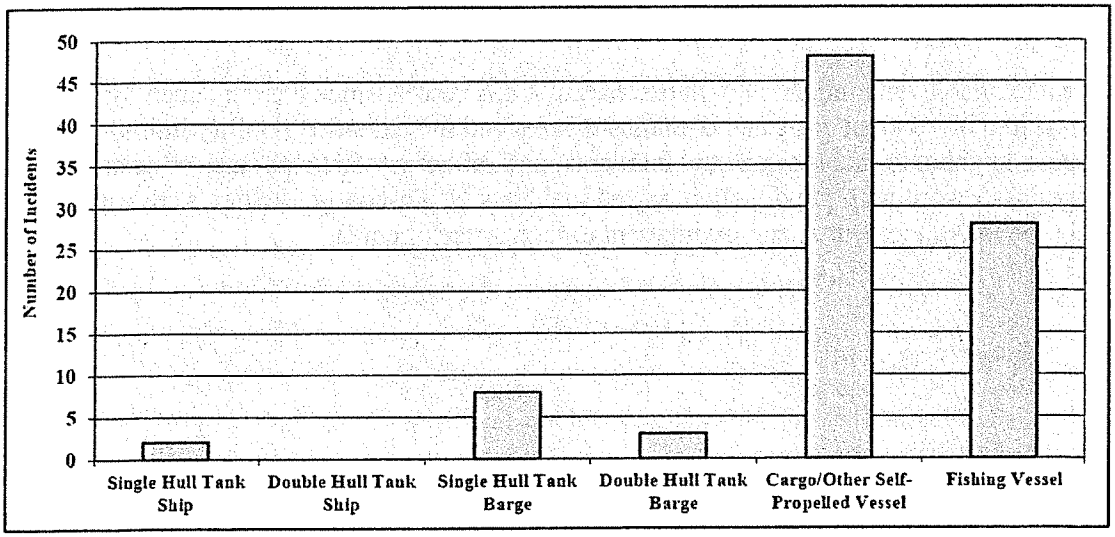


Figure 6 shows a breakdown of these 89 incidents by vessel type. Fishing vessels account for 31.5 percent of the historical incidents that result in damages in excess of the liability limits, while cargo and other self-propelled non-tank vessels represent 54.0 percent of the incidents. Single hull and double hull tank barges represent 9.0 percent and 3.4 percent, respectively. Single hull tank ships account for only 2.3 percent of such discharges.[10] There are no double hull tank ship incidents among the 89 incidents.

Figure 6: Number of Incidents Exceeding Limits of Liability by Vessel Type

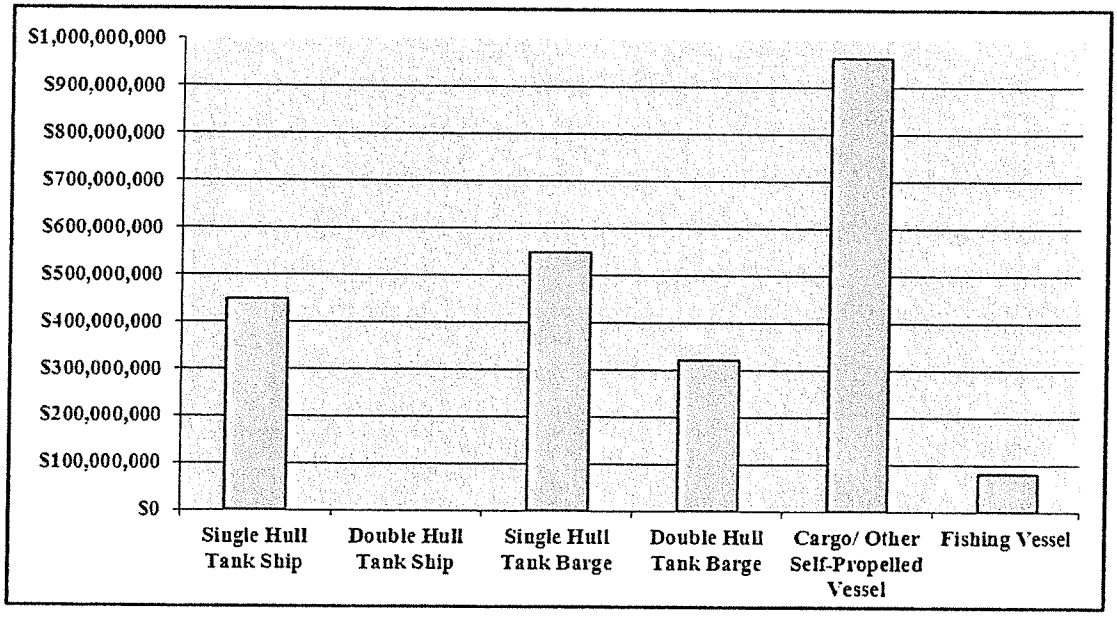


[10] Percentages do not add up to 100% due to rounding.

Figure 7 shows the total removal costs and damages from these incidents by vessel type. Total costs in excess of liability limits for cargo/other self-propelled vessel discharges have been the highest. Total costs for single hull tank ship and tank barge discharges that exceed liability limits have also been significant. Per discharge costs from single hull tank ship incidents are the highest (approximately $224.5 million) in light of the quantities of oil these vessels carry. Per discharge costs for all tank barges are also substantial (approximately $79.0 million). Larger cargo vessels also carry enough fuel to result in costly discharges (approximately $20.1 million per incident). The small size and limited quantities of oil characteristic of most fishing vessel incidents generally accounts for the lower total costs of such discharges (approximately $2.9 million), shown here and in more detail in Attachment A.

Total removal costs and damages for these discharges since enactment of the OPA is approximately $2.4 billion.

Figure 7: Total Incident Costs by Vessel Type



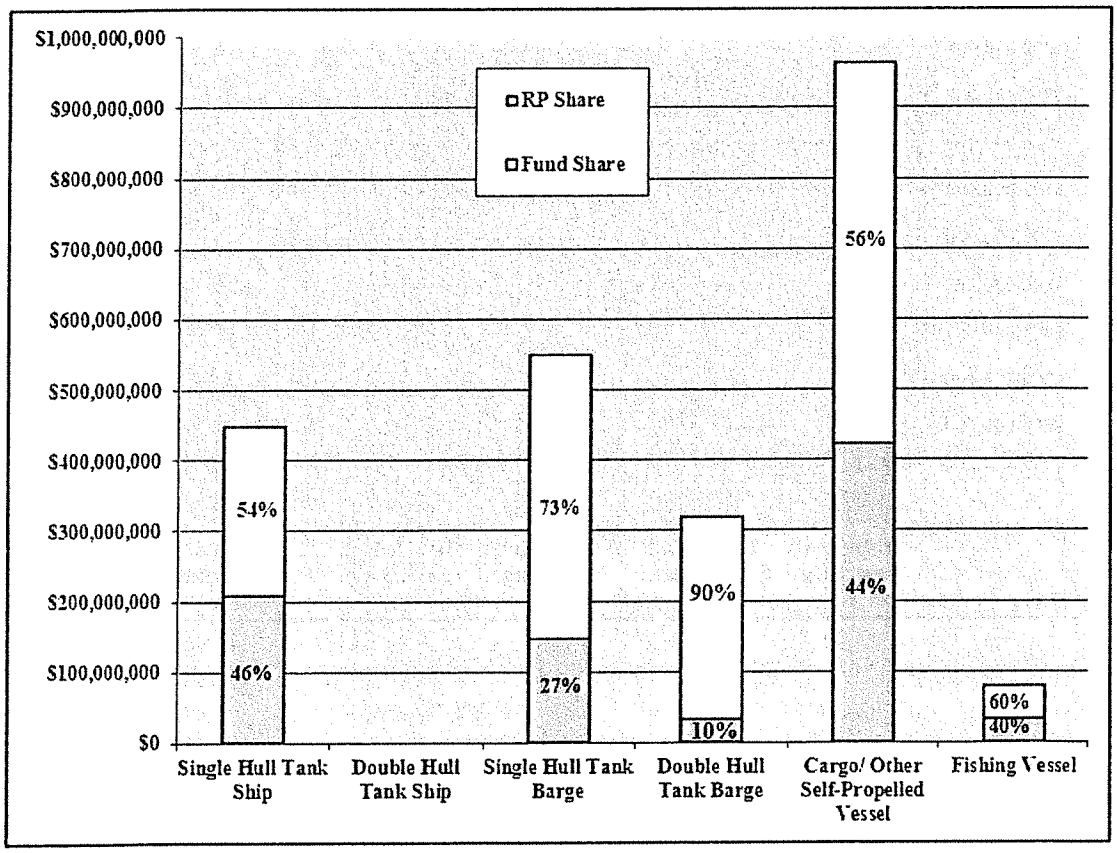
IV. Impacts on the Fund

This section provides an analysis of the impacts on the Fund resulting from claims against the Fund for vessel incidents in which costs and damages exceed liability limits.[11]

A. Historical Impact

As indicated in Figure 8, the Fund's financial obligation in cases where removal costs and damages exceed liability limits (listed in Attachment A) is substantial despite liability limit amendments. The top portion of the bar for each vessel type represents the Fund's share of the risk (in excess of applicable liability limit). The bottom portion of the bar for each vessel type represents RP risk (RP liability limit based on gross tonnage or minimum limit as applicable for each discharge).

Figure 8: RP vs. Fund Share of Total Incident Costs under Current Limits by Vessel Type



Of the approximately $2.4 billion in estimated removal costs and damages from these incidents over the last 30 years, the Fund's share of costs totals approximately $1.5 billion (64 percent). This amount represents a maximum potential impact on Fund risk resulting solely from the application of the liability limit levels. While the rate of such incidents is difficult to predict and

[11] As discussed above, historically, with the exception of the *DEEPWATER HORIZON* incident and *ENBRIDGE* data points, only vessel incidents had total incident costs that exceeded limits of liability. Therefore, facilities are not included in the discussion of RP and Fund risk cost sharing.

may vary widely from year-to-year (as indicated by Figure 5), the risk to the Fund can be expressed broadly as an annual cost of approximately $50.6 million (total costs of $1.5 billion over 30 years) in excess of amended limits in 2021 dollars.

B. Impact from Claims

Over the past 30 years, the NPFC paid over $1 billion to claimants in connection with the OPA incidents. Of this total, $462.0 million (or 45 percent) was paid in respect to circumstances where removal costs and damages exceeded the applicable liability limit amount (Figure 9). These "limit of liability" payments include payments made directly to the RPs for removal costs and damages they paid or incurred in excess of liability limits, as well as third-party claims paid by the Fund because the RP had spent up to its limit of liability.

Figure 10 shows that of the $65.0 million in claims under adjudication as of May 1, 2021, $59.9 million (or 92 percent of the total dollars) are pending claims by RPs who have incurred incident costs exceeding their liability limits or claims by third parties where incident costs exceeded the liability limits.

Figure 9: Total Claims Paid

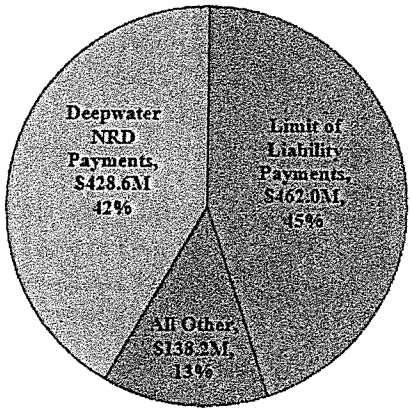
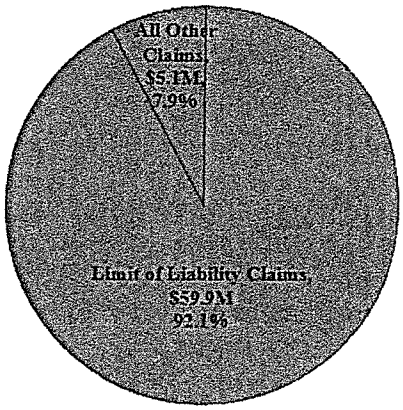


Figure 10: Total Pending Claims

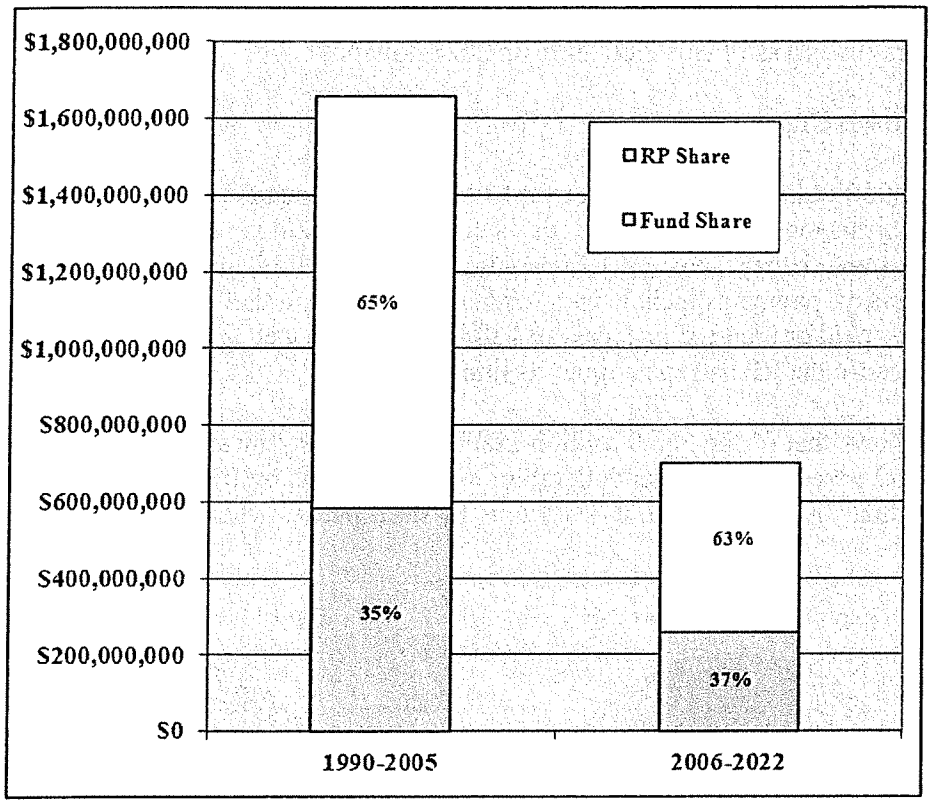


C. Recent Trends

The potential impact to the Fund resulting from payments to RPs, third parties for claims, and response costs where vessel incident costs exceeded the RPs' limits of liability varies substantially from year to year, but has averaged approximately $50.6 million per year over the past 30 years. While the potential impact is significant, it is also useful to note that the available data show a continued trend for disproportionate Fund risk as compared to what the RP pays toward the cost of the incident.

As illustrated in Figure 11 and Attachment B, the Fund share of the risk for discharges that result in estimated removal costs and claims that exceed liability limits has consistently been in excess of 60 percent of the total incident costs.

Figure 11: RP vs. Fund Share of Total Incident Costs



The nine cent per barrel tax on oil that is an important revenue source for the Fund was reinstated by the Consolidated Appropriations Act, 2021 (Public Law 116-260), which amended 26 U.S.C. 4611 (f) and extended the Fund tax until December 31, 2025. Based on current revenue and expenditure projections, the NPFC forecasts that the Fund should maintain liquidity beyond 2027 (see Figure 12).

Changing energy trends may also impact costs to the Fund. Though the Enbridge Energy Partners Lakehead Line 6B pipeline incident is an outlier within the historic data set, the oil spilled, diluted bitumen, is known to sink in water, raising response costs. Similarly, challenges of responding to an Arctic oil spill, from either a vessel or non-vessel source, are also likely to incur higher costs to the Fund. Costs associated with preparedness, response mobilization, natural resource assessment, and recovery will be higher in extreme cold climates.

V. Findings with Respect to Further Liability Limit Adjustments

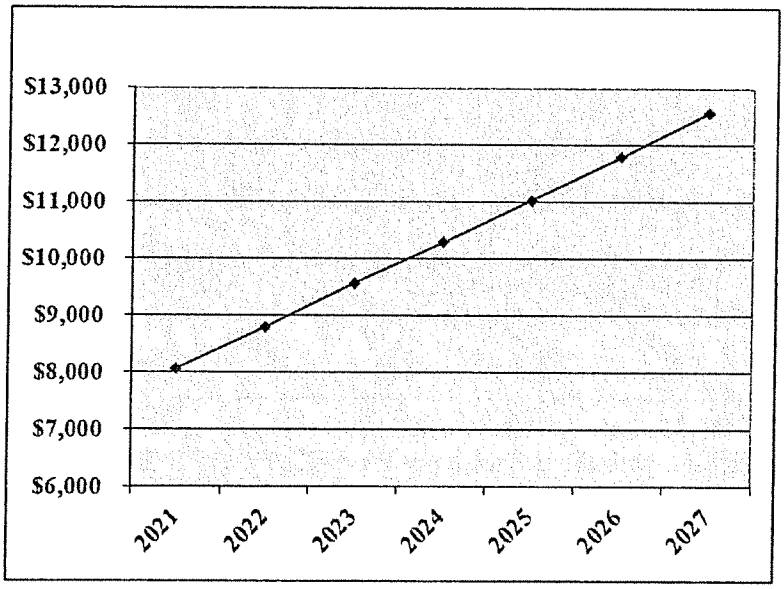
This section discusses findings, based on historical trends and analyses, and taking into account other factors impacting the Fund, on whether the liability limits need to be adjusted in order to prevent the principal of the Fund from declining to levels that are likely to be insufficient to cover expected claims.

A. Future Year Fund Outlook

The NPFC anticipates the Fund will be able to cover its projected non-catastrophic liabilities, including claims, without further increases to liability limits.

Figure 12 projects the end of year balance of the Fund through 2027 based on estimated revenues and expenditures (no adjustment for inflation):

Figure 12: Fund Forecast Balance (Millions of Dollars)



Notably, several classes of Fund expenditures are independent of revisions to the limits of liability, such as federal removal costs and annual appropriations. The Fund provides resources to the federal government to respond to oil discharges (Federal removal costs) and to compensate claimants for their removal costs and damages when a RP cannot be identified, does not respond, or does not compensate claimants. See OPA 1012(a)(1), (4) (33 U.S.C. § 2712(a)(1), (4)). The Fund also pays when recourse against RPs is not available, such as when a RP declares bankruptcy or cannot be identified.

Fund revenues are generally independent of revisions to the limits of liability. The primary source of revenue has been an excise tax on oil. Revenue also includes interest earned on Treasury Securities held by the Fund, successful cost recoveries, and fines and penalties. The Fund Forecast follows Office of Management and Budget guidance and uses the Treasury's

Office of Tax Analysis excise tax projections and the semi-annual Economic Assumptions for Trust Fund interest rates. Cost recovery and fines/penalty revenue follow historical data patterns and are much less predictable over time.

Congress annually appropriates resources from the Fund to various agencies responsible for administering and enforcing the OPA and provisions of the *Federal Water Pollution Control Act* (*See* OPA 1012(a)(5) (33 U.S.C. § 2712(a)(5))). Administrative and enforcement costs that are not allocable to a specific oil discharge are not recoverable from liable RPs.

Figure 13 shows total Fund expenses in recent years for agency appropriations, federal removal costs, and claims for removal costs and damages, of which claims resulting from incident-related costs exceeding the limits of liability is a subset.

Figure 13: Total Fund Expenditures (Thousands of Dollars)

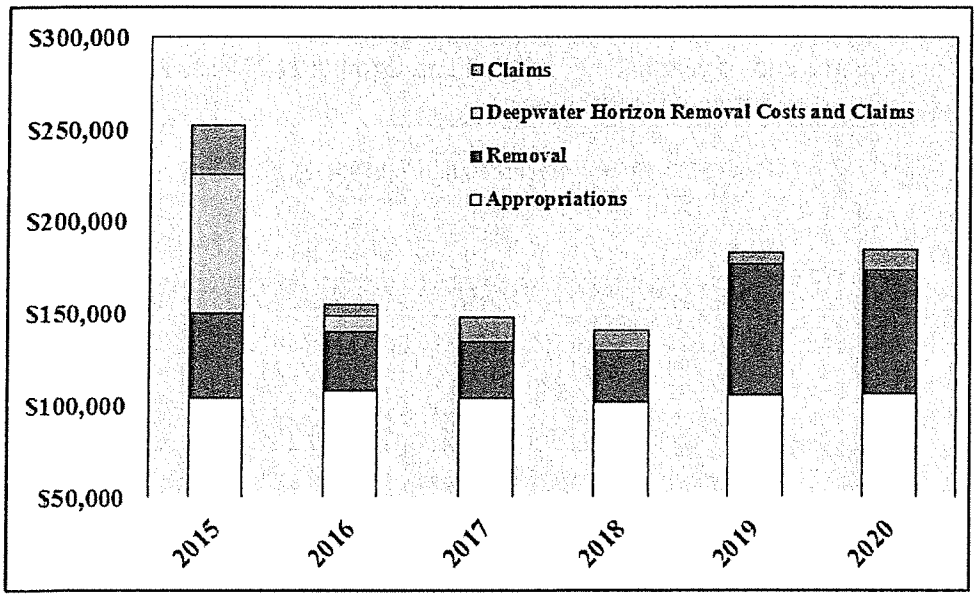


Figure 13 illustrates that, with the exception of the DEEPWATER HORIZON incident costs in 2015 through 2020, the federal removal costs and claims payments for which RPs may be liable represented only a portion of the annual expenditures from the Fund. This graph displays all costs for vessel or facility discharges.

The DEEPWATER HORIZON incident demonstrated that the $137,659,500 limit on damages for a catastrophic offshore facility incident could be inadequate. With the exception of the DEEPWATER HORIZON incident, roughly half of the removal costs in Figure 13 are for onshore and offshore facility discharges. Historical data indicate that the $672,514,900 liability limit for onshore facilities is adequate for non-catastrophic spills.

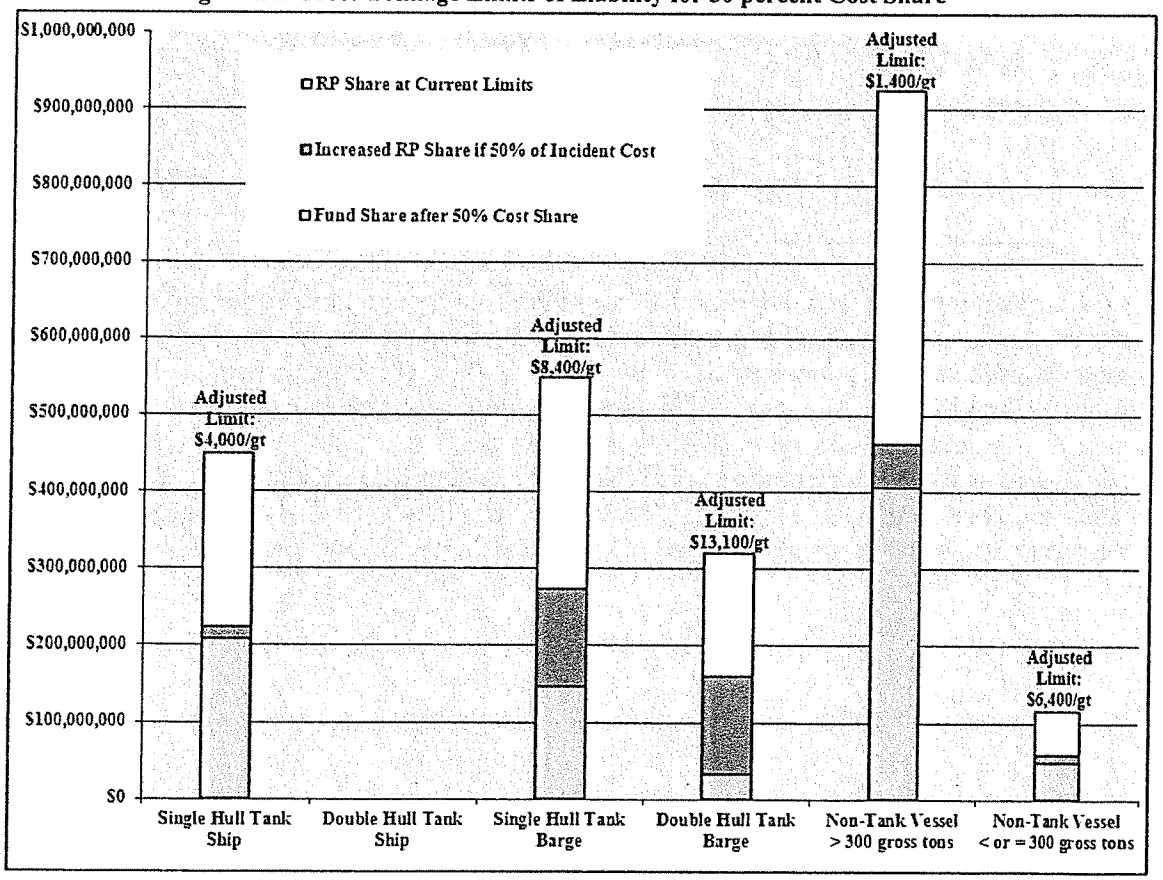
With respect to the Fund expenses for removal costs and claims allocable to vessel spills, the Fund frequently pays when an RP is unknown. In these cases, liability limits have no impact on Fund risk. Vessel and facility liability limits will affect the Fund only to the extent RPs are available and have the ability to pay.

B. Further Liability Limit Adjustments

Adjustments to liability limits help more equitably divide liabilities between the Fund and RPs. The OPA is founded on the "polluter pays" principle. At the same time, the OPA may limit the polluter's liability to pay for clean-up of spills. As previously noted, on May 12, 2010, the Administration proposed raising the limitation on liability for all RPs, including RPs for activities other than offshore drilling activities (such as shipping). Analysis indicates establishing different liability limits for non-tank vessels, which include fishing, cargo, and other self-propelled vessels, by tonnage (*i.e.*, greater than 300 gross tons and less than or equal to 300 gross tons) would provide more equitable limits on smaller vessels.

Figure 8 demonstrates that for vessel discharges where removal costs and damages exceed current liability limits, the Fund bears a majority of the cost even if every RP is available and pays to its limit. Figure 14 illustrates how further adjustments to limits of liability per gross ton might achieve an equal sharing of that risk between RPs and the Fund. The bottom portion of the bar represents the RP risk at the current limits of liability based on gross tonnage or minimum limits as applicable for each discharge. The middle portion represents the additional cost a vessel RP would pay to achieve an equal 50 percent sharing of incident costs with the Fund.

Figure 14: Gross Tonnage Limits of Liability for 50 percent Cost Share



For example, to split the estimated clean-up costs evenly between the Fund and the vessel operators, liability limits for single hull tank ships would increase to $4,000 per gross ton, single hull tank barges to $8,400 per gross ton, double hull tank barges to $13,100 per gross ton, non-tank vessels greater than 300 gross tons to $1,400 per gross ton, and non-tank vessels less than or equal to 300 gross tons to $6,400 per gross ton.

Figure 15 indicates the minimum amount a RP would be expected to pay for an incident (based on average historical costs of incidents by vessel type in 2021 dollars) if the limits of liability were adjusted so that costs were shared evenly between the RP and the Fund.

Figure 15: Minimum Liability Limits for 50 percent Cost Share

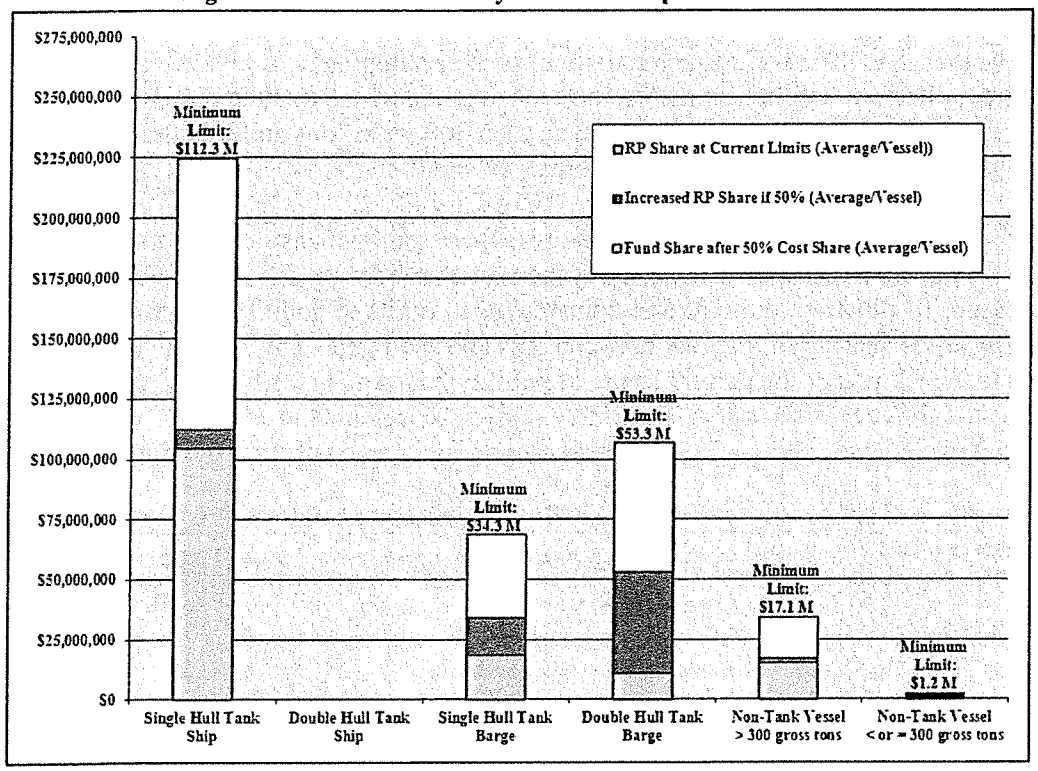


Figure 16 summarizes the 50 percent cost share limits and minimums and compares them to the current limits. Attachment C illustrates how these limits would protect the Fund from paying the majority of the total incident cost when applied to the 89 incidents discussed earlier. The current limits distinguish between single hull tank vessels, double hull tank vessels, and non-tank (other) vessels. As discussed in Section II, however, analysis has shown these categories might best be subdivided as follows: categories of Tank Ship and Tank Barge are addressed separately as subsets of single and double hull Tank Vessel, and the Non-Tank Vessel category is divided between vessels greater than 300 gross tons and vessels less than or equal to 300 gross tons.[12]

[12] The comparative results for single and double hull tank barges may appear incongruous at first glance. While double hull vessels may be safer and less likely to spill oil, the data show that a catastrophic discharge from a double hull tank barge can be just as expensive as one from a single hull tank barge.

Figure 16: Limits of Liability under the OPA

If the vessel is a. . .		The limits of liability are the greater of:	But to achieve an equal cost share limits of liability would need to be increased to:
Tank Ship	With a single hull, double sides only, or double bottom only	Greater than 3,000 gross tons: $3,700 per gross ton or $27,422,200 Less than or equal to 3,000 gross tons: $3,700 per gross ton or $7,478,800	$4,000 per gross ton or $112.3 million
	With a double hull	Greater than 3,000 gross tons: $2,300 per gross ton or $19,943,400 Less than or equal to 3,000 gross tons: $2,300 per gross ton or $4,985,900	No data[13]
Tank Barge	With a single hull, double sides only, or double bottom only	Greater than 3,000 gross tons: $3,700 per gross ton or $27,422,200 Less than or equal to 3,000 gross tons: $3,700 per gross ton or $7,478,800	$8,400 per gross ton or $34.3 million
	With a double hull	Greater than 3,000 gross tons: $2,300 per gross ton or $19,943,400 Less than or equal to 3,000 gross tons: $2,300 per gross ton or $4,985,900	$13,100 per gross ton or $53.3 million
Non-Tank Vessel	Greater than 300 gross tons	$1,200 per gross ton or $997,100	$1,400 per gross ton or $17.1 million
	Less than or equal to 300 gross tons	$1,200 per gross ton or $997,100	$6,400 per gross ton or $1.2 million

[13] There have been no historical double hull tank ship incidents that have met criteria for inclusion in this report.

Attachment A: Incidents Exceeding Liability Limits by Vessel Type[14]

Vessel Type: Tank Ship (Single Hull)

Vessel Name	Incident Year	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred
T/V JULIE N	1996	ME	18,500	$52,601,200	1.64	$86,266,000	$68,365,000	$17,901,000	$28,376,000
T/V ATHOS I	2004	NJ	37,900	$252,502,200	1.36	$343,403,000	$140,212,000	$203,191,000	$210,557,000
TOTAL						**$429,669,000**	**$208,577,000**	**$221,092,000**	**$238,933,000**

Vessel Type: Tank Barge (Single Hull)

T/B VISTABELLA	1991	PR	1,100	$5,859,400	1.89	$11,074,000	$7,479,000	$3,596,000	$4,782,000
T/B (TAMPA BAY COLLISION)	1993	FL	9,300	$68,900,000	1.78	$122,642,000	$34,269,000	$88,373,000	$2,397,000
T/B MORRIS J. BERMAN	1994	PR	5,400	$95,488,300	1.74	$166,150,000	$27,422,000	$138,727,000	$95,488,000
M/V SCANDIA & T/B NORTH CAPE	1996	RI	5,500	$49,000,000	1.64	$80,360,000	$27,422,000	$52,938,000	$9,046,000
T/B BUFFALO #292	1996	TX	1,500	$21,349,600	1.64	$35,013,000	$7,479,000	$27,534,000	$16,810,000
T/B B NO. 120	2003	MA	6,900	$59,912,400	1.40	$83,877,000	$27,422,000	$56,455,000	$1,753,000
T/B EMC 423	2005	IL	1,400	$10,188,600	1.32	$13,449,000	$7,479,000	$5,970,000	$10,189,000
BOSTON 30	2012	NY	1,600	$21,341,600	1.12	$23,903,000	$7,479,000	$16,424,000	$8,818,000
TOTAL						**$536,468,000**	**$146,451,000**	**$390,017,000**	**$149,283,000**

Vessel Type: Tank Barge (Double Hull)

T/B DBL 152	2005	LA	9,700	$60,161,900	1.32	$79,414,000	$22,404,000	$57,009,000	$19,756,000
T/B DM932	2008	LA	800	$104,460,700	1.18	$123,264,000	$4,986,000	$118,278,000	$23,406,000
KIRBY 27706	2014	TX	1,600	$105,418,700	1.08	$113,852,000	$4,986,000	$108,866,000	$5,090,000
TOTAL						**$316,530,000**	**$32,376,000**	**$284,153,000**	**$48,252,000**

Vessel Type: Cargo/Other SPV

M/V CITRUS	1996	AK	3,500	$9,158,700	1.64	$15,020,000	$4,192,000	$10,829,000	$433,000
M/V KUROSHIMA	1997	AK	4,200	$19,702,600	1.60	$31,524,000	$4,992,000	$26,532,000	$17,540,000
M/V KURE	1997	CA	36,000	$47,218,900	1.60	$75,550,000	$43,211,000	$32,339,000	$711,000
M/V NEW CARISSA	1999	OR	36,600	$50,501,400	1.54	$77,772,000	$43,885,000	$33,887,000	$32,914,000
M/V STUYVESANT	1999	CA	7,100	$11,700,000	1.54	$18,018,000	$8,533,000	$9,485,000	$379,000
M/V SERGO ZAKARIADZE	1999	PR	16,500	$15,966,700	1.54	$24,589,000	$19,802,000	$4,786,000	$6,065,000
SS J LUCKENBACH	2001	CA	7,900	$42,497,300	1.44	$61,196,000	$9,443,000	$51,753,000	$47,815,000
M/V KIMTON	2001	PR	200	$713,700	1.44	$1,028,000	$997,000	$31,000	$714,000
VICTORIA ROSE HUNT	2003	MA	100	$1,085,700	1.40	$1,520,000	$997,000	$523,000	$94,000
M/V RED DIAMOND	2003	FL	200	$2,595,200	1.40	$3,633,000	$997,000	$2,636,000	$2,595,000
CRANE BARGE MONARCH	2003	CA	200	$2,481,700	1.40	$3,474,000	$997,000	$2,477,000	$2,482,000
M/V BOWSTRING	2003	FL	300	$1,606,500	1.40	$2,249,000	$997,000	$1,252,000	$1,606,000
M/V SELENDANG AYU	2004	AK	39,800	$150,144,300	1.36	$204,196,000	$47,706,000	$156,490,000	$102,384,000
ALBION	2005	CA	200	$1,207,100	1.32	$1,593,000	$997,000	$596,000	$1,207,000

[14] This listing includes all incidents regardless of vessel size or type and regardless of whether a claim to the Fund by a RP for amounts in excess of liability limits was received or is anticipated. Costs include Federal removal costs and claims paid that have been verified. Other costs are estimated from best available information but cannot otherwise be verified. Fund exposure amounts are estimated and do not imply that the RPs will be able to limit their liability under the statute where the issue has not yet been determined.

Vessel Type: Cargo/Other SPV (Cont.)

Vessel Name	Incident Year	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred
M/V CASITAS	2005	HI	300	$1,710,700	1.32	$2,258,000	$997,000	$1,261,000	$1,711,000
MAMA LERE	2006	TX	400	$1,217,300	1.27	$1,546,000	$997,000	$549,000	$1,217,000
M/V COSCO BUSAN	2007	CA	65,100	$110,557,900	1.23	$135,986,000	$78,157,000	$57,829,000	$4,208,000
M/V SENECA	2007	MI	200	$1,211,000	1.23	$1,490,000	$997,000	$492,000	$1,211,000
LST-1166	2007	OR	2,400	$5,151,000	1.23	$6,336,000	$2,902,000	$3,434,000	$5,151,000
CATALA	2007	WA	5,700	$6,138,500	1.23	$7,550,000	$6,840,000	$710,000	$6,138,000
C/V SEA WITCH	2008	MD	17,900	$20,629,900	1.18	$24,343,000	$21,482,000	$2,861,000	$20,630,000
BIG BOY & SCOOBY DOO	2008	PA	200	$1,010,800	1.18	$1,193,000	$997,000	$196,000	$1,011,000
WENONAH	2009	CA	300	$947,800	1.20	$1,137,000	$997,000	$140,000	$948,000
SOUND DEVELOPER	2009	AK	200	$1,657,100	1.20	$1,989,000	$997,000	$991,000	$1,657,000
MONARCH	2009	AK	300	$2,097,500	1.20	$2,517,000	$997,000	$1,520,000	$1,333,000
M/V PRINCESS KATHLEEN	2010	AK	5,900	$14,185,900	1.18	$16,739,000	$7,050,000	$9,689,000	$14,186,000
DAVY CROCKETT	2011	WA	4,600	$22,457,500	1.13	$25,377,000	$5,572,000	$19,805,000	$22,458,000
TUG TIGER	2011	CA	200	$4,205,500	1.13	$4,752,000	$997,000	$3,755,000	$4,205,000
JIREH	2012	PR	1,000	$16,561,400	1.12	$18,549,000	$1,175,000	$17,374,000	$16,566,000
RESPECT	2013	CA	200	$2,467,600	1.10	$2,714,000	$997,000	$1,717,000	$2,468,000
STEPHEN L. COLBY	2013	IA	200	$1,355,600	1.10	$1,491,000	$997,000	$494,000	$1,356,000
M/V CHALLENGER	2015	AK	100	$2,541,200	1.08	$2,744,000	$997,000	$1,747,000	$2,541,000
SPIRIT OF SACRAMENTO	2016	CA	100	$1,514,800	1.07	$1,621,000	$997,000	$624,000	$1,515,000
TUG TUTAHACO	2017	FL	200	$4,000,000	1.05	$4,200,000	$997,000	$3,203,000	$2,715,000
M/V AKUTAN	2017	AK	700	$968,000	1.05	$1,016,000	$997,000	$19,000	$968,000
AKUTAN	2017	AK	700	$949,800	1.05	$997,000	$997,000	$0	$950,000
POWHATAN	2017	AK	200	$3,993,600	1.05	$4,193,000	$997,000	$3,196,000	$151,000
SS PETER STUYVESANT	2017	MA	1,700	$2,400,000	1.05	$2,520,000	$2,065,000	$455,000	$0
D-B VENGEANCE	2017	CA	400	$1,929,700	1.05	$2,026,000	$997,000	$1,029,000	$127,000
M/V OCEAN KING	2018	MA	200	$1,512,500	1.02	$1,543,000	$997,000	$546,000	$1,046,000
S-2006	2018	MP	1,000	$8,572,800	1.02	$8,744,000	$1,148,000	$7,596,000	$2,079,000
GRAND MARIANA I	2018	MP	400	$3,149,900	1.02	$3,213,000	$997,000	$2,216,000	$1,392,000
GATE CITY	2018	WV	200	$1,828,500	1.02	$1,865,000	$997,000	$868,000	$1,829,000
GOLDEN RAY	2019	GA	71,200	$94,210,000	1.00	$94,210,000	$85,414,000	$8,796,000	$2,096,000
F/V MIDWAY ISLAND	2020	HI	200	$1,290,100	1.00	$1,290,000	$997,000	$293,000	$1,290,000
TOTAL						**$907,511,000**	**$420,488,000**	**$487,021,000**	**$342,092,000**

Vessel Type: Fishing Vessel

F/V TENYO MARU	1991	WA	4,200	$6,062,900	1.89	$11,459,000	$5,000,000	$6,458,000	$6,063,000
F/V JIN SHIANG FA	1993	AS	400	$2,013,000	1.78	$3,583,000	$997,000	$2,586,000	$2,420,000
F/V YU TE NO. 1	1999	AS	200	$1,164,600	1.54	$1,793,000	$997,000	$796,000	$5,296,000
F/V AMIGA NO. 5	1999	AS	200	$3,355,700	1.54	$5,168,000	$997,000	$4,171,000	$2,766,000
F/V KWANG MYONG	1999	AS	200	$1,554,800	1.54	$2,394,000	$997,000	$1,397,000	$965,000
F/V KORAM NO. 3	1999	AS	200	$1,403,100	1.54	$2,161,000	$997,000	$1,164,000	$813,000
F/V KWANG MYONG NO 72	1999	AS	200	$2,182,900	1.54	$3,362,000	$997,000	$2,365,000	$1,593,000
F/V KWANG MYONG NO 58	1999	AS	200	$1,557,600	1.54	$2,399,000	$997,000	$1,402,000	$967,000
F/V KORAM NO 1	1999	AS	200	$1,378,400	1.54	$2,123,000	$997,000	$1,126,000	$788,000
F/V KWANG MYONG NO 51	1999	AS	200	$1,249,200	1.54	$1,924,000	$997,000	$927,000	$659,000
F/V JESSICA ANN	2000	ME	200	$947,000	1.50	$1,421,000	$997,000	$423,000	$947,000
F/V SWORDMAN I	2000	HI	100	$1,528,600	1.50	$2,293,000	$997,000	$1,296,000	$1,529,000

Vessel Type: Fishing Vessel (Cont.)

Vessel Name	Incident Year	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred
F/V WINDY BAY	2001	AK	400	$3,396,400	1.44	$4,891,000	$997,000	$3,894,000	$3,396,000
F/V VANGUARD	2001	AK	200	$699,800	1.44	$1,008,000	$997,000	$11,000	$700,000
F/V GENEI MARU #7	2002	AK	100	$869,800	1.43	$1,244,000	$997,000	$247,000	$870,000
F/V NEW HORIZON	2004	CA	100	$805,300	1.36	$1,095,000	$997,000	$98,000	$305,000
F/V MWALIL SAAT	2004	GU	200	$3,413,500	1.36	$4,642,000	$997,000	$3,645,000	$3,414,000
F/V THE BOSS	2004	OR	200	$926,100	1.36	$1,259,000	$997,000	$262,000	$926,000
F/V MILKY WAY	2005	WA	200	$1,005,100	1.32	$1,327,000	$997,000	$330,000	$539,000
CAPT MIKE	2009	LA	100	$2,413,400	1.20	$2,896,000	$997,000	$1,899,000	$2,413,000
F/V MAR-GUN	2009	AK	200	$1,442,500	1.20	$1,731,000	$997,000	$734,000	$199,000
DEEP SEA	2012	WA	200	$3,024,000	1.12	$3,387,000	$997,000	$2,390,000	$3,024,000
F/V LONE STAR	2013	AK	100	$3,398,400	1.10	$3,738,000	$997,000	$2,741,000	$3,398,000
DAIKI MARU 7	2014	GU	100	$1,550,000	1.08	$1,674,000	$997,000	$677,000	$63,000
F/V PACIFIC PARADISE	2017	HI	200	$2,500,000	1.05	$2,625,000	$997,000	$1,628,000	$1,657,000
TOTAL						**$71,597,000**	**$28,928,000**	**$42,667,000**	**$45,710,000**

GRAND TOTAL	**$2,261,777,000**	**$836,825,000**	**$1,424,952,000**	**$824,266,000**

Attachment B: Incidents Exceeding Liability Limits by Incident Date[15]

Incident Year: 1991

Vessel Type	Vessel Name	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred
Fishing Vessel	F/V TENYO MARU	WA	4,200	$6,062,900	1.99	$12,065,000	$5,000,000	$7,065,000	$6,063,000
Tank Barge (Single Hull)	T/B VISTABELLA	PR	1,100	$5,859,400	1.99	$11,660,000	$7,479,000	$4,181,000	$4,782,000
TOTAL						**$23,725,000**	**$12,479,000**	**$11,246,000**	**$10,845,000**

Incident Year: 1993

Fishing Vessel	F/V JIN SHIANG FA	AS	400	$2,013,000	1.87	$3,764,000	$997,000	$2,767,000	$2,420,000
Tank Barge (Single Hull)	T/B (TAMPA BAY COLLISION)	FL	9,300	$68,900,000	1.87	$128,843,000	$34,269,000	$94,574,000	$2,397,000
TOTAL						**$132,607,000**	**$35,266,000**	**$97,341,000**	**$4,817,000**

Incident Year: 1994

Tank Barge (Single Hull)	T/B MORRIS J. BERMAN	PR	5,400	$95,488,300	1.83	$174,744,000	$27,422,000	$147,321,000	$95,488,000
TOTAL						**$174,744,000**	**$27,422,000**	**$147,321,000**	**$95,488,000**

Incident Year: 1996

Tank Barge (Single Hull)	M/V SCANDIA & T/B NORTH CAPE	RI	5,500	$49,000,000	1.72	$84,280,000	$27,422,000	$56,858,000	$9,046,000
Tank Barge (Single Hull)	T/B BUFFALO #292	TX	1,500	$15,947,100	1.72	$27,429,000	$7,479,000	$19,950,000	$16,810,000
Tank Ship (Single Hull)	T/V JULIE N	ME	18,500	$52,601,200	1.72	$90,474,000	$68,365,000	$22,109,000	$28,376,000
Cargo/Other SPV	M/V CITRUS	AK	3,500	$9,158,700	1.72	$15,753,000	$4,192,000	$11,561,000	$433,000
TOTAL						**$217,936,000**	**$107,458,000**	**$110,478,000**	**$54,665,000**

Incident Year: 1997

Cargo/Other SPV	M/V KUROSHIMA	AK	4,200	$19,702,600	1.68	$33,100,000	$4,992,000	$28,108,000	$17,540,000
Cargo/Other SPV	M/V KURE	CA	36,000	$47,218,900	1.68	$79,328,000	$43,211,000	$36,117,000	$711,000
TOTAL						**$112,428,000**	**$48,203,000**	**$64,225,000**	**$18,251,000**

[15] This listing includes all incidents regardless of vessel size or type and regardless of whether a claim to the Fund by a RP for amounts in excess of liability limits was received or is anticipated. Costs include Federal removal costs and claims paid that have been verified. Other costs are estimated from best available information but cannot otherwise be verified. Fund exposure amounts are estimated and do not imply that the RPs will be able to limit their liability under the statute where the issue has not yet been determined.

Incident Year: 1999

Vessel Type	Vessel Name	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred
Cargo/Other SPV	M/V NEW CARISSA	OR	36,600	$50,501,400	1.62	$81,812,000	$43,885,000	$37,927,000	$26,775,000
Cargo/Other SPV	M/V STUYVESANT	CA	7,100	$11,700,000	1.62	$18,954,000	$8,533,000	$10,421,000	$379,000
Cargo/Other SPV	M/V SERGO ZAKARIADZE	PR	16,500	$15,966,700	1.62	$25,866,000	$19,802,000	$6,064,000	$6,065,000
Fishing Vessel	F/V YU TE NO. 1	AS	200	$1,164,600	1.62	$1,887,000	$997,000	$890,000	$5,296,000
Fishing Vessel	F/V AMIGA NO. 5	AS	200	$3,355,700	1.62	$5,436,000	$997,000	$4,439,000	$2,766,000
Fishing Vessel	F/V KWANG MYONG	AS	200	$1,554,800	1.62	$2,519,000	$997,000	$1,522,000	$965,000
Fishing Vessel	F/V KORAM NO. 3	AS	200	$1,403,100	1.62	$2,273,000	$997,000	$1,276,000	$813,000
Fishing Vessel	F/V KWANG MYONG NO 72	AS	200	$2,182,900	1.62	$3,536,000	$997,000	$2,539,000	$1,593,000
Fishing Vessel	F/V KWANG MYONG NO 58	AS	200	$1,557,600	1.62	$2,523,000	$997,000	$1,526,000	$967,000
Fishing Vessel	F/V KORAM NO 1	AS	200	$1,378,400	1.62	$2,233,000	$997,000	$1,236,000	$788,000
Fishing Vessel	F/V KWANG MYONG NO 51	AS	200	$1,249,200	1.62	$2,024,000	$997,000	$1,027,000	$659,000
TOTAL						**$149,063,000**	**$80,196,000**	**$68,867,000**	**$47,066,000**

Incident Year: 2000

Fishing Vessel	F/V JESSICA ANN	ME	200	$947,000	1.57	$1,487,000	$997,000	$490,000	$947,000
Fishing Vessel	F/V SWORDMAN I	HI	100	$1,528,600	1.57	$2,400,000	$997,000	$1,403,000	$1,529,000
TOTAL						**$3,887,000**	**$1,994,000**	**$1,893,000**	**$2,476,000**

Incident Year: 2001

Cargo/Other SPV	SS J LUCKENBACH	CA	7,900	$42,497,300	1.51	$64,171,000	$9,443,000	$54,728,000	$47,815,000
Cargo/Other SPV	M/V KIMTON	PR	200	$713,700	1.51	$1,078,000	$997,000	$81,000	$714,000
Fishing Vessel	F/V WINDY BAY	AK	400	$3,396,400	1.51	$5,129,000	$997,000	$4,131,000	$3,396,000
Fishing Vessel	F/V VANGUARD	AK	200	$699,800	1.51	$1,057,000	$997,000	$60,000	$700,000
TOTAL						**$71,435,000**	**$12,434,000**	**$59,000,000**	**$52,625,000**

Incident Year: 2002

Fishing Vessel	F/V GENEI MARU #7	AK	100	$869,800	1.50	$1,305,000	$997,000	$308,000	$870,000
Fishing Vessel	F/V TERESA LYNN	FL	200	$690,800	1.50	$1,036,000	$997,000	$39,000	$691,000
TOTAL						**$2,341,000**	**$1,994,000**	**$347,000**	**$1,561,000**

Incident Year: 2003

Cargo/Other SPV	VICTORIA ROSE HUNT	MA	100	$1,085,700	1.47	$1,596,000	$997,000	$599,000	$94,000
Cargo/Other SPV	M/V RED DIAMOND	FL	200	$2,595,200	1.47	$3,815,000	$997,000	$2,818,000	$2,595,000
Cargo/Other SPV	CRANE BARGE MONARCH	CA	200	$2,481,700	1.47	$3,648,000	$997,000	$2,651,000	$2,482,000
Cargo/Other SPV	M/V BOWSTRING	FL	300	$1,606,500	1.47	$2,361,000	$997,000	$1,364,000	$1,606,000
Tank Barge (Single Hull)	T/B B NO. 120	MA	6,900	$59,912,400	1.47	$88,071,000	$27,422,000	$60,649,000	$1,753,000
TOTAL						**$99,491,000**	**$31,410,000**	**$68,081,000**	**$8,530,000**

Incident Year: 2004

Vessel Type	Vessel Name	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred
Fishing Vessel	F/V NEW HORIZON	CA	100	$805,300	1.42	$1,143,000	$997,000	$146,000	$305,000
Cargo/Other SPV	M/V SELENDANG AYU	AK	39,800	$150,144,300	1.42	$213,205,000	$47,706,000	$165,499,000	$102,384,000
Fishing Vessel	F/V MWALIL SAAT	GU	200	$3,413,500	1.42	$4,847,000	$997,000	$3,850,000	$3,414,000
Fishing Vessel	F/V THE BOSS	OR	200	$926,100	1.42	$1,315,000	$997,000	$318,000	$926,000
Tank Ship (Single Hull)	T/V ATHOS I	NJ	37,900	$252,502,200	1.42	$358,553,000	$140,212,000	$218,342,000	$210,557,000
Cargo/Other SPV	M/V ORIENTAL I	FL	200	$727,400	1.42	$1,033,000	$997,000	$36,000	$727,000
TOTAL						**$580,096,000**	**$191,906,000**	**$388,191,000**	**$318,313,000**

Incident Year: 2005

Tank Barge (Double Hull)	T/B DBL 152	LA	9,700	$51,556,200	1.38	$71,147,000	$22,404,000	$48,743,000	$24,621,000
Cargo/Other SPV	ALBION	CA	200	$1,207,100	1.38	$1,666,000	$997,000	$669,000	$1,207,000
Cargo/Other SPV	M/V CASITAS	HI	300	$1,710,700	1.38	$2,361,000	$997,000	$1,364,000	$1,711,000
Tank Barge (Single Hull)	T/B EMC 423	IL	1,400	$10,188,600	1.38	$14,060,000	$7,479,000	$6,581,000	$10,189,000
Fishing Vessel	F/V MILKY WAY	WA	200	$1,005,100	1.38	$1,387,000	$997,000	$390,000	$539,000
TOTAL						**$90,621,000**	**$32,874,000**	**$57,747,000**	**$38,267,000**

Incident Year: 2006

Cargo/Other SPV	MAMA LERE	TX	400	$1,217,300	1.33	$1,619,000	$997,000	$622,000	$1,217,000
TOTAL						**$1,619,000**	**$997,000**	**$622,000**	**$1,217,000**

Incident Year: 2007

Cargo/Other SPV	M/V COSCO BUSAN	CA	65,100	$110,557,900	1.29	$142,620,000	$78,157,000	$64,462,000	$4,208,000
Cargo/Other SPV	M/V SENECA	MI	200	$1,211,000	1.29	$1,562,000	$997,000	$565,000	$1,211,000
Cargo/Other SPV	LST-1166	OR	2,400	$5,151,000	1.29	$6,645,000	$2,902,000	$3,743,000	$5,151,000
Cargo/Other SPV	CATALA	WA	5,700	$6,138,500	1.29	$7,919,000	$6,840,000	$1,079,000	$6,138,000
TOTAL						**$158,746,000**	**$88,896,000**	**$69,849,000**	**$16,708,000**

Incident Year: 2008

Tank Barge (Double Hull)	T/B DM932	LA	800	$104,460,700	1.24	$129,531,000	$4,986,000	$124,545,000	$23,406,000
Cargo/Other SPV	C/V SEA WITCH	MD	17,900	$20,629,900	1.24	$25,581,000	$21,482,000	$4,099,000	$20,630,000
Cargo/Other SPV	BIG BOY & SCOOBY DOO	PA	200	$1,010,800	1.24	$1,253,000	$997,000	$256,000	$1,011,000
TOTAL						**$156,365,000**	**$27,465,000**	**$128,900,000**	**$45,047,000**

Incident Year: 2009

Fishing Vessel	CAPT MIKE	LA	100	$2,413,400	1.26	$3,041,000	$997,000	$2,044,000	$2,413,000
Cargo/Other SPV	WENONAH	CA	300	$947,800	1.26	$1,194,000	$997,000	$197,000	$948,000
Cargo/Other SPV	SOUND DEVELOPER	AK	200	$1,657,100	1.26	$2,088,000	$997,000	$1,091,000	$1,657,000
Cargo/Other SPV	MONARCH	AK	300	$2,097,500	1.26	$2,643,000	$997,000	$1,646,000	$1,333,000
Fishing Vessel	F/V MAR-GUN	AK	200	$1,442,500	1.26	$1,817,000	$997,000	$820,000	$199,000
TOTAL						**$10,783,000**	**$4,985,000**	**$5,798,000**	**$6,550,000**

Incident Year: 2010

Vessel Type	Vessel Name	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred
Cargo/Other SPV	M/V PRINCESS KATHLEEN	AK	5,900	$14,185,900	1.23	$17,449,000	$7,050,000	$10,399,000	$14,186,000
TOTAL						**$17,449,000**	**$7,050,000**	**$10,399,000**	**$14,186,000**

Incident Year: 2011

Cargo/Other SPV	DAVY CROCKETT	WA	4,600	$22,457,500	1.19	$26,724,000	$5,572,000	$21,153,000	$22,458,000
Cargo/Other SPV	TUG TIGER	CA	200	$4,205,500	1.19	$5,005,000	$997,000	$4,007,000	$4,205,000
TOTAL						**$31,729,000**	**$6,569,000**	**$25,160,000**	**$26,663,000**

Incident Year: 2012

Cargo/Other SPV	JIREH	PR	1,000	$16,514,100	1.17	$19,321,000	$1,175,000	$18,147,000	$16,518,000
Fishing Vessel	DEEP SEA	WA	200	$3,015,600	1.17	$3,528,000	$997,000	$2,531,000	$3,024,000
Tank Barge (Single Hull)	BOSTON 30	NY	1,600	$17,167,900	1.17	$20,086,000	$7,479,000	$12,608,000	$8,818,000
TOTAL						**$42,935,000**	**$9,651,000**	**$33,286,000**	**$28,360,000**

Incident Year: 2013

Fishing Vessel	F/V LONE STAR	AK	100	$3,398,400	1.16	$3,942,000	$997,000	$2,945,000	$3,398,000
Cargo/Other SPV	RESPECT	CA	200	$2,467,600	1.16	$2,862,000	$997,000	$1,865,000	$2,468,000
Cargo/Other SPV	STEPHEN L. COLBY	IA	200	$1,355,600	1.16	$1,572,000	$997,000	$575,000	$1,356,000
TOTAL						**$8,376,000**	**$2,991,000**	**$5,385,000**	**$7,222,000**

Incident Year: 2014

Tank Barge (Double Hull)	KIRBY 27706	TX	1,600	$105,418,700	1.13	$119,123,000	$4,986,000	$114,137,000	$5,090,000
Fishing Vessel	DAIKI MARU 7	GU	100	$1,550,000	1.13	$1,752,000	$997,000	$754,000	$63,000
TOTAL						**$120,875,000**	**$5,983,000**	**$114,891,000**	**$5,153,000**

Incident Year: 2015

Cargo/Other SPV	M/V CHALLENGER	AK	100	$2,541,200	1.13	$2,872,000	$997,000	$1,874,000	$2,541,000
TOTAL						**$2,872,000**	**$997,000**	**$1,874,000**	**$2,541,000**

Incident Year: 2016

Cargo/Other SPV	SPIRIT OF SACRAMENTO	CA	100	$1,514,800	1.12	$1,697,000	$997,000	$699,000	$1,515,000
TOTAL						**$1,697,000**	**$997,000**	**$699,000**	**$1,515,000**

Incident Year: 2017

Cargo/Other SPV	TUG TUTAHACO	FL	200	$4,000,000	1.10	$4,400,000	$997,000	$3,403,000	$2,715,000
Cargo/Other SPV	M/V AKUTAN	AK	700	$968,000	1.10	$1,065,000	$997,000	$68,000	$968,000
Fishing Vessel	F/V PACIFIC PARADISE	HI	200	$2,500,000	1.10	$2,750,000	$997,000	$1,753,000	$1,657,000
Cargo/Other SPV	AKUTAN	AK	700	$949,800	1.10	$1,045,000	$997,000	$48,000	$950,000
Cargo/Other SPV	POWHATAN	AK	200	$7,335,400	1.10	$8,069,000	$997,000	$7,072,000	$3,032,000
Cargo/Other SPV	SS PETER STUYVESANT	MA	1,700	$2,400,000	1.10	$2,640,000	$2,065,000	$575,000	$109,000
Cargo/Other SPV	D-B VENGEANCE	CA	400	$1,929,700	1.10	$2,123,000	$997,000	$1,126,000	$127,000
TOTAL						**$22,092,000**	**$8,047,000**	**$14,045,000**	**$9,558,000**

Incident Year: 2018

Vessel Type	Vessel Name	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred
Cargo/Other SPV	M/V OCEAN KING	MA	200	$1,512,500	1.07	$1,618,000	$997,000	$621,000	$1,046,000
Cargo/Other SPV	S-2006	MP	1,000	$8,554,000	1.07	$9,153,000	$1,148,000	$8,004,000	$8,554,000
Cargo/Other SPV	GRAND MARIANA I	MP	400	$3,242,100	1.07	$3,469,000	$997,000	$2,472,000	$1,392,000
Cargo/Other SPV	GATE CITY	WV	200	$1,857,000	1.07	$1,987,000	$997,000	$990,000	$1,857,000
Cargo/Other SPV	F/V PACIFIC KNIGHT	AK	200	$1,297,800	1.07	$1,389,000	$997,000	$392,000	$1,298,000
Cargo/Other SPV	YP 702	GA	200	$1,544,800	1.07	$1,653,000	$997,000	$656,000	$1,545,000
TOTAL						**$19,269,000**	**$6,133,000**	**$13,135,000**	**$15,692,000**

Incident Year: 2019

Cargo/Other SPV	GOLDEN RAY	GA	71,200	$98,073,900	1.05	$102,978,000	$85,414,000	$17,564,000	$5,960,000
TOTAL						**$102,978,000**	**$85,414,000**	**$17,564,000**	**$5,960,000**

Incident Year: 2020

Cargo/Other SPV	F/V MIDWAY ISLAND	HI	200	$1,387,400	1.05	$1,457,000	$997,000	$460,000	$1,387,000
Fishing Vessel	PAPPYS PRIDE	TX	200	$969,000	1.05	$1,017,000	$997,000	$20,000	$969,000
TOTAL						**$2,474,000**	**$1,994,000**	**$480,000**	**$2,356,000**

Incident Year: 2021

Fishing Vessel	F/V AMERICAN CHALLENGER	CA	200	$1,274,900	1.00	$1,275,000	$997,000	$278,000	$1,275,000
TOTAL						**$1,275,000**	**$997,000**	**$278,000**	**$1,275,000**

TOTAL 1990-2005						**$1,658,375,000**	**$583,639,000**	**$1,074,735,000**	**$652,901,000**
TOTAL 2006-2022						**$701,534,000**	**$259,168,000**	**$442,365,000**	**$190,003,000**

GRAND TOTAL						**$2,359,908,000**	**$842,808,000**	**$1,517,101,000**	**$842,904,000**

Attachment C: Incidents Exceeding Liability Limits with Limits to Achieve 50 Percent Cost Share[16]

Vessel Type: Tank Ship (Single Hull)

Vessel Name	Incident Year	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred	Gross Ton Liability Limits for a 50% Cost Share	Minimum Liability for a 50% Cost Share
										Shaded Area Indicates Higher Limit Which Would Be Applied	
T/V JULIE N	1996	ME	18,500	$52,601,200	1.64	$86,266,000	$68,365,000	$17,901,000	$28,376,000	$70,212,600	$107,417,210
T/V ATHOS I	2004	NJ	37,900	$252,502,200	1.36	$343,403,000	$140,212,000	$203,191,000	$210,557,000	$144,001,000	$107,417,210
TOTAL						**$429,669,000**	**$208,577,000**	**$221,092,000**	**$238,933,000**		

Vessel Type: Tank Barge (Single Hull)

T/B VISTABELLA	1991	PR	1,100	$5,859,400	1.89	$11,074,000	$7,479,000	$3,596,000	$4,782,000	$8,938,000	$33,579,522
T/B (TAMPA BAY COLLISION)	1993	FL	9,300	$68,900,000	1.78	$122,642,000	$34,269,000	$88,373,000	$2,397,000	$75,948,400	$33,579,522
T/B MORRIS J. BERMAN	1994	PR	5,400	$95,488,300	1.74	$166,150,000	$27,422,000	$138,727,000	$95,488,000	$44,091,400	$33,579,522
M/V SCANDIA & T/B NORTH CAPE	1996	RI	5,500	$49,000,000	1.64	$80,360,000	$27,422,000	$52,938,000	$9,046,000	$45,149,200	$33,579,522
T/B BUFFALO #292	1996	TX	1,500	$21,349,600	1.64	$35,013,000	$7,479,000	$27,534,000	$16,810,000	$12,324,600	$33,579,522
T/B B NO. 120	2003	MA	6,900	$59,912,400	1.40	$83,877,000	$27,422,000	$56,455,000	$1,753,000	$56,325,800	$33,579,522
T/B EMC 423	2005	IL	1,400	$10,188,600	1.32	$13,449,000	$7,479,000	$5,970,000	$10,189,000	$11,455,400	$33,579,522
BOSTON 30	2012	NY	1,600	$21,341,600	1.12	$23,903,000	$7,479,000	$16,424,000	$8,818,000	$13,398,800	$33,579,522
TOTAL						**$536,468,000**	**$146,451,000**	**$390,017,000**	**$149,283,000**		

Vessel Type: Tank Barge (Double Hull)

T/B DBL 152	2005	LA	9,700	$60,161,900	1.32	$79,414,000	$22,404,000	$57,009,000	$19,756,000	$125,658,900	$52,373,877
T/B DM932	2008	LA	800	$104,460,700	1.18	$123,264,000	$4,986,000	$118,278,000	$23,406,000	$10,294,200	$52,373,877
KIRBY 27706	2014	TX	1,600	$105,418,700	1.08	$113,852,000	$4,986,000	$108,866,000	$5,090,000	$21,052,800	$52,373,877
TOTAL						**$316,530,000**	**$32,376,000**	**$284,153,000**	**$48,252,000**		

Non-Tank Vessel > 300 GT

F/V TENYO MARU	1991	WA	4,200	$6,062,900	1.89	$11,459,000	$5,000,000	$6,458,000	$6,063,000	$5,417,100	$16,896,771
F/V JIN SHIANG FA	1993	AS	400	$2,013,000	1.78	$3,583,000	$997,000	$2,586,000	$2,420,000	$471,900	$16,896,771
M/V CITRUS	1996	AK	3,500	$9,158,700	1.64	$15,020,000	$4,192,000	$10,829,000	$433,000	$4,540,900	$16,896,771
M/V KUROSHIMA	1997	AK	4,200	$19,702,600	1.60	$31,524,000	$4,992,000	$26,532,000	$17,540,000	$5,408,000	$16,896,771
M/V KURE	1997	CA	36,000	$47,218,900	1.60	$75,550,000	$43,211,000	$32,339,000	$711,000	$46,811,700	$16,896,771
M/V NEW CARISSA	1999	OR	36,600	$50,501,400	1.54	$77,772,000	$43,885,000	$33,887,000	$32,914,000	$47,542,300	$16,896,771
M/V STUYVESANT	1999	CA	7,100	$11,700,000	1.54	$18,018,000	$8,533,000	$9,485,000	$379,000	$9,244,300	$16,896,771
M/V SERGO ZAKARIADZE	1999	PR	16,500	$15,966,700	1.54	$24,589,000	$19,802,000	$4,786,000	$6,065,000	$21,452,600	$16,896,771

[16] This listing includes all incidents regardless of vessel size or type and regardless of whether a claim to the Fund by a RP for amounts in excess of liability limits was received or is anticipated. Costs include Federal removal costs and claims paid that have been verified. Other costs are estimated from best available information but cannot otherwise be verified. Fund exposure amounts are estimated and do not imply that the RPs will be able to limit their liability under the statute where the issue has not yet been determined.

Non-Tank Vessel > 300 GT (Cont.)

Vessel Name	Incident Year	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred	Gross Ton Liability Limits for a 50% Cost Share	Minimum Liability for a 50% Cost Share
										Shaded Area Indicates Higher Limit Which Would Be Applied	
SS J LUCKENBACH	2001	CA	7,900	$42,497,300	1.44	$61,196,000	$9,443,000	$51,753,000	$47,815,000	$10,229,700	$16,896,771
F/V WINDY BAY	2001	AK	400	$3,396,400	1.44	$4,891,000	$997,000	$3,894,000	$3,396,000	$526,500	$16,896,771
M/V SELENDANG AYU	2004	AK	39,800	$150,144,300	1.36	$204,196,000	$47,706,000	$156,490,000	$102,384,000	$51,681,500	$16,896,771
MAMA LERE	2006	TX	400	$1,217,300	1.27	$1,546,000	$997,000	$549,000	$1,217,000	$479,700	$16,896,771
M/V COSCO BUSAN	2007	CA	65,100	$110,557,900	1.23	$135,986,000	$78,157,000	$57,829,000	$4,208,000	$84,670,300	$16,896,771
LST-1166	2007	OR	2,400	$5,151,000	1.23	$6,336,000	$2,902,000	$3,434,000	$5,151,000	$3,143,400	$16,896,771
CATALA	2007	WA	5,700	$6,138,500	1.23	$7,550,000	$6,840,000	$710,000	$6,138,000	$7,410,000	$16,896,771
C/V SEA WITCH	2008	MD	17,900	$20,629,900	1.18	$24,343,000	$21,482,000	$2,861,000	$20,630,000	$23,272,600	$16,896,771
M/V PRINCESS KATHLEEN	2010	AK	5,900	$14,185,900	1.18	$16,739,000	$7,050,000	$9,689,000	$14,186,000	$7,637,500	$16,896,771
DAVY CROCKETT	2011	WA	4,600	$22,457,500	1.13	$25,377,000	$5,572,000	$19,805,000	$22,458,000	$6,035,900	$16,896,771
JIREH	2012	PR	1,000	$16,561,400	1.12	$18,549,000	$1,175,000	$17,374,000	$16,566,000	$1,272,700	$16,896,771
SS PETER STUYVESANT	2017	MA	1,700	$2,400,000	1.05	$2,520,000	$2,065,000	$455,000	$0	$2,237,300	$16,896,771
M/V AKUTAN	2017	AK	700	$968,000	1.05	$1,016,000	$997,000	$19,000	$968,000	$973,700	$16,896,771
AKUTAN	2017	AK	700	$949,800	1.05	$997,000	$997,000	$0	$950,000	$973,700	$16,896,771
D-B VENGEANCE	2017	CA	400	$1,929,700	1.05	$2,026,000	$997,000	$1,029,000	$127,000	$575,900	$16,896,771
S-2006	2018	MP	1,000	$8,572,800	1.02	$8,744,000	$1,148,000	$7,596,000	$2,079,000	$1,244,100	$16,896,771
GRAND MARIANA I	2018	MP	400	$3,149,900	1.02	$3,213,000	$997,000	$2,216,000	$1,392,000	$577,200	$16,896,771
GOLDEN RAY	2019	GA	71,200	$94,210,000	1.00	$94,210,000	$85,414,000	$8,796,000	$2,096,000	$92,531,400	$16,896,771
TOTAL						**$876,950,000**	**$405,548,000**	**$471,401,000**	**$318,286,000**		

Vessel Type: Non-Tank Vessel < or = 300 GT

F/V YU TE NO. 1	1999	AS	200	$1,164,600	1.54	$1,793,000	$997,000	$796,000	$5,296,000	$1,020,000	$1,164,786
F/V AMIGA NO. 5	1999	AS	200	$3,355,700	1.54	$5,168,000	$997,000	$4,171,000	$2,766,000	$1,020,000	$1,164,786
F/V KWANG MYONG	1999	AS	200	$1,554,800	1.54	$2,394,000	$997,000	$1,397,000	$965,000	$1,020,000	$1,164,786
F/V KORAM NO. 3	1999	AS	200	$1,403,100	1.54	$2,161,000	$997,000	$1,164,000	$813,000	$1,020,000	$1,164,786
F/V KWANG MYONG NO 72	1999	AS	200	$2,182,900	1.54	$3,362,000	$997,000	$2,365,000	$1,593,000	$1,020,000	$1,164,786
F/V KWANG MYONG NO 58	1999	AS	200	$1,557,600	1.54	$2,399,000	$997,000	$1,402,000	$967,000	$1,020,000	$1,164,786
F/V KORAM NO 1	1999	AS	200	$1,378,400	1.54	$2,123,000	$997,000	$1,126,000	$788,000	$1,020,000	$1,164,786
F/V KWANG MYONG NO 51	1999	AS	200	$1,249,200	1.54	$1,924,000	$997,000	$927,000	$659,000	$1,020,000	$1,164,786
F/V JESSICA ANN	2000	ME	200	$947,000	1.50	$1,421,000	$997,000	$423,000	$947,000	$882,300	$1,164,786
F/V SWORDMAN I	2000	HI	100	$1,528,600	1.50	$2,293,000	$997,000	$1,296,000	$1,529,000	$550,800	$1,164,786
F/V VANGUARD	2001	AK	200	$699,800	1.44	$1,008,000	$997,000	$11,000	$700,000	$1,020,000	$1,164,786
M/V KIMTON	2001	PR	200	$713,700	1.44	$1,028,000	$997,000	$31,000	$714,000	$1,020,000	$1,164,786
F/V GENEI MARU #7	2002	AK	100	$869,800	1.43	$1,244,000	$997,000	$247,000	$870,000	$703,800	$1,164,786
VICTORIA ROSE HUNT	2003	MA	100	$1,085,700	1.40	$1,520,000	$997,000	$523,000	$94,000	$326,400	$1,164,786
M/V RED DIAMOND	2003	FL	200	$2,595,200	1.40	$3,633,000	$997,000	$2,636,000	$2,595,000	$1,020,000	$1,164,786
CRANE BARGE MONARCH	2003	CA	200	$2,481,700	1.40	$3,474,000	$997,000	$2,477,000	$2,482,000	$1,020,000	$1,164,786
M/V BOWSTRING	2003	FL	300	$1,606,500	1.40	$2,249,000	$997,000	$1,252,000	$1,606,000	$1,739,100	$1,164,786
F/V NEW HORIZON	2004	CA	100	$805,300	1.36	$1,095,000	$997,000	$98,000	$305,000	$290,700	$1,164,786
F/V MWALIL SAAT	2004	GU	200	$3,413,500	1.36	$4,642,000	$997,000	$3,645,000	$3,414,000	$836,400	$1,164,786
F/V THE BOSS	2004	OR	200	$926,100	1.36	$1,259,000	$997,000	$262,000	$926,000	$1,020,000	$1,164,786
F/V MILKY WAY	2005	WA	200	$1,005,100	1.32	$1,327,000	$997,000	$330,000	$539,000	$1,020,000	$1,164,786
ALBION	2005	CA	200	$1,207,100	1.32	$1,593,000	$997,000	$596,000	$1,207,000	$1,020,000	$1,164,786

Vessel Type: Non-Tank Vessel < or = 300 GT (Cont.)

Vessel Name	Incident Year	Incident Location	Gross Tonnage	Total Incident Cost	Inflation Factor	Total Incident Cost (2021 Dollars)	Limits of Liability	Fund Exposure	Actual Fund Costs Incurred	Gross Ton Liability Limits for a 50% Cost Share	Minimum Liability for a 50% Cost Share
										Shaded Area Indicates Higher Limit Which Would Be Applied	
M/V CASITAS	2005	HI	300	$1,710,700	1.32	$2,258,000	$997,000	$1,261,000	$1,711,000	$1,377,000	$1,164,786
M/V SENECA	2007	MI	200	$1,211,000	1.23	$1,490,000	$997,000	$492,000	$1,211,000	$1,020,000	$1,164,786
BIG BOY & SCOOBY DOO	2008	PA	200	$1,010,800	1.18	$1,193,000	$997,000	$196,000	$1,011,000	$1,014,900	$1,164,786
CAPT MIKE	2009	LA	100	$2,413,400	1.20	$2,896,000	$997,000	$1,899,000	$2,413,000	$408,000	$1,164,786
F/V MAR-GUN	2009	AK	200	$1,442,500	1.20	$1,731,000	$997,000	$734,000	$199,000	$984,300	$1,164,786
WENONAH	2009	CA	300	$947,800	1.20	$1,137,000	$997,000	$140,000	$948,000	$1,479,000	$1,164,786
SOUND DEVELOPER	2009	AK	200	$1,657,100	1.20	$1,989,000	$997,000	$991,000	$1,657,000	$1,020,000	$1,164,786
MONARCH	2009	AK	300	$2,097,500	1.20	$2,517,000	$997,000	$1,520,000	$1,333,000	$1,514,700	$1,164,786
TUG TIGER	2011	CA	200	$4,205,500	1.13	$4,752,000	$997,000	$3,755,000	$4,205,000	$1,020,000	$1,164,786
DEEP SEA	2012	WA	200	$3,024,000	1.12	$3,387,000	$997,000	$2,390,000	$3,024,000	$1,004,700	$1,164,786
F/V LONE STAR	2013	AK	100	$3,398,400	1.10	$3,738,000	$997,000	$2,741,000	$3,398,000	$744,600	$1,164,786
RESPECT	2013	CA	200	$2,467,600	1.10	$2,714,000	$997,000	$1,717,000	$2,468,000	$1,020,000	$1,164,786
STEPHEN L. COLBY	2013	IA	200	$1,355,600	1.10	$1,491,000	$997,000	$494,000	$1,356,000	$1,020,000	$1,164,786
DAIKI MARU 7	2014	GU	100	$1,550,000	1.08	$1,674,000	$997,000	$677,000	$63,000	$591,600	$1,164,786
M/V CHALLENGER	2015	AK	100	$2,541,200	1.08	$2,744,000	$997,000	$1,747,000	$2,541,000	$683,400	$1,164,786
SPIRIT OF SACRAMENTO	2016	CA	100	$1,514,800	1.07	$1,621,000	$997,000	$624,000	$1,515,000	$504,900	$1,164,786
POWHATAN	2017	AK	200	$3,993,600	1.05	$4,193,000	$997,000	$3,196,000	$151,000	$1,020,000	$1,164,786
TUG TUTAHACO	2017	FL	200	$4,000,000	1.05	$4,200,000	$997,000	$3,203,000	$2,715,000	$1,020,000	$1,164,786
F/V PACIFIC PARADISE	2017	HI	200	$2,500,000	1.05	$2,625,000	$997,000	$1,628,000	$1,657,000	$1,020,000	$1,164,786
M/V OCEAN KING	2018	MA	200	$1,512,500	1.02	$1,543,000	$997,000	$546,000	$1,046,000	$1,020,000	$1,164,786
GATE CITY	2018	WV	200	$1,828,500	1.02	$1,865,000	$997,000	$868,000	$1,829,000	$1,020,000	$1,164,786
F/V MIDWAY ISLAND	2020	HI	200	$1,290,100	1.00	$1,290,000	$997,000	$293,000	$1,290,000	$1,020,000	$1,164,786
TOTAL						**$102,158,000**	**$43,868,000**	**$58,287,000**	**$69,516,000**		

GRAND TOTAL	**$2,261,777,000**	**$836,825,000**	**$1,424,952,000**	**$824,266,000**	

GAO U.S. Government Accountability Office

Oil and Gas Pipelines: Agencies Should Improve Oversight of Decommissioning

GAO-24-106444
Q&A Report to the Ranking Member, Committee on Natural Resources, House of Representatives

January 18, 2024

Why This Matters

Oil and gas pipeline operators have installed at least 384,000 miles of onshore gathering pipelines across the United States. Gathering lines carry natural gas, crude oil, and other hazardous liquids from production wells to processing facilities, refineries, or transmission pipelines. Many are located on federal lands and were installed decades ago.

Of the approximately 650 million acres of federal lands, 95 percent are managed by the Department of Agriculture's Forest Service or the Department of the Interior's Bureau of Land Management (BLM), Fish and Wildlife Service (FWS), or National Park Service (NPS). These agencies oversee most of the oil and gas operations on federal lands. Such operations include gathering line decommissioning—the process that pipeline operators should follow, after oil and gas production has ended, to ensure any remaining gathering lines are safe and to restore the land to its natural state. Some stakeholders have raised concerns about potential environmental or safety risks that gathering lines on federal lands could pose if not decommissioned properly.

We were asked to review issues related to decommissioning oil and gas gathering lines on federal lands. This report examines the risks associated with gathering lines that are not decommissioned properly or in a timely manner and how agencies oversee decommissioning of gathering lines on federal lands.

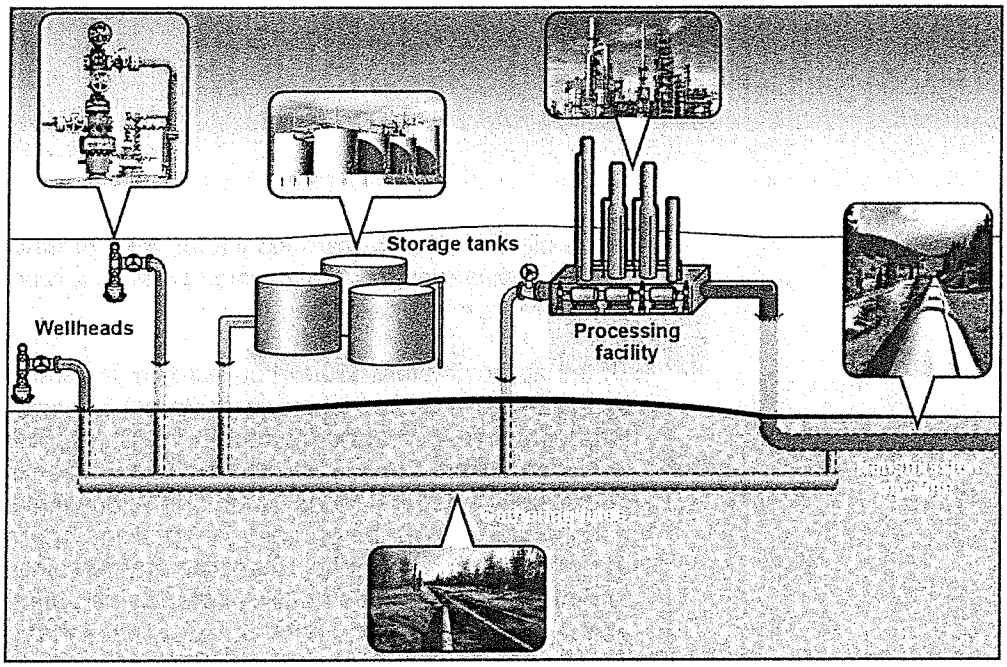
Key Takeaways

- If pipeline operators do not decommission gathering lines properly or in a timely manner, they could pose various safety and environmental risks, including spills, emissions, and explosions.
- It is unknown how many gathering lines are on federal lands or the extent to which operators have properly decommissioned them because agencies have limited data and have carried out limited oversight of decommissioning.
- Limited oversight can lead to orphaned gathering lines—those without any identifiable responsible parties. In such cases, the federal government may have to step in to manage and pay for decommissioning.
- To strengthen federal oversight of gathering lines on federal lands, we recommend that agencies develop plans to improve data collection for oversight purposes, further specify decommissioning timing requirements in some cases, and identify gathering lines presenting the greatest safety, environmental, or fiscal risks to prioritize.

What are gathering lines?

Gathering lines carry natural gas, crude oil, and other hazardous liquids from production wells to processing facilities, refineries, and transmission pipelines (see fig. 1). Production wells typically have at least one initial gathering line connected (commonly called a flow line). The flow line transports product to a storage tank, processing facility, or a gathering system (a network of pipelines collecting product from numerous wells).

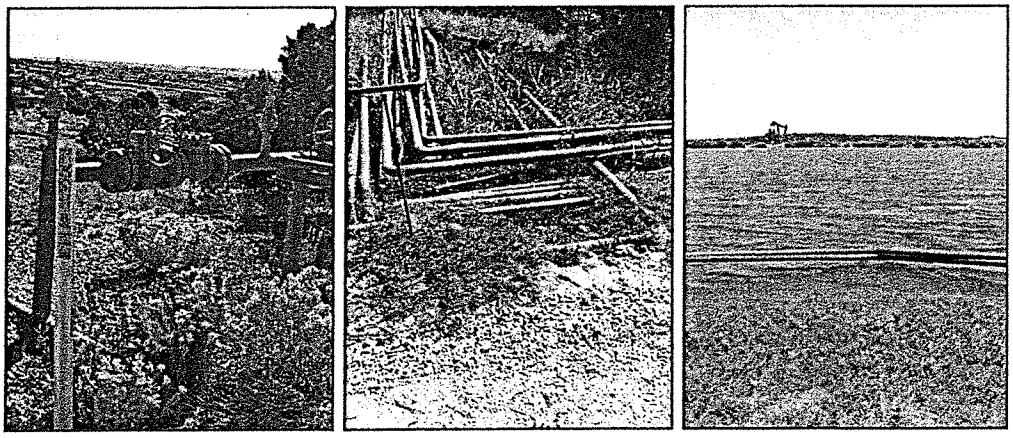
Figure 1: Example of Gathering Lines and Other Oil and Gas Infrastructure



Source: GAO analysis (illustration); and Ded Pixto/salman2/Maverick/rCarner/vacancylizm/serikbaib/stock.adobe.com (photos). | GAO-24-106444

In addition to gathering lines, the overall pipeline system in the United States features diverse facilities and other types of pipelines. Transmission pipelines tend to be larger, operate at higher pressures, and may carry product to refining, processing, or storage facilities. Distribution pipelines transport natural gas to homes and businesses. Gathering lines (see fig. 2) and distribution pipelines tend to operate within a single state (intrastate), while transmission pipelines tend to transport product across state boundaries (interstate).

Figure 2: Examples of Gathering Lines and Associated Infrastructure

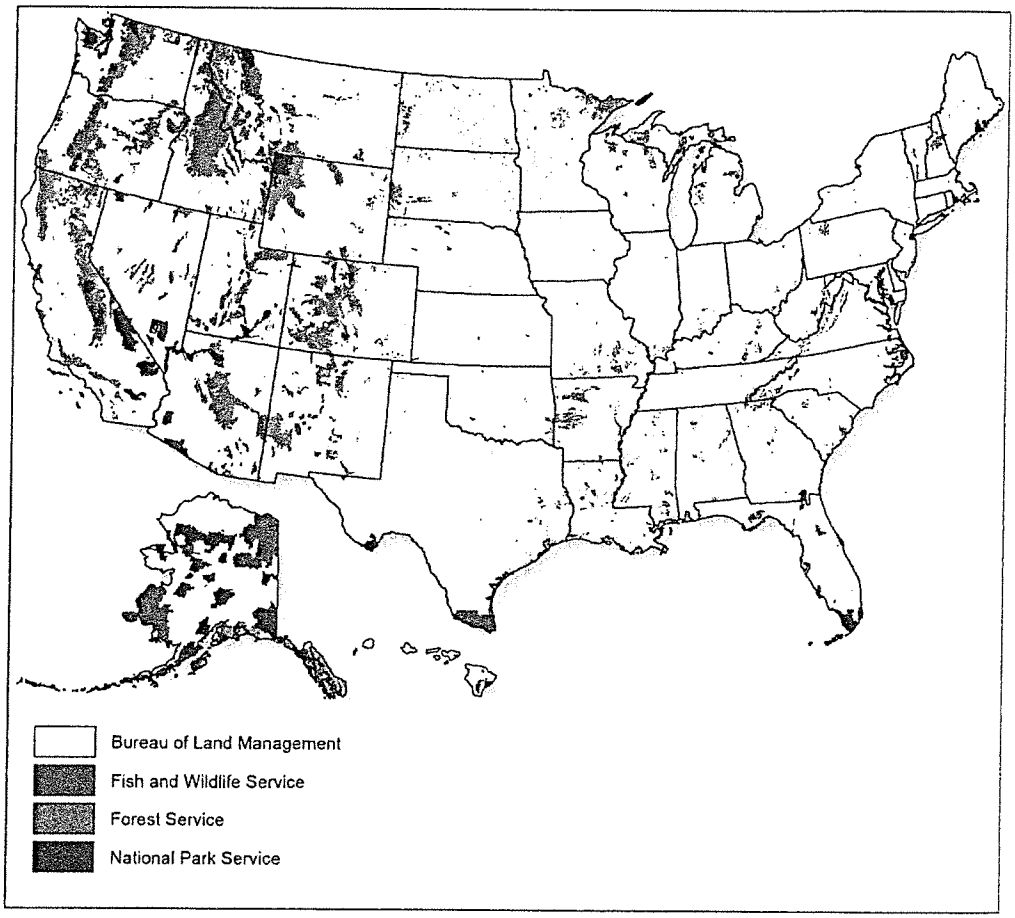


Source: GAO (left) and Fish and Wildlife Service (middle and right). | GAO-24-106444

On what federal lands are gathering lines typically found?

Though agencies generally do not collect the data to know the precise routes of gathering lines on federal lands, they are generally located on lands managed by the four agencies that oversee most oil and gas development: BLM, FWS, Forest Service, and NPS (see fig. 3). Most oil and gas development on federal lands occurs in western states—about 93 percent of oil production from federal lands is taking place in New Mexico, Wyoming, and North Dakota. However, oil and gas infrastructure can be found on federal lands across the country (see fig. 4). For example, most gathering lines on FWS-managed wildlife refuges are in Louisiana, Texas, and Oklahoma.

Figure 3: Federal Lands Managed by Bureau of Land Management, Fish and Wildlife Service, Forest Service, and National Park Service, as of September 2019



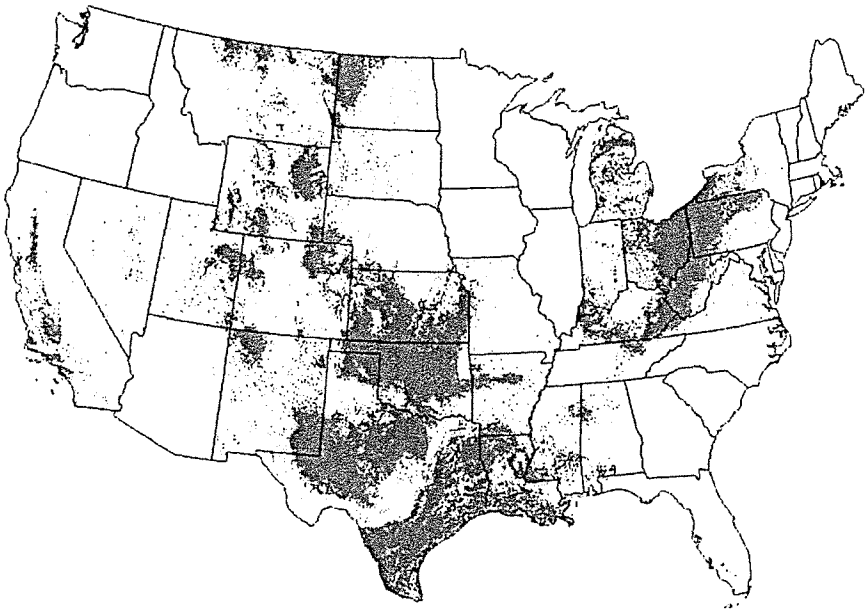
Sources: GAO analysis of U.S. Geological Survey's National Atlas website data; MapInfo (map). | GAO-24-106444

Typically, a land management agency regulates the following:

- gathering lines used to access federally leased mineral rights (on-lease) granted to an operator,[1]
- the use of a federal surface to install and operate gathering lines off-lease or to access non-federally leased mineral rights (right-of-way), or
- the terms of access across federally managed lands for operators to develop existing non-federal mineral rights (e.g., reserved rights or inholdings).

Additionally, BLM is responsible for granting and overseeing rights-of-way for oil and gas pipelines that traverse federal lands managed by two or more agencies (excluding NPS), even if the pipeline does not cross BLM-managed land.[2]

Figure 4: U.S. Onshore Oil and Gas Wells, as of November 2023



Source: GAO analysis of Enverus data; and ArcGIS (map). | GAO-24-106444

The Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA), which oversees the safety of pipeline transportation, historically has not regulated most gathering lines.[3] This is because gathering lines pose lower risks as they tend to be located in less populated areas and operate at low pressures. Over time, however, increased extraction of gas and oil from shale deposits has resulted in larger, higher pressure gathering lines, and development has brought populated areas closer to some rural gathering lines, increasing potential safety risks.

Because most gathering lines have historically not been regulated, available data about them are limited. In 2012, we recommended that PHMSA collect data from operators of historically unregulated onshore gathering lines.[4] In 2019 and 2021, PHMSA issued regulations instituting new reporting requirements for operators of historically unregulated gathering lines.[5] Specifically, among other things, the agency required all operators of hazardous liquid gathering lines to submit annual reports containing data on pipeline characteristics, such as diameter and age, starting in 2021. PHMSA required the same of all operators of natural gas gathering lines starting in 2023.

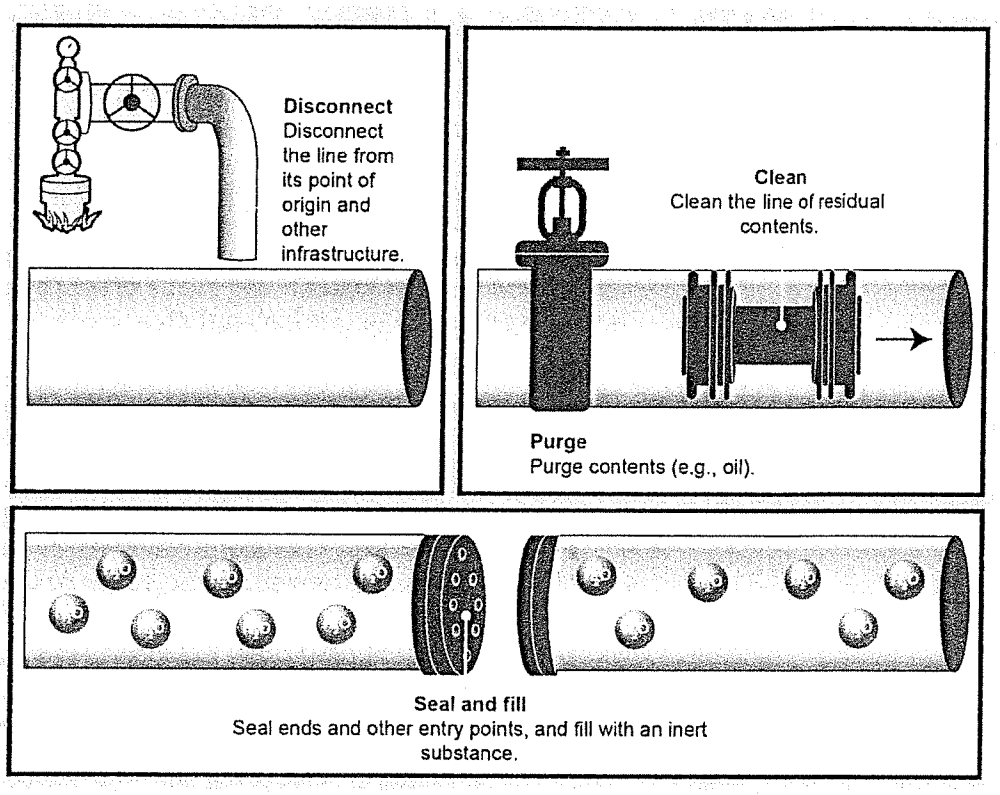
What is the standard process for operators to decommission gathering lines?

According to federal guidance, as well as agency officials and oil and gas industry representatives we spoke with, operators should take the following steps when decommissioning gathering lines:

- Disconnect the gathering line from its point of origin (e.g., wellhead), other pipelines, and any associated infrastructure.
- Purge contents (e.g., natural gas) and clean the gathering line.
- Remove the gathering line and associated infrastructure from the surface, as well as anything buried within a few feet of the surface.
- Seal the ends and any other entry points of buried lines.
- Fill buried gathering lines with an inert substance, such as water or nitrogen.
- Reclaim the surface—generally, to restore the site to a state approximating the condition it was in prior to oil and gas operations.

In figure 5, we illustrate some of these steps.

Figure 5: Examples of Gathering Line Decommissioning Activities



Source: GAO analysis (illustration). | GAO-24-106444

Aboveground gathering lines are usually removed while buried gathering lines remain in place to minimize disturbance to the surface. In either case, the land is then reclaimed. Such reclamation activities could include planting native vegetation, recontouring the soil, and taking erosion prevention measures.

What are the risks of improper or untimely decommissioning?

Gathering lines that were not decommissioned properly or in a timely manner have led to various safety and environmental risks, including spills, emissions, and explosions. Comprehensive data on incidents associated with gathering lines do not exist, though officials we interviewed highlighted the risks below.

Spills

The most common risk cited by officials we interviewed was spills from gathering lines. Hydrocarbons can remain in gathering lines that were not properly decommissioned. If those pipelines degrade over time or rupture from unexpected events, such as landslides, there could be spills that can contaminate soil and water, harm wildlife, and damage plants.

Emissions

If operators do not properly purge hydrocarbons when gathering lines are decommissioned, those pipelines can emit harmful gases. For example, methane is hazardous to humans, is flammable and potentially explosive, and is detrimental to the environment because it is a powerful greenhouse gas. The extent of methane emissions from improperly decommissioned gathering lines on federal lands is unknown.

Explosions

If gathering lines are not disconnected from wells, purged of product, or properly capped to prevent natural migration of product, they could leak hydrocarbons and cause an explosion if they are damaged during drilling or construction activities. For example, in 2017, homeowners in Colorado were replacing a water heater in their basement when they struck an improperly decommissioned gathering line on their property. Gas leaked from the gathering line and caused an explosion that killed two people and injured two others. According to the National Transportation Safety Board's report about this incident, the pipeline operator had failed to properly decommission the gathering line near the home. In addition, the homeowner was unaware of this because the local authorities had failed to confirm the location and status of nearby gathering lines before approving construction on the property.

What steps do agencies take to help ensure proper decommissioning?

To varying degrees, agencies seek to ensure proper decommissioning through administrative oversight, obtaining financial assurances, and on-site monitoring.

- **Approving reclamation plans.** Agencies require operators to submit reclamation plans prior to installing gathering lines and other oil and gas infrastructure. Once operations conclude, or a right-of-way permit terminates or is revoked, agencies expect operators to decommission the associated infrastructure in accordance with approved reclamation plans.
- **Requiring bonds.** Agencies currently require operators to post bonds or other financial assurances before most gathering lines are installed.[6] These bonds help ensure that operators will decommission their infrastructure; if operators do not, they forfeit the amount of the bond.
- **Monitoring active gathering lines.** Agencies reported taking some action to monitor active gathering lines and identify those that should be decommissioned under existing regulatory programs. However, this monitoring is limited by staff availability, agency authority, and gathering line accessibility, among other factors.
- **Verifying decommissioning.** Agencies can witness the decommissioning process, view post-decommissioning reports, confirm reclamation activities are complete, or require third-party monitors to ensure operators meet decommissioning requirements.

What challenges do agencies face in ensuring proper decommissioning?

Agency efforts to ensure proper decommissioning may be hindered by insufficient bonding, data limitations, and ambiguous requirements.

Insufficient bonding

Officials from all four agencies told us that operators have not posted sufficient bonds to decommission all existing gathering lines, but they are taking steps to address this issue. For example, both FWS and NPS updated their regulations in 2016 to require operators to provide sufficient financial assurance.[7] However, since FWS and NPS have not historically collected bonds for many existing gathering lines, it will take time to bring operators into compliance.

In a 2021 report, BLM acknowledged that insufficient bonding levels provide an inadequate incentive for operators to decommission oil and gas infrastructure.[8] In 2023, BLM proposed new regulations that would increase bond minimums collected for on-lease activities, and officials told us they plan to issue additional new regulations increasing bonds for rights-of-way.[9]

Data limitations

Agencies do not know the number, status, and precise routes of all gathering lines on federal lands, based on our analysis of available data and interviews with agency officials. Across the four agencies, gathering line data are limited, incomplete, and can be difficult to access if only hard copy records exist.

- BLM has ready access to detailed data for the more than 95,000 wells on federal leases, but its databases do not include any data for the gathering lines associated with those wells.
- NPS and FWS databases also focus on wells. Both agencies have little to no data for the gathering lines associated with those wells.
- BLM and Forest Service, which collectively manage nearly 39,000 rights-of-way with gathering lines, collect some information about those gathering lines but the data are limited. For example, neither agency tracks information on operating status (e.g., active, idle, decommissioned, etc.) or the precise routes of gathering lines.

Further, officials from all four agencies told us that some information about gathering lines is maintained in field offices, but this information may be difficult for staff outside of those field offices to access and use for monitoring purposes.

In addition, officials from all four agencies said data can be even more sparse for older gathering lines, which in some cases were installed prior to federal management of the land. This challenge is compounded because many older gathering lines are buried, which makes them difficult to find, according to agency officials.

While PHMSA issued regulations requiring new data reporting, operators are only required to submit geospatial data representing the precise locations of a subset of gathering lines.[10] Also, for orphaned gathering lines, there is no operator to report data.

Ambiguous timing requirement

For the nearly 39,000 gathering lines on BLM and Forest Service rights-of-way, the timing requirement for decommissioning is ambiguous, which results in a deference to operators that can affect agency oversight. BLM and Forest Service regulations specify triggers for termination and revocation of rights-of-way. However, upon termination or revocation, both agencies' regulations direct operators to decommission "within a reasonable time."[11] This does not set a clear expectation of timeliness that agencies can effectively enforce. Some agency officials told us that they primarily rely on operators to identify when they intend to decommission gathering lines.

According to *Standards for Internal Control in the Federal Government*, agencies should define objectives in specific and measurable terms that are fully and clearly set forth so they can be easily understood.[12] Without specific decommissioning timing requirements, BLM and Forest Service cannot ensure that operators decommission gathering lines in a timely manner. If they are not decommissioned in a timely manner, gathering lines may become orphaned, with no existing party responsible if operators go out of business. This can lead to the federal government having to pay for decommissioning. With more specific decommissioning timing requirements, agencies can strengthen their oversight and mitigate the federal government's fiscal exposure caused by orphaned gathering lines.

How are agencies improving limited data?

Agencies are taking some steps to improve limited data, but those efforts are ad hoc and not comprehensive. Examples of strategies to improve data being implemented by some agencies and field offices include the following:

- **Digitizing existing paper files.** For gathering lines on federal lands that were installed decades ago, agency officials told us any existing information is only available on hard copy maps or surveys stored in field offices. Although digitizing these paper copies can be time- and resource-intensive, two BLM field offices told us that they have started to digitize this information. For example, beginning in 2009, officials from one BLM field office told us they undertook an extensive effort to digitize maps and aerial imagery. As a result, the field office now has geospatial data for about 90 percent of the gathering lines in its region, according to officials.
- **Acquiring geospatial data from operators.** Some agency officials in field offices told us they are now requiring operators to submit geospatial data when installing new gathering lines. Another agency told us it worked with operators to map existing gathering lines and provide that geospatial data. Although it took the operator nearly 10 years to map its gathering lines, FWS noted it can now use those maps to identify potential leak sources and to avoid abandoned gathering lines when conducting regular maintenance activities, such as mowing.
- **Improving existing data systems.** In 2022, FWS officials told us they added several data fields for gathering line records to FWS's existing database. Those data fields may eventually provide staff with additional information to oversee decommissioning, such as operating status. However, officials said it will take years to fully collect the data necessary to populate those new data fields for existing gathering lines.
- **Collecting geospatial data during inspections.** Staff from NPS and one of BLM's field offices told us they gather geospatial route data when they conduct compliance inspections of gathering lines. During those inspections, staff use devices to collect geospatial data, which can then be uploaded to local databases when the staff return to the office.
- **Collecting data through external sources.** Some agencies told us that they collected gathering line data from external sources. Two agencies mentioned collaborating with state regulatory agencies that collect geospatial route data. One agency purchased a subscription for proprietary data that a vendor provides for the oil and gas industry. In addition, staff from one BLM field office reported that they work with local organizations, such as water associations, to collect data for gathering lines in their region.
- **Identifying undocumented infrastructure.** Some agencies are using funding from the 2021 Infrastructure Investment and Jobs Act (IIJA) to identify oil and gas infrastructure that is not currently documented in their databases.[13] For example, NPS developed a protocol for its inspectors to review existing records at state agencies and search for any evidence on park lands that might indicate improperly decommissioned infrastructure, such as complaints about water quality in the area.

These steps are likely to result in improved data over time, but they have been undertaken in an ad hoc manner and vary from field office to field office. None of the agencies has a documented plan to ensure they are collecting and maintaining the data needed to oversee decommissioning activities.

Standards for Internal Control in the Federal Government call for management to use quality information to achieve the agency's objectives. Quality information is

appropriate, current, complete, accurate, accessible, and provided on a timely basis. Developing a plan with a timeline for implementing data improvement efforts would provide management the assurance that officials are collecting and maintaining the data needed to oversee decommissioning. Specifically, a documented plan would identify what data are needed, potential sources for the data, timelines to collect or acquire the data, and how best to maintain the data over time, ensuring that they remain current and accessible.

What happens to gathering lines that are orphaned?

When gathering lines are orphaned, the federal government has stepped in to decommission some orphaned gathering lines. However, agencies have limited resources, and most of the agencies have not taken actions that will be necessary to prioritize the gathering lines that pose the greatest risks.

While the total number of orphaned gathering lines is unknown, implementation of the IIJA presents agencies with an opportunity to decommission the riskiest gathering lines. Congress authorized and appropriated $250 million in funding, available through September 2030, to decommission orphaned gathering lines and other orphaned infrastructure.[14]

All four agencies have taken steps to identify orphaned gathering lines to decommission with IIJA funding. As of September 2023, Interior had approved projects that will cost more than $82 million, including $23 million for Forest Service. For example, in one funded project that will cost $3.1 million, Forest Service will remove 31 miles of orphaned gathering lines in the Monongahela National Forest and reclaim the land. According to the agency, the gathering line—which contains unknown quantities of hydrocarbons—could leak or emit methane near ecologically and biologically diverse habitats that are home to endangered species. The gathering line also crosses several walking paths in the forest, and visitors have been injured when they accidentally walked on sections of the gathering line.[15]

Agencies' use of IIJA funding will address some orphaned infrastructure, but agencies told us that IIJA funding will not be sufficient to decommission all of it. For example, Forest Service officials said that even if all of the $250 million was provided solely to Forest Service, those funds would allow for decommissioning of only 5 to 10 percent of the known and expected orphaned infrastructure on Forest Service lands.

The IIJA provides funding to decommission existing orphaned gathering lines and calls for agencies to rank those lines for priority in decommissioning.[16] Agencies also need to analyze the risks associated with other gathering lines they oversee in order to prioritize their oversight over the riskiest. This is because additional lines may eventually become orphaned and some of those may pose substantial safety, environmental, or fiscal risks.

According to *Standards for Internal Control in the Federal Government*, agencies should identify, analyze, and respond to risks related to achieving the defined objectives. We found that only NPS has assessed the potential risks of gathering lines on its lands. When updating its regulations in 2016 and preparing an Environmental Impact Statement, NPS analyzed risks from oil and gas operations, including gathering lines, and identified additional risk mitigations.[17] No other agencies have analyzed the risks associated with the gathering lines they oversee. Assessing risks would allow agencies to adequately prioritize those gathering lines that pose the greatest safety, environmental, or fiscal risks for either oversight attention if lines are active, or decommissioning if lines are orphaned.

Conclusions

Gathering lines have generally been seen as low risk, and this has likely contributed to agencies historically exerting less oversight over their decommissioning. More recent changes in the size, pressure, and locations of gathering lines—as well as an explosion in 2017 that killed two people—have highlighted that even relatively low-risk infrastructure can be deadly if not properly decommissioned.

Agencies have taken steps in recent years to enhance their oversight of gathering line decommissioning, addressing some of the challenges we identified that agencies face in ensuring proper decommissioning. For example, BLM has proposed regulations that would increase bond minimums, and field offices have taken steps to improve their limited data.

However, we found that agencies generally lack the data needed to effectively oversee decommissioning and do not have plans to help ensure they collect needed data in the future. Having plans would help agencies to ensure that data improvement efforts succeed in yielding the data needed to effectively oversee gathering line decommissioning.

Additionally, we found that BLM and Forest Service have vague requirements for when operators should decommission gathering lines on nearly 39,000 rights-of-way. Without specifying time frames in which such lines should be decommissioned, operators may choose to delay decommissioning as long as possible, potentially resulting in additional orphaned gathering lines.

Federal government cleanup of orphaned infrastructure abandoned by private operators results in federal fiscal exposure. IIJA funding will address some of that orphaned infrastructure, but agencies told us that IIJA funding will not be sufficient to clean up all of it. Moreover, additional gathering lines that are not currently orphaned may eventually become orphaned, and some may pose substantial risks. Of the four agencies, only NPS has assessed risk to prioritize the riskiest gathering lines for oversight and decommissioning.

Recommendations for Executive Action

We are making nine recommendations—six to the Department of the Interior and three to the Department of Agriculture. Specifically:

The Director of BLM should develop a documented plan to ensure the agency collects and maintains the data necessary to oversee the decommissioning of gathering lines. (Recommendation 1)

The Director of BLM should further specify when gathering lines should be decommissioned following the termination or revocation of rights-of-way. (Recommendation 2)

The Director of BLM should analyze all gathering lines BLM oversees to identify and prioritize those that pose the greatest safety, environmental, or fiscal risks for oversight and decommissioning. (Recommendation 3)

The Director of FWS should develop a documented plan to ensure the agency collects and maintains the data necessary to oversee the decommissioning of gathering lines. (Recommendation 4)

The Director of FWS should analyze all gathering lines FWS oversees to identify and prioritize those that pose the greatest safety, environmental, or fiscal risks for oversight and decommissioning. (Recommendation 5)

The Director of NPS should develop a documented plan to ensure the agency collects and maintains the data necessary to oversee the decommissioning of gathering lines. (Recommendation 6)

The Chief of the Forest Service should develop a documented plan to ensure the agency collects and maintains the data necessary to oversee the decommissioning of gathering lines. (Recommendation 7)

The Chief of the Forest Service should further specify when gathering lines should be decommissioned following the termination or revocation of rights-of-way. (Recommendation 8)

The Chief of the Forest Service should analyze all gathering lines the Forest Service oversees to identify and prioritize those that pose the greatest safety, environmental, or fiscal risks for oversight and decommissioning. (Recommendation 9)

Agency Comments

We provided a draft of this report to the Department of Interior and Department of Agriculture for review and comment. In its comments, reproduced in appendix I, Interior concurred with our recommendations. In its comments, reproduced in appendix II, Agriculture generally concurred with our recommendations. Interior and Agriculture provided technical comments, which we incorporated as appropriate.

How GAO Did This Study

To examine risks associated with gathering lines that are not decommissioned properly and how agencies oversee decommissioning, we reviewed agency documentation and prior GAO reports, and conducted a literature search for studies or reports published over the past 10 years. We used key terms to search relevant databases, such as ProQuest, SCOPUS, and Petroleum Abstracts.

We also reviewed relevant laws, regulations, policies, and guidance related to decommissioning gathering lines. Then we compared agencies' decommissioning oversight activities with their responsibilities outlined in regulations, policies, and standards for internal control.

To collect a range of perspectives about risks and how agencies oversee decommissioning, we interviewed a nongeneralizable sample of 35 knowledgeable stakeholders, including agency officials from headquarters and field offices, state agency officials, representatives from the oil and gas industry, and members of environmental advocacy and pipeline safety organizations. Because we selected a nongeneralizable sample of organizations to interview, the information gathered is not generalizable to organizations beyond those we interviewed.

We conducted this performance audit from January 2023 to January 2024 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Addressee

The Honorable Raúl M. Grijalva
Ranking Member
Committee on Natural Resources
House of Representatives

GAO Contact Information

For more information, contact: Frank Rusco, Director, Natural Resources and Environment, at (202) 512-3841 or ruscof@gao.gov.

Chuck Young, Managing Director, Public Affairs, YoungC1@gao.gov, (202) 512-4800.

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Staff Acknowledgments: Quindi Franco (Assistant Director), Jeremy Williams (Analyst in Charge), Peggie Garcia, William Gerard, Cindy Gilbert, Kaelin Kuhn, Joseph Maher, Matt McLaughlin, Madhav Panwar, Jerry Sandau, Sara Sullivan, and Sara Vermillion.

Appendix I: Comments from Department of the Interior

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

Mr. Frank Rusco
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Rusco,

Thank you for providing the Department of the Interior (Department) an opportunity to review and comment on the draft Government Accountability Office (GAO) report titled, "*Oil and Gas Pipelines: Agencies Should Improve Oversight of Decommissioning*" (GAO-24-106444). We appreciate GAO's review of the Department's risks associated with gathering lines that are not decommissioned properly or in a timely manner and how agencies are overseeing the decommissioning of gathering lines on federal lands.

The GAO issued multiple recommendations, including six to the Department of Interior to address its findings. Below is a summary of actions taken or planned to implement the recommendations:

Recommendation 1: The Director of BLM should develop a documented plan to ensure the agency collects and maintains the data necessary to oversee the decommissioning of gathering lines.

Response: Concur. The BLM will develop a documented plan to ensure the collection and maintenance of data necessary to oversee the proper and timely decommissioning of oil and gas gathering pipelines located on Rights-of-Way (ROW). Gathering lines located on oil and gas leases are identified in the Application for Permit to Drill (APD), associated to the well, and tracked in the Automated Fluid Minerals Support System (AFMSS).

Target Date: February 15, 2025

Recommendation 2: The Director of BLM should further specify when gathering lines should be decommissioned following the termination or revocation of rights-of-way.

Response: Concur. The BLM will issue policy to strengthen Federal oversight of decommissioning activities for gathering lines and pipelines issued through grant authorizations on Federal lands. The policy will include guidance on timelines for decommissioning.

Target Date: February 15, 2025

Recommendation 3: The Director of BLM should analyze all gathering lines BLM oversees

to identify and prioritize those that pose the greatest safety, environmental, or fiscal risks for oversight and decommissioning.

Response: Concur. The BLM actively analyzes all on-lease gathering lines. This is done in accordance with the Mineral Leasing Act of 1920, as amended, implementing regulations, and risk-based policies. The regulations are at 43 CFR 2880 and 43 CFR 3100. The risk-based policies include the Inspection Strategy Instruction Memorandum (IM), the Idled Well IM and the Orphaned Well IM. Additional tools for analyzing gathering lines issued with a ROW authorization will be included in the plan as required by Recommendation 1 listed above.

Target Date: February 15, 2025

Recommendation 4: The Director of FWS should develop a documented plan to ensure the agency collects and maintains the data necessary to oversee the decommissioning of gathering lines.

Response: Concur. The FWS will develop a documented plan to update the National Wildlife Refuge System oil and gas permitting and inspection process to collect and maintain the necessary information and geospatial data to manage the decommissioning of gathering lines.

Responsible Official: Chief, National Wildlife Refuge System
Target Date: January 15, 2025

Recommendation 5: The Director of FWS should analyze all gathering lines FWS oversees to identify and prioritize those that pose the greatest safety, environmental, or fiscal risks for oversight and decommissioning.

Response: Concur. The FWS will update its oil and gas inspection process to assess gathering lines associated with existing and new oil and gas operations on refuge lands for monitoring and decommissioning based on safety, health, environmental, and/or fiscal risks.

Responsible Official: Chief, National Wildlife Refuge System
Target Date: January 15, 2025

Recommendation 6: The Director of NPS should develop a documented plan to ensure the agency collects and maintains the data necessary to oversee the decommissioning of gathering lines.

Response: Concur. The NPS will develop this plan to support, guide, and enhance its current efforts to collect this data. These current efforts include bringing oil and gas operators in national park units into compliance with NPS regulations at 36 C.F.R. Part 9, Subpart B, which apply to nonfederal oil and gas operations including gathering lines. In addition to regulatory oversight and adequate bonding, the plan will include the NPS's collection and maintenance of data as part of its ongoing inspections of oil and gas well sites in park units and related facilities, including gathering lines.

Responsible Official: Geologic Resources, Natural Resource Stewardship & Science
Target Date: December 31, 2024

We've included technical comments on the draft report as an Enclosure to this correspondence for your consideration. If you should have any questions or need additional information, please contact the PFM AM team at DOI_PFM_AM@ios.doi.gov.

Sincerely,

JOAN MOONEY Digitally signed by JOAN MOONEY Date: 2024.01.05 12:49:24 -05'00'

Joan M. Mooney
Principal Deputy Assistant Secretary
Exercising the Delegated Authority of the Assistant Secretary for Policy, Management and Budget

Enclosure

Appendix II: Comments from Department of Agriculture

USDA United States Department of Agriculture | Forest Service | Washington Office | 1400 Independence Avenue, SW Washington, D.C. 20250

File Code: 1420
Date: 12/12/23

Mr. Frank Rusco
Director, Natural Resources & Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Rusco:

The U.S. Department of Agriculture (USDA) Forest Service appreciates the opportunity to respond to the U.S. Government Accountability Office's (GAO) draft report titled, "Decommissioning Oil & Gas Pipelines on Federal Lands (GAO-24-106444)."

The Agency generally agrees with the GAO draft report and recommendations and will create a corrective action plan to address the GAO findings. The plan will focus on collecting necessary data for future oversight and decommissioning of oil and gas pipelines on the National Forest System, prioritizing pipelines that pose the greatest risks.

Thank you again for the opportunity to review the draft report. If you have any questions, please contact Robert Velasco, Chief Financial Officer, at robert.velasco@usda.gov.

Sincerely,

RANDY MOORE
Chief

Caring for the Land and Serving People

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Endnotes

[1]We use the term "operator" to refer to pipeline operators and operating rights owners on federal oil and gas leases, as well as to federal lessees, right-of-way/easement grantees, special use permittees, and any other permittees for access to reserved rights, among others owning or operating the gathering pipelines addressed in this report.

[2]Statutory authorities and regulatory requirements are often different for oil and gas development in Alaska. Additionally, we did not identify many gathering lines on federal lands in Alaska. For these reasons, we excluded Alaska from our review.

[3]We refer to hazardous liquid and natural gas gathering lines that were not subject to PHMSA's regulations prior to the issuance of the 2019 and 2021 rules as "historically unregulated." One category of pipelines subject to PHMSA's safety requirements, beyond annual and accident reporting, are regulated rural gathering lines. These are defined as any onshore hazardous liquid, including oil, gathering line in a rural area that has a diameter within a specified 2-inch range, operates at or above a certain maximum pressure, and is located in or near an environmentally sensitive area. 49 C.F.R. § 195.11. PHMSA specifies final reporting requirements when regulated gas and hazardous liquid pipelines that cross commercially navigable waterways are abandoned, as well as abandonment and deactivation procedures for regulated gas pipelines. *Id.* §§ 192.727, 195.59.

[4]GAO, *Pipeline Safety: Collecting Data and Sharing Information on Federally Unregulated Gathering Pipelines Could Help Enhance Safety*, GAO-12-388 (Washington, D.C.: Mar. 22, 2012).

[5]84 Fed. Reg. 52260 (Oct. 1, 2019); 86 Fed. Reg. 63266 (Nov. 15, 2021).

[6]BLM, Forest Service, and the Fish and Wildlife Service may, but do not always, require a bond for rights-of-way or other off-lease permits.

[7]81 Fed. Reg. 77972, 77980, 78002 (Nov. 4, 2016); 81 Fed. Reg. 79948, 79979 (Nov. 14, 2016).

[8]Department of the Interior. *Report on the Federal Oil and Gas Leasing Program: Prepared in Response to Executive Order 14008* (November 2021).

[9]88 Fed. Reg. 47562, 47579–80, 47627–28 (July 24, 2023).

[10]While most gathering line operators do not have to submit geospatial data for those pipelines into PHMSA's mapping system, operators of regulated rural hazardous liquid gathering lines (including oil) are required to do so. *See* 49 C.F.R. § 195.11(b)(4).

[11]36 C.F.R. § 251.60(i); 43 C.F.R. § 2886.19(a).

[12]GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: September 2014).

[13]Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021) (IIJA).

[14]*See* IIJA, Pub. L. No. 117-58, § 40601, 135 Stat. 429, 1081–82, 1090–91 (2021) (codified in relevant part at 42 U.S.C. §15907(b), (h)(1)); *see also id.* 135 Stat. at 1395. Specifically, the act authorized and appropriated $250 million to establish programs to plug, remediate, and reclaim orphaned wells located on federal lands managed by the Departments of Agriculture and the Interior. Pipelines associated with orphaned wells are included in the scope of the program. *See* 42 U.S.C. § 15907(b)(2).

[15]In technical comments provided in response to an earlier draft of this report, Forest Service told us that they had identified an existing pipeline operator as a responsible party and will seek to redirect the awarded IIJA funds to a different project.

[16]IIJA § 40601, 135 Stat. at 1081–82, 1090–91 (codified in relevant part at 42 U.S.C. §15907(b), (h)(1)); *see also id.* 135 Stat. at 1395.

[17]DOI/NPS, "Revision of 9b Regulations Governing Non-Federal Oil and Gas Activities–Final Environmental Impact Statement" (2016); *see also* 81 Fed. Reg. 77972 (Nov. 4, 2016).