Nos. 20-16157 and 20-16158

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

STATE OF CALIFORNIA, et al.,

Plaintiffs-Appellants,

v.

UNITED STATES BUREAU OF LAND MANAGEMENT, et al.,

Defendants-Appellees,

and

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA, et al.,

Intervenor-Defendants-Appellees.

On Appeal from the United States District Court for the Northern District of California, Nos. 4:18-cv-00521 and 4:18-cv-00524
(Hon. Haywood S. Gilliam)

BRIEF OF AMICUS CURIAE INSTITUTE FOR POLICY INTEGRITY AT NEW YORK UNIVERSITY SCHOOL OF LAW IN SUPPORT OF PLAINTIFFS-APPELLANTS AND REVERSAL

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Date: October 28, 2020 */s/ Richard L. Revesz*
Richard L. Revesz

[i] Under Federal Rule of Appellate Procedure 29(a)(4)(E), the Institute for Policy Integrity states that no party's counsel authored this brief in whole or in part, and no person contributed money intended to fund the preparation or submission of this brief.

[ii] This brief does not purport to represent the views of New York University School of Law, if any.

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AMICUS CURIAE'S INTEREST AND AUTHORITY TO FILE

The Institute for Policy Integrity at New York University School of Law ("Policy Integrity") submits this *amicus curiae* brief in support of Plaintiffs-Appellants' challenge to the Bureau of Land Management's ("BLM") repeal, 82 Fed. Reg. 61,924 (Dec. 29, 2017) ("Repeal") of the Hydraulic Fracturing Rule, 80 Fed. Reg. 16,128 (Mar. 26, 2015) ("2015 Rule"). Policy Integrity is a nonpartisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship on administrative law, economics, and environmental policy.

Plaintiffs challenge the Repeal as arbitrary and capricious for, among other reasons, improperly considering costs and benefits. Policy Integrity's economists and lawyers have significant relevant expertise, having produced extensive scholarship on the balanced use of economic analysis in regulatory decisionmaking. For example, our Director, Richard L. Revesz, has published over eighty articles and books on environmental and administrative law, including many on the legal and economic principles that inform rational regulatory decisions.[1]

To promote its mission, Policy Integrity files *amicus* briefs addressing the economic analyses that agencies use to support rulemakings. *E.g.*, Br. of Inst. for

[1] *See* Richard L. Revesz, Publications, https://its.law.nyu.edu/facultyprofiles/index.cfm?fuseaction=profile.publications&personid=20228.

Policy Integrity as *Amicus Curiae*, *A Cmty. Voice v. EPA*, No. 19-71930 (9th Cir., filed Jan. 22, 2020) (arguing that the agency unreasonably dismissed the rule's forgone benefits); Br. of Inst. for Policy Integrity as *Amicus Curiae*, *Air Alliance Houston v. EPA*, 906 F.3d 1049 (D.C. Cir. 2018) (same); Br. of Inst. for Policy Integrity as *Amicus Curiae*, *California v. BLM*, 277 F. Supp. 3d 1106 (N.D. Cal. 2017) (same). In many such cases, courts have agreed that mischaracterizing or ignoring forgone benefits is arbitrary. *Air Alliance Houston*, 906 F.3d at 1067-68; *California*, 277 F. Supp. 3d at 1123.

Policy Integrity has strong interests in this particular case. In 2014, our Director Richard Revesz testified before the House Committee on Energy and Commerce about the economic case for federal regulation of hydraulic fracturing, and the interaction between federal and state standards.[2] Policy Integrity filed comments on the proposed Repeal, commenting that BLM wrongly dismissed significant forgone benefits as "marginal" simply because they were not quantified; that BLM's own calculations belied its claim that new state regulations and industry practices adequately substituted for the federal storage tank requirement; and that

[2] *Constitutional Considerations: State vs. Federal Environmental Policy Implementation: Hearing Before the Subcomm. on Env't & the Econ. of the H. Comm. on Energy & Commerce*, 113th Cong. (July 11, 2014) (testimony of Richard Revesz), *available at* https://docs.house.gov/meetings/IF/IF18/20140711/102452/HHRG-113-IF18-Wstate-ReveszR-20140711.pdf.

BLM ignored the Repeal's indirect effects. *See* Appellants' Joint Excerpts of Record ("ER") at ER000904-09. Policy Integrity presented similar arguments as *amicus* before the district court below, and the court found that Policy Integrity presented "unique arguments regarding the cost and benefit analysis in the Repeal." ER000045 n.15.

Policy Integrity's expertise in cost-benefit analysis and administrative law give it a unique perspective for evaluating Plaintiffs' claims that the Repeal is arbitrary and capricious.

Per Fed. R. App. P. 29(a)(2), all parties have consented to the filing of this *amicus* brief, provided it is timely and complies with applicable rules.

SUMMARY OF ARGUMENT

BLM's cost-benefit analysis reveals that the 2017 Repeal relies on arbitrary assumptions that are inconsistent with the record.

First, BLM insists that any forgone benefits are "marginal" or have been "eliminated" because the "benefits were largely unquantified in the 2015 rule," and because new developments make the 2015 Rule "redundant." *See* 82 Fed. Reg. at 61,939; BLM, *Regulatory Impact Analysis for the Final Rule to Rescind the 2015 Hydraulic Fracturing Rule* 9 (2017) ("2017 RIA"). But every respected guide on cost-benefit analysis—from White House manuals to the economic literature to BLM's own historical regulatory practices—confirms that unquantified effects

demand due consideration and that a current inability to quantify an effect reveals nothing about that effect's certainty or magnitude. *See infra* Section I.A. BLM fails to adequately explain why risks that two years earlier it found were "certain" and "significant," albeit unquantified, are now suddenly deemed "too small." *Compare* 80 Fed. Reg. at 16,130, 16,204 *with* 82 Fed. Reg. at 61,942.

Moreover, BLM's argument that new developments render the 2015 Rule "redundant" is belied by the agency's own analyses. To offer just one example, data related to the 2015 Rule's requirement to use tanks rather than pits to store recovered fluids provides a clear refutation of BLM's assertion. Compared to its 2015 estimates of how many operations would be subject to the tank requirement, BLM now estimates that a similar proportion of total operations in a similar number of jurisdictions will opt to use cheaper, riskier pits rather than safer tanks following the Repeal. *See infra* Section I.B. This example demonstrates that the 2015 Rule's tank requirement is *not redundant* with other standards. Indeed, were the tank requirement actually redundant as BLM claims, such that the Repeal would not result in operators using cheaper pits instead of safer tanks, then none of the millions of dollars in cost savings that BLM now touts could actually materialize.

BLM claims the Repeal is "[a]dditionally" justified by decreasing indirect impacts to truck traffic. 82 Fed. Reg. at 61,939-40. But it is patently arbitrary for BLM to focus on one alleged indirect benefit to justify the Repeal, while

simultaneously refusing to consider the Repeal's indirect costs, such as worker safety impacts and forgone benefits to industry. *See infra* Section II.

Overall, BLM is factually wrong about the Repeal's costs and benefits, in ways that render the Repeal arbitrary and capricious.

ARGUMENT

BLM's cost-benefit analysis reveals that the Repeal relies on arbitrary assumptions and explanations that "run[] counter to the evidence." *Motor Vehicles Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). BLM's assessments of cost savings and forgone benefits from rescinding the 2015 Rule "contradict" the agency's "prior factual findings," yet fail to offer the "'more substantial justification' or reasoned explanation mandated by [the Supreme Court]." *Organized Vill. of Kake v. Dep't of Agric.*, 795 F.3d 956, 967 (9th Cir. 2015) (citations omitted).

In the 2015 Rule, BLM concluded that:

- There was a "clear" need for "preventative" regulations to protect surface waters and groundwater. 80 Fed. Reg. at 16,180, 16,188-89.
- The 2015 Rule overall—including, for example, requiring storage of recovered fluids in rigid tanks rather than pits—"exceed[ed]" most state and industry standards. BLM, *Regulatory Impact Analysis for Hydraulic Fracturing Rule* 3 (2015) ("2015 RIA").

- The 2015 Rule provided "*significant benefits* to all Americans by avoiding potential damages to water quality, the environment, and public health." 80 Fed. Reg. at 16,130 (emphasis added).
- For example, requiring tanks instead of pits "most certainly reduce[s] risk" not just to surface water, groundwater, and wildlife, but also to air quality. *Id.* at 16,162, 16,204. BLM made this determination after rejecting concerns of indirect costs from truck traffic related to tanks. *Id.* at 16,162. BLM also highlighted "additional" indirect "advantage[s]" of switching from pits to tanks, including reducing industry's long-term monitoring and remediation costs, and increasing the potential to recycle recovered fluids. *Id.* at 16,163, 16,203.

In the 2017 Repeal, BLM unaccountably changes its mind on all counts. BLM now insists that any forgone benefits from rescinding the 2015 Rule are at most "marginal" and "too small," or have been "completely offset" and "eliminated." *See* 2017 RIA at 5, 9, 55; 82 Fed. Reg. at 61,939, 61,942. This Court has ruled that if an agency reverses policy by finding that an environmental risk—judged "only two years before" to be "important"—is instead "merely . . . minor," that agency must grapple with the original facts and offer a "more substantial" and "reasoned explanation." *Organized Vill. of Kake*, 795 F.3d at 967-69. The Repeal fails that standard.

I. BLM Arbitrarily Assumes that Forgone Benefits Are Insignificant or Nonexistent

BLM dismisses the 2015 Rule's benefits as "too small," "marginal," or completely "eliminated," on the grounds that BLM could not quantify the 2015 Rule's benefits and that, regardless, any benefits are now suddenly redundant with state laws and other practices. *See* 2017 RIA at 5, 9, 55; 82 Fed. Reg. at 61,939, 61,942. But the smattering of reasons BLM offers to dismiss the 2015 Rule's benefits are either logically incoherent or contradicted by the agency's own record.

A. BLM Arbitrarily Dismisses the 2015 Rule's Benefits as "Largely Unquantified"

To support its claim that the 2015 Rule's benefits are "too small," BLM asserts that "[t]here were no monetary estimates of any incremental benefit" of the 2015 Rule. 82 Fed. Reg. at 61,942. The implication is that unquantified benefits are inherently "small" or less "certain to exist." *Id.; see also id.* at 61,939 ("Any marginal benefits provided by the 2015 rule do not outweigh the rule's costs . . . . *In fact, benefits were largely unquantified* in the 2015 rule.") (emphasis added); 2017 RIA at 4-5, 9, 55 (repeatedly citing lack of quantification when arguing that forgone benefits are "marginal"). Indeed, Federal Defendants made this argument explicitly in their cross-motion for summary judgment before the district court: "BLM concluded that the cost savings in the 2017 Rule exceeded the foregone benefits of

the 2015 Rule, *particularly because BLM never quantified the 2015 Rule's benefits*." ER000226-27 (emphasis added; citations omitted).

But concluding that forgone benefits must be small because they were unquantified represents a radical and arbitrary departure, both from the agency's own factual findings in 2015, and from best practices for regulatory analysis.

Though the 2015 Rule's benefits were unquantified, that fact by no means supports a finding now that those benefits were marginal or small. Indeed, in 2015, BLM found that the rule would deliver real and "significant benefits to all Americans," 80 Fed. Reg. at 16,130, particularly by "significantly reduc[ing] the risks . . . to surface waters and usable groundwater," *id.* at 16,203. BLM found that, in the face of "increasingly complex hydraulic fracturing operations," it was beneficial to take "proactive" and "preventative" steps to protect the environment and public health. *Id.* at 16,188-89.

The agency's rescission of the tank requirement helps illustrates this point. In 2015, BLM found that whereas pits pose "a risk of impacts to air, water, and wildlife," tanks "are less prone to leaking, are safer for wildlife, and will have less air emissions." *Id.* at 16,162. This conclusion was based on BLM's "observations in the field" and "BLM's experience" that for "high-volume operations," using tanks instead of pits "reduces reclamation requirements, eliminates longer term environmental risk, reduces risks of spills or leaks, and increases safety." *Id.* at

16,163. In fact, it was "generally recognized that tanks carry less risk onsite" for spills and leaks. *Id.* at 16,204. BLM "agree[d]" with commenters that, even if lined, pits carried "too great" a "risk of impacts to air, water, and wildlife." *Id.* at 16,162. Furthermore, by making leaks more "readily detectable," BLM expected tanks would "provide the best possible avoidance of surface and groundwater spills and contamination" and so "provide environmental benefit." *Id.* at 16,203. Ultimately, BLM found that the tank requirement "would *most certainly* reduce risk." *Id.* at 16,204 (emphasis added). In short, BLM found that the 2015 Rule's benefits, though unquantified, were "significant" and "certain," based on its field observations, experience, public comments, and other evidence.

BLM now wants to dismiss those same benefits as negligible and uncertain, despite the underlying evidence. Yet to justify policy reversals, agencies must offer reasoned explanations based on rational principles. *Organized Vill. of Kake*, 795 F.3d at 968. Ignoring an important aspect of the problem merely because it is unquantified is an arbitrary violation of standard practices for regulatory analysis.

Executive orders and guidance governing regulatory analysis instruct agencies to give due consideration to all important unquantified costs and benefits. Executive Order 12,866 requires agencies to assess "qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider." Exec. Order No. 12,866 § 1(a), 58 Fed. Reg. 51,735 (Oct. 4, 1993); *see also* 2017

RIA at 5 (professing to follow Exec. Order 12,866 in "recognizing that not all benefits and costs can be described in monetary or even in quantitative terms"). And courts agree that "[t]he mere fact that the magnitude of [an effect] is uncertain is no justification for disregarding the effect entirely." *Pub. Citizen v. Fed. Motor Carrier Safety Admin*., 374 F.3d 1209, 1219 (D.C. Cir. 2004); *see also Air Alliance Houston,* 906 F.3d at 1067 (faulting the agency for, without analysis, dismissing unquantified forgone benefits as "speculative"); Richard L. Revesz, *The Trump Administration's Attacks on Regulatory Benefits*, 14 Rev. Env't Econ. & Pol'y 324, 325 (2020) (contrasting recent agency actions against the "longstanding regulatory practice" of weighing unquantified benefits).

The Office of Management and Budget ("OMB")'s guidance on regulatory analysis cautions agencies against ignoring the potential magnitude of unquantified benefits, because the most efficient rule may not have the "largest quantified and monetized . . . estimate." OMB, *Circular A-4* at 2 (2003).[3] The economic literature widely recognizes that cost-benefit analysis requires proper consideration of effects that "defy quantification but are thought to be important." Kenneth J. Arrow et al., *Benefit-Cost Analysis in Environmental, Health, and Safety Regulation: A Statement*

[3] *Available at* HFRR_034342. *Circular A-4* was issued under President George W. Bush and continues to guide agencies on regulatory analysis. *See* 2017 RIA at 5 (relying on *Circular A-4*).

of Principles 10 (1996).[4] The mere fact that a benefit cannot currently be quantified says little about its magnitude. In recent decades, some of the most important regulatory benefits were once considered unquantifiable but were subsequently quantified. Richard L. Revesz, *Quantifying Regulatory Benefits*, 102 Cal. L. Rev. 1423, 1436 (2014) (explaining, for example, how the key valuation of mortality risk reductions—known as the "value of a statistical life"—had "initially evaded quantification").

Recognizing that unquantified benefits can be substantial had been a longstanding BLM practice. For example, in 1982, BLM prepared its *Final Regulatory Impact Analysis for Regulations Governing Competitive Oil and Gas Leasing in the National Petroleum Reserve in Alaska*.[5] BLM explained that, "[b]ecause of information gaps and scientific uncertainty," the "social costs" of allowing oil and gas drilling on sensitive lands "cannot be quantitatively predicted." *Id*. at 33. Nevertheless, BLM noted that drilling operations could entail the "risk of *significant* environmental harm," *id.* (emphasis added), and particularly insisted that

[4] The Court may consider background material on technical subjects outside the record to assess the sufficiency of the agency's assessments. *Love v. Thomas*, 858 F.2d 1347, 1356 (9th Cir. 1988).

[5] Complete text at https://books.google.com/books?id=5g4xAQAAMAAJ. Courts may look beyond the administrative record and take judicial notice of agencies' own practices. *Dent v. Holder*, 627 F.3d 365, 371 (9th Cir. 2010); *Rose v. Stephens Inst.*, No. 09-cv-05966, 2016 WL 5076214 at *4 (N.D. Cal. Sept. 20, 2016) (taking notice of past agency reports to compare "historical practice").

sociocultural and economic effects to Native communities, while unquantifiable, were "real and very important." *Id.* at 32. Similarly, BLM consistently concluded that unquantified environmental impacts could be "substantial" both when regulating hardrock mining during the Clinton Administration, 65 Fed. Reg. 69,998, 70,102 (Nov. 21, 2000), and when repealing portions of those regulations during the George W. Bush Administration, 66 Fed. Reg. 54,834, 54,844 (Oct. 30, 2001). In short, BLM has demonstrated since the Reagan Administration that even if environmental effects are unquantified, they may be significant and must be weighed in decisionmaking.

The fact that the 2015 Rule's benefits were unquantified does not "explain why the detailed factual findings regarding the harm that would be prevented upon implementation" of the 2015 Rule are now so readily dismissed. *Air Alliance Houston*, 906 F.3d at 1067.

B. The Agency's Own Analyses Reveal that the 2015 Rule Is Not Redundant

BLM claims, "[b]ased upon an updated review of state and some tribal regulations, as well as existing Federal regulations," that "the potential incremental benefit of the 2015 rule *has been eliminated* by existing legal frameworks." 2017 RIA at 9 (emphasis added). Elsewhere, BLM claims that the 2015 Rule is now "redundant" because of new state laws, new industry practices, and existing federal

authorities. *Id.* at 4-5; *see also id.* at 55 ("Any potential increase in risk [is] partially *or completely offset* by state and other Federal regulations.") (emphasis added).

Plaintiffs-Appellants explain why this is not true. *See* Opening Br. of the State of California ("California Br.") at 29-35 (explaining how "state requirements continue to differ significantly" from the 2015 Rule); Opening Br. of Pls.-Appellants Sierra Club, et al. ("Sierra Club Br.") at 36-40 (explaining how the Repeal leaves regulatory gaps on tribal lands). A detailed review of the specific decision to rescind the storage tank requirement will further demonstrate the falseness of BLM's claims.

Because rescinding the tank requirement produces two-fifths of the total cost savings that BLM uses to justify the Repeal, 2017 RIA at 54, the tank requirement makes a good case study for the overall irrationality of BLM's justifications. In 2015, BLM concluded that the tank requirement was certain to significantly reduce risks to surface water, groundwater, public health, wildlife, air emissions, worker safety, and remediation, and that such proactive measures warranted the relatively modest compliance costs. 2015 RIA at 3, 77-80; 80 Fed. Reg. at 16,163, 16,188, 16,203. BLM now dismisses all those benefits from the tank requirement on the grounds that new developments have allegedly made the 2015 Rule redundant.

Yet BLM admits that, without the 2015 Rule, pre-existing federal regulations lack any tank requirement. BLM, *Environmental Assessment: Rescinding the 2015 Hydraulic Fracturing on Federal and Indian Lands Rule* 43 (2017) ("2017 EA")

(answering "No" on whether BLM's "previous requirement" included any "minimum requirement for storage tanks"). Similarly, BLM admits that there is no industry-wide guidance to use tanks rather than pits. 2017 RIA at 48. Therefore, to support its claim that new developments make the 2015 Rule's tank requirement redundant, BLM would need to show major changes in local coverage, either through new state or tribal laws or changes in geographic distribution of higher-risk, higher-volume operations. BLM does not—and cannot—show such major changes.

1. Without a Federal Tank Requirement, a Significant and Steady Proportion of Operations Will Install Cheaper, Riskier Pits

In both the 2015 Rule and the 2017 Repeal, BLM first assessed what percent of operations on federal lands across state and tribal jurisdictions would potentially be subject to a tank requirement. 2015 RIA at 70-75; 2017 RIA at 47-48, 50, 69-73. This applicability assessment was based on whether the jurisdictions had comparable requirements for tanks, as well as estimated voluntary compliance rates, which reflected that some operators might voluntarily use tanks for financial reasons, depending on the geographic location and fluid volume of particular operations. After assessing the applicability percentage for each jurisdiction, in both 2015 and 2017, BLM then forecasted where future hydraulic fracturing operations would occur, to estimate either the compliance costs of the tank requirement or, conversely, the cost savings of rescinding the tank requirement. 2015 RIA at 85-87; 2017 RIA at 56-58.

The numbers in the 2015 and 2017 analyses are remarkably similar. In the 2015 Rule's applicability assessment, BLM found that at least some operations in thirteen states and nineteen tribal jurisdictions might use pits rather than tanks if not for a new federal requirement. 2015 RIA at 109, 112, 115 (showing non-zero applicability rates in multiple jurisdictions). Similarly, in the 2017 Repeal's applicability assessment, BLM estimates that at least some operations in thirteen states and twenty tribal jurisdictions would use pits rather than tanks once the new federal requirement was repealed. 2017 RIA at 50 (same).

None of the minor changes in state law since 2015 alter this conclusion. California's adoption of a tank requirement shortly after the 2015 Rule was finalized did not affect either tally, because in 2015, BLM had assumed that all California operations already would use tanks. 2015 RIA at 74; 2017 RIA at 38. North Dakota did adopt a new law in 2016 to require tanks, 2017 RIA at 38-39, but the removal of that one state from the applicability assessment was offset by several other changes.[6] First, one state (Michigan) and one tribe (Chinle) were added to the list of potential host jurisdictions for hydraulic fracturing operations based on new activity in Fiscal Year 2014, *see* 2017 RIA at 18, and BLM admits that future operations in either of

[6] In 2017, BLM also changed the applicability percentage for Fort Berthold from 24.9% down to 0%. *Compare* 2015 RIA at 115 *with* 2017 RIA at 50. Though the Fort Berthold reservation is within North Dakota, commenters specifically told BLM about the lack of relevant tribal laws and lack of state law application or enforcement for Fort Berthold, *see, e.g.*, ER000963-64, and BLM never explains the change.

those new jurisdictions would have been subject to the 2015 Rule's tank requirement, *id.* at 50 (listing 100% applicability).

Second, whereas in 2015 BLM assumed that New Mexico and Texas both already generally required tanks, 2015 RIA at 75, in the 2017 *Environmental Assessment*, BLM determines that neither state's laws could actually substitute for the 2015 tank requirement. 2017 EA at 43 (answering "No" for both states). Both states are much more lenient in granting exceptions to use pits instead of tanks than the 2015 Rule would have been. *Compare* 2017 RIA at 40 (explaining New Mexico can "approve[ ]" pits instead of tanks) *with* 80 Fed. Reg. at 16,129-30 (explaining the 2015 tank requirement offered only "very limited exceptions"). A March 2017 conversation between BLM and Texas regulators revealed there had been "No change in TX policy in allowing Pits." 2017 EA at 43 n.26. Thus, based on where the 2015 Rule could have potentially applied, there is no evidence that recent changes have, on net, made the tank requirement "redundant."

Moving from general applicability assessments to specific cost estimates, again the numbers are remarkably similar. In analyzing the 2015 Rule, BLM estimated that operations in ten or eleven states[7] and eleven tribal jurisdictions would be subject to the tank requirement, generating annual compliance costs, *see* 2015

[7] The number of states changes slightly between BLM's central and "upper bound" forecasts of total hydraulic fracturing activity on federal lands: for example, the average operations expected per year in Kansas increase from zero to one.

RIA at 109, 112, 115 (listing non-zero costs), but also generating "significant" environmental benefits, 80 Fed. Reg. at 16,203. In analyzing the 2017 Repeal, BLM estimates that operations in twelve states and nineteen tribes would conversely be free to install cheaper pits, with associated annual cost savings. 2017 RIA at 56-58 (listing negative costs, i.e., cost savings). Thus, BLM now estimates that—far from being redundant—the 2015 tank requirement would affect operations in even more jurisdictions than it previously assumed when it issued the 2015 Rule.

In terms of the number of total operations covered, the 2015 data indicate that BLM estimated about 5.2% of total new operations on federal lands across the various states would have been subject to the tank requirement.[8] Similarly, the 2017 data indicate that BLM estimates about 5.6% of total new operations on federal lands across various states would, following the Repeal, choose to install pits rather than tanks.[9] In particular, based on the cost savings that BLM now claims, dozens of new

[8] The total tank-related compliance costs on non-tribal federal lands across all states were $8,328,262 per year. 2015 RIA at 109. At an estimated compliance cost of $74,400 to install a tank rather than a pit, *id.*, the total figure reflects that about 112 operations per year on non-tribal federal lands would have to install tanks. In 2015, BLM estimated there would be around 2144 new hydraulic fracturing operations per year on non-tribal federal lands. *Id.* 112 / 2144 = 5.22%. This reflects BLM's central cost estimates in 2015. Using the same methodology for BLM's "upper bound" cost estimates, *id.* at 112, slightly increases the percentage to 7.1%.

[9] The total tank-related cost savings on non-tribal federal lands across all states have an upper estimate of about $12,500,000 per year. 2017 RIA at 58. At an estimated cost savings of $74,400 to use a pit rather than a tank, *id.* at 48, the total figure reflects up to 168 operations per year on non-tribal federal lands would eschew tanks. The upper estimate corresponds with a predicted activity rate of 3,500 new

operations each year in states like Colorado and Wyoming will, following the Repeal, opt for cheaper, riskier pits rather than tanks. 2017 RIA at 57-58 (claiming significant cost savings in these states).

Moreover, while somewhat fewer individual operations may be at stake in states like Arkansas, Ohio, and Pennsylvania, *id.* at 57 (showing moderate cost savings in these states), such states actually have very high fluid volumes per operation and also very low rates of voluntary compliance, *id.* at 70 (showing Arkansas at over triple the average fluid use); *id.* at 73 (reporting 2.9% voluntary compliance in Arkansas, 0% in Ohio, 12.4% in Pennsylvania). Consequently, rescinding the federal tank requirement puts a disproportionate amount of recovered fluids in eastern states' operations at significantly higher risk of leaks and spills. The 2015 Rule specifically noted the importance of tank requirements for states that host operations with "very high" volumes of recovered fluids, 80 Fed. Reg. at 16,200, 16,202, 16,205; public comments on the proposed Repeal flagged the same concern, ER000907. BLM arbitrarily fails to address the concern that some of the very

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wells on federal and tribal lands, *id.* at 53, and on average about 86% of such wells have been on non-tribal federal lands, *id.* at 17 (showing 8-year average of 2,380 federal wells versus 394 tribal wells per year). 86% of 3,500 = 3,010 wells. 168 / 3010 = 5.58%. Using the same methodology for BLM's lower estimate of cost savings, *id.* at 56, yields an identical percentage.

Similarly, Sierra Club et al., Br. at 58, cites the 2017 EA to estimate that "up to 10% of new wells" would not voluntarily comply without a federal tank requirement. Both the 2015 EA and the 2017 EA estimate the same percentage shortfall in voluntary compliance rates. ER001250, ER000849.

operations left uncovered by the Repeal are perhaps the riskiest operations given the high volume of fluids involved.

In short, the agency's own analysis completely belies BLM's assertion that the 2015 Rule's tank requirement is largely redundant with other standards. BLM estimates roughly the same proportion of total federal wells—about 5% of operations spread across about a dozen states and over a dozen tribes, including some of the riskiest, high-volume operations—that were supposed to comply with the 2015 tank requirement will now enjoy cost savings as they switch back to cheaper pits. BLM's assertion that the 2015 Rule's tank requirement is redundant with other standards therefore "runs counter to the evidence." *State Farm*, 463 U.S. at 43.

2. BLM Implicitly and Arbitrarily Applies a Different Baseline to Benefits Than to Costs

The very fact that BLM estimates any cost savings at all from rescinding the 2015 tank requirement makes obvious that the "incremental benefit of the 2015 rule" could *not* have "been eliminated" due to legal redundancies, as BLM claims. 2017 RIA at 4-5, 9. The only way that cost savings can occur is if the Repeal lets operators install cheaper pits instead of safer tanks. If preexisting state regulations or voluntary practices meant operators would install tanks regardless of federal regulation, then repealing such federal regulation may not forgo any environmental benefits at those specific operations, but neither could the Repeal generate any meaningful cost savings for such operators. For example, BLM estimates the Repeal will generate no

cost savings related to the tank requirement in North Dakota, due to specific legal changes unique to North Dakota. 2017 RIA at 56. But for the thirty-one other states and tribes where BLM does estimate cost savings from repealing the tank requirement, *id.* at 56-57, assuming, as BLM does, that operators' subsequent choices to install pits instead of tanks may generate private cost savings, then those choices will also generate public environmental and health risks. BLM inappropriately denies this reality and instead insists that the Repeal could incongruously generate cost savings even as forgone benefits have been allegedly "eliminated" by "redundant" laws and practices.

The Office of Management and Budget's guidelines on the best practices for regulatory analysis instruct agencies to "evaluate benefits and costs against the same baseline." *Circular A-4* at 15.[10] And caselaw makes clear that treating costs and benefits with comparable methodologies is a basic element of rational regulatory analysis. *Ctr. for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1198 (9th Cir. 2008) (explaining that agencies may not "put a thumb on the scale" by treating costs and benefits differently).

Instead of following these principles, BLM effectively set different baselines for its calculation of cost savings than for its assessment of forgone benefits. For cost savings, BLM acknowledges that gaps in existing state laws and voluntary practices

[10] *Available at* HFRR_034349. *See supra* note 3.

will allow operators to install cheaper pits following the Repeal. But for forgone benefits, BLM argues that all the environmental risk reductions achieved by the 2015 Rule's tank requirement may have been "eliminated" by a new baseline of gap-filling state laws and industry practices. 2017 RIA at 4-5, 9.

Again, either the Repeal will relieve operators of additional compliance obligations and so will forgo the environmental benefits of those additional compliance activities, or else operators would comply anyway due to preexisting regulations and voluntary practices and so the Repeal would produce no cost savings. The agency "cannot have it both ways" by claiming vast compliance cost savings while trivializing forgone benefits. *Air Alliance Houston*, 906 F.3d at 1068; *accord California v. BLM*, 286 F. Supp. 3d 1054, 1069 (N.D. Cal. 2018).

C. BLM's Other Arguments for Dismissing the 2015 Rule's Unquantified Benefits Are Unavailing

BLM provides scant other reasons to explain why it is "no longer persuaded" by its prior factual findings regarding the 2015 Rule's benefits, 82 Fed. Reg. at 61,932, and those reasons do not hold up to scrutiny, as Plaintiffs explain. California Br. at 38-40; Sierra Club Br. at 40-42.

A focus on the tank requirement further demonstrates how BLM's justifications are wanting. For example, BLM states that its review "since December 2014" did not find "any increase in the number of incidents," 82 Fed. Reg. at

61,932—but lack of an *increase* does not indicate lack of an ongoing problem. BLM concedes that a new 2016 report from the U.S. Environmental Protection Agency (EPA) "found examples" of spills during fluid management "that result in large volumes or high concentrations of chemicals reaching groundwater resources," as well as "storage of hydraulic fracturing wastewater in unlined pits, resulting in contamination of groundwater resources." 2017 RIA at 14.

Indeed, BLM underplays the evidence in EPA's report. EPA found that storage equipment leaks and failures were "[c]ommon causes" of spills; that spills of recovered fluids "have reached groundwater and surface water[s]"; that such spills alter the acidity, conductivity, and chloride concentrations in affected water; that such spills can impact groundwater "for years"; and that chronic exposure to 120 chemicals in produced water spills carry health hazards, including "liver toxicity, kidney toxicity, neurotoxicity, reproductive and developmental toxicity, and carcinogenesis." ER001124, ER001126 & n.1, ER001132.

BLM tries to dismiss EPA's study on the grounds that it "did not distinguish between hydraulic fracturing on Federal or Indian lands and hydraulic fracturing on other lands." 82 Fed. Reg. at 61,932. Yet EPA found a general rate of produced water spills across hydraulic fracturing operations—five to seven spills per 100 active wells, EPA, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States* 7-31

(2016)[11]—and BLM offers no reason to think the risk is uniquely below average on Federal or tribal lands. Note, for example, that Texas's rate of produced water spills increased 9% from 2014 to 2015, *id.*, despite the fact that Texas has some baseline regulations on fluid management, *see* 2017 EA at 43 & n.26 (admitting that Texas's regulations allow pits and are an inadequate substitute for the 2015 Rule).

In sum, BLM's treatment of the 2015 Rule's benefits as trivial ignores an "important aspect of the problem," *State Farm*, 463 U.S. at 43, and so is arbitrary and capricious.

II. BLM Arbitrarily Counts Indirect Cost Savings but Not Indirect Forgone Benefits

BLM's irrational treatment of the Repeal's costs and benefits is further illustrated by the inconsistent analysis of indirect impacts from rescinding the tank requirement. As one justification for repealing the entire 2015 Rule, BLM claims that that rescinding the tank requirement "may alleviate some on-the-ground indirect impacts, such as . . . truck traffic." 82 Fed. Reg. at 61,939-40. And BLM implies the environmental benefits of reducing truck traffic may offset any remaining environmental harms from the Repeal. 2017 RIA at 48; *see also* 2017 EA at 50. Yet in 2015, BLM considered the indirect cost of "increased truck traffic" but

[11] ER001092-1141 provides the Executive Summary; the full report is *available at* http://ofmpub.epa.gov/eims/eimscomm.getfile?p_download_id=530159.

determined that the tank requirement was nevertheless prudent, because tanks reduce emissions and eliminate "longer term environmental risk." 80 Fed. Reg. at 16,162-63. BLM fails to explain why it now weighs truck traffic differently.

BLM also cites as an indirect effect that "[r]escinding the requirement may also facilitate the reuse of recovered fluids, which may reduce environmental impacts." 2017 RIA at 48. Yet in 2015, BLM concluded the exact opposite was true: "As compared with pits, tanks better isolate recovered fluids from contamination by surface sediments that might increase the costs of recycling the fluids." 80 Fed Reg. at 16,203. BLM fails to explain this reversed factual finding.

Indeed, in 2015, BLM found many indirect benefits from the rule generally and the tank requirement specifically. Though the tank requirement's main goal was to protect the environment and public health, it would also "provide enhanced protection to on-site workers" by reducing air emissions, 2015 RIA at 78.

Furthermore, though for some regulated entities tanks would certainly cost more than pits, nevertheless BLM found that tanks would deliver some long-term cost savings to industry that were not reflected in its estimate of compliance costs. For example, BLM observed that using tanks instead of pits "allows for quicker site preparation, reduces reclamation requirements . . . and increases safety." 80 Fed. Reg. at 16,163. Additionally, using tanks would not require the same "long-term monitoring and mitigation," such as "periodic upkeep, monitoring, and fences," as

is required for pits. *Id.* Tanks also help operators "manage costs and timing of operations, and to control impacts to the environment and any resulting liability." *Id.* In its 2015 Rule, BLM recognized that its cost estimate ($74,400 per well) was likely overestimated due to such unquantified cost savings and industry benefits generated by use of tanks. 2015 RIA at 75; *see also* ER000908-09 (explaining that in 2015, BLM did not adjust its monetized cost estimates to reflect important potential cost savings but did recognize that costs were "likely . . . overestimate[d]").

In the Repeal, BLM disregards all these indirect effects. BLM insists that "[h]ealth effects from air emissions"—an indirect benefit of the tank requirement—"are outside the scope of this rule." 82 Fed. Reg. at 61,932.[12] BLM fails to explain why truck traffic is a justification for the Repeal while air quality and on-site worker safety are somehow "outside the scope." BLM similarly dismisses all the previous findings of potential cost savings as "not clear." *Id.* at 61,942. Instead, BLM continues to use the $74,400 per well figure to calculate the Repeal's cost savings, 2017 RIA at 48, without acknowledging that this figure is likely overestimated

[12] Even as BLM insists that air quality effects are "outside the scope" and could not be considered as indirect costs of the Repeal, 82 Fed. Reg. at 61,932, BLM also argues that "this rescission will [not] cause air pollution . . . to be greater or less," *id.* at 61,933—a conclusion seemingly inconsistent with its admission elsewhere that using pits instead of tanks would increase volatile organic compound emissions. 2017 EA at 28.

because industry would lose the long-term benefits to monitoring and mitigation that partially offset the original compliance costs.

BLM's willingness to justify the Repeal partly on an alleged indirect benefit from reduced truck traffic, without considering the Repeal's indirect costs to worker safety and long-term industry monitoring expenses, is patently arbitrary. Indirect benefits "are simply mirror images" of indirect costs. Samuel J. Rascoff & Richard L. Revesz, *The Biases of Risk Tradeoff Analysis: Towards Parity in Environmental and Health-and-Safety Regulation*, 69 U. Chi. L. Rev. 1763, 1793 (2002); *see also* Christopher C. DeMuth & Dougals H. Ginsburg, *Rationalism in Regulation*, 108 Mich. L. Rev. 877, 888 (2010). Indeed, agencies are required to treat costs and benefits alike and consider each with comparable analysis, and may not "put a thumb on the scale by undervaluing the benefits and overvaluing the costs." *Ctr. for Biological Diversity*, 538 F.3d at 1198; *see also Bus. Roundtable v. SEC*, 647 F.3d 1144, 1148-89 (D.C. Cir. 2011) (chastising the agency for "inconsistently and opportunistically fram[ing] the costs and benefits of the rule"); *Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983) (ruling that "[s]imple logic, fairness, and the premises of cost-benefit analysis" bar agencies from "promoting possible benefits while ignoring their costs").

Executive guidance broadly instructs agencies to "assess *all* costs and benefits," Exec. Order No. 12,866 § 1(a), 58 Fed. Reg. at 51,735 (emphasis added),

and stresses that "[t]he same standards of information and analysis quality that apply to direct benefits and costs should be applied to ancillary benefits and countervailing risks," *Circular A-4* at 26.[13] Courts also require agencies to take indirect costs into account when making regulatory decisions. In *Michigan v. EPA*, the Supreme Court recognized the wisdom of accounting for indirect effects when determining whether regulation is appropriate. 135 S. Ct. 2699, 2707 (2015) (explaining rational rulemaking "requires paying attention to the advantages *and* the disadvantages of agency decisions"). Similarly, in *American Trucking Associations v. EPA*, the U.S. Court of Appeals for the D.C. Circuit required EPA to consider indirect costs when setting ambient standards for ozone, as failing to do so would mean the agency had considered only "half of [the] health effects." 175 F.3d 1027, 1051–52, *rev'd on other grounds sub nom. Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457 (2001).

Refusing to even consider the Repeal's indirect costs—such as costs to worker safety and long-term monitoring expenses—is irrational, especially when BLM relies on other indirect effects (truck traffic) to justify the Repeal. By dismissing key indirect costs as "outside the scope," BLM arbitrarily skews its regulatory analysis by inconsistently ignoring an "important aspect of the problem." *State Farm*, 463 U.S. at 43.

[13] *Available at* HFRR_034355; *see supra* note 3.

CONCLUSION

The Court should set aside the Repeal as arbitrary and capricious.

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Respectfully submitted,

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I hereby certify that on this 28th day of October, 2020, a true and correct copy of the foregoing brief was filed with the Clerk of the United States Court of Appeals for the Ninth Circuit via the Court's CM/ECF system. Counsel for all parties are registered CM/ECF users and will be served by the appellate CM/ECF system.

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