

FOR PUBLICATION

**UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

ENVIRONMENTAL DEFENSE CENTER,
a California non-profit corporation;
SANTA BARBARA CHANNELKEEPER,
a California non-profit corporation;
PEOPLE OF THE STATE OF
CALIFORNIA, ex rel. Rob Bonta,
Attorney General; CALIFORNIA
COASTAL COMMISSION; CENTER FOR
BIOLOGICAL DIVERSITY; WISHTOYO
FOUNDATION,

Plaintiffs-Appellees,

v.

BUREAU OF OCEAN ENERGY
MANAGEMENT,

Defendant-Appellee,

AMERICAN PETROLEUM INSTITUTE,
Intervenor-Defendant-Appellant,

and

RICHARD YARDE, Regional
Supervisor, Office of Environment,
Bureau of Ocean Energy
Management; DAVID FISH, Bureau
of Safety and Environmental
Enforcement; AMANDA LEFTON,
Director, Bureau of Ocean Energy

No. 19-55526

D.C. Nos.

2:16-cv-08418-

PSG-FFM

2:16-cv-08473-

PSG-FFM

2:16-cv-09352-

PSG-FFM

Management; KEVIN M. SLIGH, SR.,
Director, Bureau of Safety and
Environmental Enforcement;
BUREAU OF SAFETY AND
ENVIRONMENTAL ENFORCEMENT;
JOAN BARMINSKI, Pacific Region
Director, Bureau of Ocean Energy
Management; MIKE MITCHELL,
Acting Pacific Region Director,
Bureau of Safety and Environmental
Enforcement; U.S. DEPARTMENT OF
THE INTERIOR; DEB HAALAND,
Secretary of the Interior,

Defendants,

EXXON MOBIL CORPORATION;
DCOR, LLC,

Intervenor-Defendants.

ENVIRONMENTAL DEFENSE CENTER,
a California non-profit corporation;
SANTA BARBARA CHANNELKEEPER,
a California non-profit corporation;
PEOPLE OF THE STATE OF
CALIFORNIA, ex rel. Rob Bonta,
Attorney General; CALIFORNIA
COASTAL COMMISSION; CENTER FOR
BIOLOGICAL DIVERSITY; WISHTOYO
FOUNDATION,

Plaintiffs-Appellees,

v.

No. 19-55707

D.C. Nos.
2:16-cv-08418-
PSG-FFM
2:16-cv-08473-
PSG-FFM
2:16-cv-09352-
PSG-FFM

BUREAU OF OCEAN ENERGY
MANAGEMENT; RICHARD YARDE,
Regional Supervisor, Office of
Environment, Bureau of Ocean
Energy Management; DAVID FISH,
Bureau of Safety and Environmental
Enforcement; AMANDA LEFTON,
Director, Bureau of Ocean Energy
Management; KEVIN M. SLIGH, SR.,
Director, Bureau of Safety and
Environmental Enforcement;
BUREAU OF SAFETY AND
ENVIRONMENTAL ENFORCEMENT;
JOAN BARMINSKI, Pacific Region
Director, Bureau of Ocean Energy
Management; MIKE MITCHELL,
Acting Pacific Region Director,
Bureau of Safety and Environmental
Enforcement; U.S. DEPARTMENT OF
THE INTERIOR; DEB HAALAND,
Secretary of the Interior,

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AMERICAN PETROLEUM INSTITUTE;
DCOR, LLC,
Intervenor-Defendants,

and

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Intervenor-Defendant-Appellant.

ENVIRONMENTAL DEFENSE CENTER,
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and

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COASTAL COMMISSION; CENTER FOR
BIOLOGICAL DIVERSITY; WISHTOYO
FOUNDATION,

Plaintiffs,

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BUREAU OF OCEAN ENERGY
MANAGEMENT; RICHARD YARDE,
Regional Supervisor, Office of
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Energy Management; DAVID FISH,
Bureau of Safety and Environmental
Enforcement; AMANDA LEFTON,
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Management; KEVIN M. SLIGH, SR.,
Director, Bureau of Safety and
Environmental Enforcement;
BUREAU OF SAFETY AND
ENVIRONMENTAL ENFORCEMENT;
JOAN BARMINSKI, Pacific Region
Director, Bureau of Ocean Energy
Management; MIKE MITCHELL,

No. 19-55708

D.C. Nos.

2:16-cv-08418-

PSG-FFM

2:16-cv-08473-

PSG-FFM

2:16-cv-09352-

PSG-FFM

Acting Pacific Region Director,
Bureau of Safety and Environmental
Enforcement; U.S. DEPARTMENT OF
THE INTERIOR; DEB HAALAND,
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DCOR, LLC,
Intervenor-Defendants-Appellees.

ENVIRONMENTAL DEFENSE CENTER,
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SANTA BARBARA CHANNELKEEPER,
a California non-profit corporation;
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Attorney General; CALIFORNIA
COASTAL COMMISSION; CENTER FOR
BIOLOGICAL DIVERSITY; WISHTOYO
FOUNDATION,
Plaintiffs-Appellees,

v.

BUREAU OF OCEAN ENERGY
MANAGEMENT; RICHARD YARDE,
Regional Supervisor, Office of
Environment, Bureau of Ocean
Energy Management; DAVID FISH,
Bureau of Safety and Environmental
Enforcement; AMANDA LEFTON,
Director, Bureau of Ocean Energy

No. 19-55718

D.C. Nos.
2:16-cv-08418-
PSG-FFM
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PSG-FFM
2:16-cv-09352-
PSG-FFM

Management; KEVIN M. SLIGH, SR.,
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BUREAU OF SAFETY AND
ENVIRONMENTAL ENFORCEMENT;
JOAN BARMINSKI, Pacific Region
Director, Bureau of Ocean Energy
Management; MIKE MITCHELL,
Acting Pacific Region Director,
Bureau of Safety and Environmental
Enforcement; U.S. DEPARTMENT OF
THE INTERIOR; DEB HAALAND,
Secretary of the Interior,

Defendants,

AMERICAN PETROLEUM INSTITUTE;
EXXON MOBIL CORPORATION,
Intervenor-Defendants,

and

DCOR, LLC,
Intervenor-Defendant-Appellant.

ENVIRONMENTAL DEFENSE CENTER,
a California non-profit corporation;
SANTA BARBARA CHANNELKEEPER,
a California non-profit corporation;
PEOPLE OF THE STATE OF
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COASTAL COMMISSION; CENTER FOR
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FOUNDATION,

Plaintiffs-Appellees,

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BUREAU OF OCEAN ENERGY
MANAGEMENT; RICHARD YARDE,
Regional Supervisor, Office of
Environment, Bureau of Ocean
Energy Management; DAVID FISH,
Bureau of Safety and Environmental
Enforcement; AMANDA LEFTON,
Director, Bureau of Ocean Energy
Management; KEVIN M. SLIGH, SR.,
Director, Bureau of Safety and
Environmental Enforcement;
BUREAU OF SAFETY AND
ENVIRONMENTAL ENFORCEMENT;
JOAN BARMINSKI, Pacific Region
Director, Bureau of Ocean Energy
Management; MIKE MITCHELL,
Acting Pacific Region Director,
Bureau of Safety and Environmental
Enforcement; U.S. DEPARTMENT OF
THE INTERIOR; DEB HAALAND,

No. 19-55725

D.C. Nos.
2:16-cv-08418-
PSG-FFM
2:16-cv-08473-
PSG-FFM
2:16-cv-09352-
PSG-FFM

Secretary of the Interior,
Defendants-Appellants,

and

AMERICAN PETROLEUM INSTITUTE;
EXXON MOBIL CORPORATION;
DCOR, LLC,
Intervenor-Defendants.

PEOPLE OF THE STATE OF
CALIFORNIA, ex rel. Rob Bonta,
Attorney General; CALIFORNIA
COASTAL COMMISSION,
Plaintiffs-Appellants,

and

ENVIRONMENTAL DEFENSE CENTER,
a California non-profit corporation;
SANTA BARBARA CHANNELKEEPER,
a California non-profit corporation;
CENTER FOR BIOLOGICAL
DIVERSITY; WISHTOYO
FOUNDATION,
Plaintiffs,

v.

BUREAU OF OCEAN ENERGY
MANAGEMENT; RICHARD YARDE,
Regional Supervisor, Office of
Environment, Bureau of Ocean
Energy Management; DAVID FISH,

No. 19-55727

D.C. Nos.
2:16-cv-08418-
PSG-FFM
2:16-cv-08473-
PSG-FFM
2:16-cv-09352-
PSG-FFM

Bureau of Safety and Environmental
Enforcement; AMANDA LEFTON,
Director, Bureau of Ocean Energy
Management; KEVIN M. SLIGH, SR.,
Director, Bureau of Safety and
Environmental Enforcement;
BUREAU OF SAFETY AND
ENVIRONMENTAL ENFORCEMENT;
JOAN BARMINSKI, Pacific Region
Director, Bureau of Ocean Energy
Management; MIKE MITCHELL,
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Bureau of Safety and Environmental
Enforcement; U.S. DEPARTMENT OF
THE INTERIOR; DEB HAALAND,
Secretary of the Interior,

Defendants-Appellees,

AMERICAN PETROLEUM INSTITUTE;
EXXON MOBIL CORPORATION;
DCOR, LLC,

Intervenor-Defendants-Appellees.

CENTER FOR BIOLOGICAL
DIVERSITY; WISHTOYO
FOUNDATION,

Plaintiffs-Appellants,

and

ENVIRONMENTAL DEFENSE CENTER,
a California non-profit corporation;
SANTA BARBARA CHANNELKEEPER,
a California non-profit corporation;
PEOPLE OF THE STATE OF
CALIFORNIA, ex rel. Rob Bonta,
Attorney General; CALIFORNIA
COASTAL COMMISSION,

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BUREAU OF OCEAN ENERGY
MANAGEMENT; RICHARD YARDE,
Regional Supervisor, Office of
Environment, Bureau of Ocean
Energy Management; DAVID FISH,
Bureau of Safety and Environmental
Enforcement; AMANDA LEFTON,
Director, Bureau of Ocean Energy
Management; KEVIN M. SLIGH, SR.,
Director, Bureau of Safety and
Environmental Enforcement;
BUREAU OF SAFETY AND
ENVIRONMENTAL ENFORCEMENT;
JOAN BARMINSKI, Pacific Region
Director, Bureau of Ocean Energy

No. 19-55728

D.C. Nos.

2:16-cv-08418-

PSG-FFM

2:16-cv-08473-

PSG-FFM

2:16-cv-09352-

PSG-FFM

OPINION

Management; MIKE MITCHELL,
Acting Pacific Region Director,
Bureau of Safety and Environmental
Enforcement; U.S. DEPARTMENT OF
THE INTERIOR; DEB HAALAND,
Secretary of the Interior,
Defendants-Appellees,

AMERICAN PETROLEUM INSTITUTE;
EXXON MOBIL CORPORATION;
DCOR, LLC,
Intervenor-Defendants-Appellees.

Appeal from the United States District Court
for the Central District of California
Philip S. Gutierrez, Chief District Judge, Presiding

Argued and Submitted October 18, 2021
San Francisco, California

Filed June 3, 2022

Before: J. Clifford Wallace, Ronald M. Gould, and
Carlos T. Bea, Circuit Judges.

Opinion by Judge Gould

SUMMARY*

Environmental Law

The panel reversed the district court’s grant of summary judgment to federal defendants on plaintiffs’ National Environmental Policy Act (“NEPA”) claims, and affirmed the grant of summary judgment to plaintiffs on the Endangered Species Act (“ESA”) and Coastal Zone Management Act (“CZMA”) claims, in actions – brought by environmental groups, the State of California, and the California Coastal Commission – alleging federal agencies violated environmental laws when they authorized unconventional oil drilling methods on offshore platforms in the Pacific Outer Continental Shelf off the coast of California.

Environmental groups learned through Freedom of Information Act requests that agencies within the U.S. Department of the Interior had authorized permits for offshore well stimulation treatments without first conducting the normally-required environmental review. Pursuant to settlements between the environmental groups and the federal agencies – the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE), the agencies issued an Environmental Assessment (“EA”) evaluating the use of offshore well stimulation treatments and did not prepare a full Environmental Impact Statement (“EIS”). The agencies concluded that the use of these treatments would not pose a significant environmental impact and issued a finding of No

* This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

Significant Impact (“FONSI”). Petroleum industry defendants intervened.

The panel first concluded that that it had jurisdiction to review the challenges to the agencies’ EA and FONSI and that plaintiffs’ claims were ripe for review now. After reviewing the agencies’ EA and FONSI, the panel held that the agencies failed to take the hard look required by NEPA in issuing their EA and that they should have prepared an EIS for their proposed action. The panel reversed the summary judgment to defendants on the NEPA claims and granted summary judgment to plaintiffs on those claims; affirmed the district court’s summary judgment to plaintiffs on the ESA and CZMA claims; and held that the district court did not abuse its discretion in fashioning injunctive relief.

Specifically, on the issues of jurisdiction, first, the panel held that the programmatic EA and FONSI met both prongs of the test set forth in *Bennett v. Spear*, 520 U.S. 154, 177–78 (1997), for final agency action under the Administrative Procedure Act: the EA and FONSI marked the consummation of the agency’s decision-making process; and the EA and FONSI determined rights and obligations and were actions from which legal consequences would flow. Second, concerning the ripeness of the NEPA and CZMA claims, the panel held that the agencies’ action satisfied the test for prudential ripeness under *Ohio Forestry Ass’n, Inc. v. Sierra Club*, 523 U.S. 726, 733 (1998). Delayed review would cause hardship to plaintiffs because they were alleging only procedural violations in this case; reviewing plaintiffs’ claims at this point would not inappropriately interfere with further administrative action; and there was no need for further factual development.

Concerning the merits of plaintiffs' NEPA claims, first, plaintiffs claimed that the agencies violated NEPA because the agencies' EA was inadequate. The panel held that the EA's findings relied on the incorrect assumption that well stimulation treatment would be infrequent, and the panel concluded that the agencies acted arbitrarily and capriciously by offering an analysis that ran counter to the evidence before the agency, and failed to take the requisite hard look in arriving at their conclusion. The panel held further that the agencies acted arbitrarily and capriciously by assuming in the EA that compliance with a permit issued by the Environmental Protection Agency under the Clean Water Act would render the impacts of well stimulation treatments insignificant. Second, plaintiffs also contended that the EA violated NEPA because the agencies failed to consider a reasonable range of alternatives and relied upon a too narrow statement of purpose and need in the EA. The panel held that in light of the discretion afforded the agencies, the EA's statement of "purpose and need" did not unduly constrain the agencies' consideration of alternatives regarding the use of well stimulation treatments. The panel held further, however, that the agencies did not meet their obligations under NEPA to give consideration to all reasonable alternatives.

Plaintiffs also challenged the agencies' decision not to prepare an EIS as a separate violation of NEPA. Here, the environmental impacts of extensive offshore fracking were largely unexplored. The important issues here warranted a full NEPA analysis in an EIS: offshore well stimulation treatments may adversely effect endangered or threatened species; well stimulation treatments in the Pacific Outer Continental Shelf would affect unique geographic areas; and the effects of offshore well stimulation treatments are highly uncertain and involve unknown risks. The panel held that the

agencies acted arbitrarily and capriciously by not preparing an EIS, and by limiting their assessment to an EA that did not fully evaluate the environmental impacts of fracking. The panel vacated the inadequate EA, and remanded to the district court with instructions to amend its injunction to prohibit the agencies from approving permits for well stimulation treatments until the agencies have issued an EIS and have fully and fairly evaluated all reasonable alternatives.

The environmental groups alleged that the federal agencies violated the ESA's consultation requirement, and the district court granted summary judgment to plaintiffs on this issue. The panel rejected the agencies' sole argument on appeal that the ESA claim was not ripe, and there was no agency action requiring consultation. BOEM and BSEE have advised the court that consultation with the U.S. Fish and Wildlife Service are still ongoing, which make this claim ripe for review. The panel used a two-step test to determine whether an action qualified as a sufficient "agency action" under the ESA. First, the panel held that the district court correctly held that by issuing the EA and FONSI for the proposed action of allowing well stimulation treatments offshore California, the agencies "affirmatively authorized" private companies to proceed with these treatments. Second, the panel held that the agencies had discretion to influence for the benefit of a protected species where throughout the EA, the agencies presented and dismissed alternative options that would have imposed restrictions affecting the oil companies' subsequent applications. The programmatic analysis and approval of the use of offshore well stimulation treatments without restriction in the EA and FONSI met the definition of "agency action." The panel affirmed the district court's summary judgment to the environmental groups on the ESA claim.

The panel next turned to California's CZMA claim, alleging that the agencies violated the CZMA because they did not conduct a consistency review to determine whether the use of offshore well stimulation was consistent with California's coastal management plan. The panel agreed with the district court that the agencies' proposed action to allow well stimulation treatments in the Pacific Outer Continental Shelf qualified as a "Federal agency activity" under § (c)(1) of the CZMA. Specifically, the panel held that the proposed action met the CZMA regulations' broadly definition of "Federal agency activity." The panel rejected the agencies and Intervenor's contention that the programmatic EA was a "bare NEPA analysis" document divorced from any agency action. The panel also held that the proposed action fell outside the scope of § (c)(3) of the CZMA, which would have precluded review under § (c)(1). The panel concluded that the agencies violated the CZMA by failing to conduct the requisite consistency review, and summary judgment was properly granted to California on the CZMA claims.

Intervenor Exxon Mobil Corporation and DCOR, LLC challenged the injunctive relief the district court awarded to remedy the ESA and CZMA violations, which enjoined the agencies from approving any permits allowing well stimulation treatments offshore California until the agencies completed consultation with the Fish and Wildlife Service and consistency review with California. The panel held that it was reasonable for the district court to conclude that the agencies' violations of the ESA and CZMA would result in irreparable harm if the agencies could approve well stimulation treatment permits before the protective environmental requirements of these statutes were followed. The panel also held that the district court did not abuse its discretion in its analysis of the other three factors for

injunctive relief. The panel affirmed the injunctive relief previously fashioned by the district court and remanded with instructions that the district court amend its injunctions to enjoin the agencies from approving well stimulation treatment permits until the agencies issue a complete EIS, rather than the inadequate EA on which they had relied.

COUNSEL

George Torgun (argued), Deputy Attorney General; Jamee Jordan Patterson, David A. Zonana, and David G. Alderson, Supervising Deputy Attorneys General; Daniel A. Olivas and Edward H. Ochoa, Senior Assistant Attorneys General; Rob Bonta, Attorney General; Office of the Attorney General, Oakland, California; for Plaintiffs-Appellees/Cross-Appellants People of the State of California and California Coastal Commission.

Margaret M. Hall (argued) and Linda J. Krop, Santa Barbara, California, for Plaintiffs-Appellees/Cross-Appellants Environmental Defense Center and Santa Barbara Channelkeeper.

James A. Maysonett (argued), Michael T. Gray, and Joseph H. Kim, Attorneys; Eric Grant, Deputy Assistant Attorney General; Environment and Natural Resources Division, United States Department of Justice, Washington, D.C., for Defendants-Appellees/Appellants Bureau of Ocean Energy Management, Richard Yarde, David Fish, Amanda Lefton, Kevin M. Sligh Sr., Bureau of Safety and Environmental Enforcement, Joan Barminski, Mike Mitchell, U.S. Department of the Interior, and Deb Haaland.

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Steven J. Rosenbaum and Bradley K. Ervin, Covington & Burling LLP, Washington, D.C., for Intervenor-Defendant-Appellant/Cross-Appellee American Petroleum Institute.

L. Poe Leggette, Baker & Hostetler LLP, Houston, Texas, for Intervenor-Defendant-Appellee/Appellant DCOR, LLC.

Kristen Monsell and Emily Jeffers, Center for Biological Diversity, Oakland, California, for Plaintiffs-Appellees/Cross-Appellants Center for Biological Diversity and Wishtoyo Foundation.

Noah Garrison, Santa Monica, California, for Amici Curiae Members of U.S. House of Representatives.

OPINION

GOULD, Circuit Judge:

State boundaries extend three miles from their coastlines. Although the land and water beyond that is subject to federal control, coastal states are entitled to participate in the federal government's decisions concerning this area, known as the Outer Continental Shelf. This appeal concerns the federal government's authorization of unconventional oil drilling methods on offshore platforms in the Pacific Outer Continental Shelf. These unconventional oil drilling methods are known within the oil and gas industry as "well stimulation treatments" and encompass, among other techniques, what is known colloquially as fracking.¹ Well stimulation treatments prolong drilling operations by enabling oil companies to extract oil otherwise unreachable using conventional drilling methods. These stimulation treatments pose unknown risks, or so Plaintiffs contend, because their environmental impacts have not been fully studied.

Many of the questions that arise from this appeal are a result of its unique procedural posture. For offshore oil and development activities, agencies are supposed to conduct environmental review of proposed activities *before* approving permits authorizing private companies to conduct such activities. But here, environmental groups learned through Freedom of Information Act ("FOIA") requests that agencies within the U.S. Department of the Interior had

¹ The district court and the parties use "WST" to refer to well stimulation treatments. We decline to use that abbreviation in this opinion but do not alter quotes from the administrative record in which that abbreviation is used.

authorized permits for offshore well stimulation treatments without first conducting the normally-required environmental review. The federal agencies, the Bureau of Ocean Energy Management (“BOEM”) and the Bureau of Safety and Environmental Enforcement (“BSEE”), agreed to conduct an environmental review only after being sued by and reaching settlement agreements with the environmental groups involved in this litigation: the Environmental Defense Center (“EDC”), the Santa Barbara Channelkeeper, the Center for Biological Diversity (“CBD”), and the Wishtoyo Foundation. Pursuant to the settlements, the agencies issued an Environmental Assessment (“EA”) evaluating the use of offshore well stimulation treatments and did not prepare a full Environmental Impact Statement (“EIS”). The agencies ultimately concluded that the use of these treatments would not pose a significant environmental impact and issued a Finding of No Significant Impact (“FONSI”).

The environmental groups considered the agencies’ environmental review to be inadequate and sued once again. In this litigation, they assert claims under the National Environmental Policy Act (“NEPA”), 42 U.S.C. § 4321 *et seq.*, and under the Endangered Species Act (“ESA”), 16 U.S.C. § 1531 *et seq.*, against BOEM, BSEE, and the responsible federal agency officials. The State of California and the California Coastal Commission (collectively, “California”) also sued, alleging that the agencies violated NEPA and the Coastal Zone Management Act (“CZMA”), 16 U.S.C. § 1451 *et seq.*, by not reviewing the use of well stimulation treatments for consistency with California’s coastal management program. Exxon Mobil Corporation (“Exxon”), the American Petroleum Institute (“API”), and DCOR, LLC (“DCOR”) intervened, and the cases were consolidated. So, the litigants before us include

environmental group Plaintiffs, state Plaintiffs, federal agency Defendants, and intervening petroleum industry Defendants.²

The district court granted summary judgment to Defendants on the NEPA claims, and to Plaintiffs on the ESA and the CZMA claims. All parties timely appealed.

We have jurisdiction over this appeal under 28 U.S.C. § 1291, and we affirm in part and reverse in part. We address in turn the following issues: (1) whether the programmatic environmental review was final agency action under the Administrative Procedure Act (“APA”); (2) whether the claims are ripe for review now or when the agencies approve specific permit applications; (3) whether the agencies’ EA and FONSI violated NEPA; (4) whether the agencies violated the ESA by not conducting required consultation with other relevant federal agencies; and (5) whether the agencies violated the CZMA by not conducting a consistency review with California’s costal program. These issues are addressed in Sections II through V, *infra*.

The essential, and recurring, question raised by this case is whether an agency’s conclusion in a programmatic environmental review that a proposed action would not have a significant environmental impact constitutes agency authorization of that proposed action, even if the agency will have to approve subsequent, individual permits before that action can occur. This question resurfaces throughout this opinion in different forms, as we must decide whether the agencies’ programmatic environmental review constitutes “final agency action” under the APA, “agency action” under

² The panel thanks all parties and amici curiae for their extensive legal briefing, which has assisted the Court.

the ESA, and “Federal agency activity” under the CZMA. We answer the various iterations of this question in the affirmative.

We first conclude that we have jurisdiction to review the challenges to the agencies’ EA and FONSI and that Plaintiffs’ claims are ripe for review now. After reviewing the agencies’ EA and FONSI, we hold that the agencies failed to take the hard look required by NEPA in issuing their EA and that they should have prepared an EIS for their proposed action. We reverse the district court’s grant of summary judgment to Defendants on the NEPA claims, and we grant summary judgment to Plaintiffs on these claims. We affirm the district court’s grant of summary judgment to Plaintiffs on the ESA and the CZMA claims. And we hold that the district court did not abuse its discretion in fashioning injunctive relief.

I. BACKGROUND

A. Factual Background

Federal law provides that state boundaries extend three nautical miles from their coastlines. 43 U.S.C. § 1312. The submerged land and water beyond the state boundary, known as the Outer Continental Shelf, *id.* §§ 1331(a), 1332(1), is subject to federal control. This appeal centers on the use of well stimulation treatments in the Pacific Outer Continental Shelf.

1. Offshore drilling

Declaring that the oil and natural gas reserves beneath the Outer Continental Shelf are a “vital national resource,” Congress enacted the Outer Continental Shelf Lands Act (“OCSLA”) to govern the development of offshore oil and

gas resources in this region, while recognizing the crucial need to balance resource development with the protection of the human, marine, and coastal environments. *Id.* § 1332(3). The OCSLA provides for the right of coastal states to participate in decisions concerning the Outer Continental Shelf “to the extent consistent with the national interest.” *Id.* § 1332(4)(C).

Congress created four phases for offshore oil and gas production. First, the Department of the Interior creates a leasing program to meet national energy needs for a five-year period. *See id.* § 1344. Second, the Department of the Interior holds lease sales. *See id.* § 1337. Third, the winning bidders obtain leases and submit exploration plans to the Department of the Interior, and these plans, if approved, authorize exploratory drilling. *See id.* § 1340. Fourth, if lessees discover commercially viable oil and gas deposits through their exploratory drilling, they then file development and production plans that would authorize them to construct a platform, install equipment, lay pipeline, and conduct other development activities. *See id.* § 1351. Before commercial drilling, lessees must submit an Application for Permit to Drill or an Application for Permit to Modify. The Department of the Interior can then approve the drilling operations, approve with modification, or deny the application. *See generally* 30 C.F.R. §§ 250.410–465; *id.* § 550.281. Lessees are required to revise an approved development and production plan if they make certain operational changes, like changing the type or volume of production or increasing the amount of emissions or waste, or if they propose to conduct activities that require approval of a license or permit that is not described in their approved plan. *Id.* § 550.283. *Id.* BOEM and BSEE, two agencies within the Department of the Interior, manage the oil and gas activities described in OCSLA.

There are 23 oil and gas platforms in the federal waters on the Pacific Outer Continental Shelf off the coast of California. Oil companies installed these platforms between 1967 and 1989 and continue to rely on development and production plans approved in that time period for their drilling activities.

2. Well stimulation treatments

Well stimulation treatments include oil extraction techniques that allow oil production to continue from wells with declining reservoirs. These practices prolong drilling operations, and expand total production, by enabling oil companies to extract oil otherwise unreachable using conventional drilling methods. The well stimulation treatments at issue in this case primarily consist of hydraulic fracturing (commonly known as fracking), which involves injecting a mixture of water, sand, and chemicals into a well at an extremely high pressure to fracture the rock formation.³

Well stimulation treatments pose a variety of risks. Not all of the chemicals used in well stimulation treatments have been studied, but the known chemicals include carcinogens, mutagens, toxins, and endocrine disruptors. These chemicals can harm aquatic animals and other wildlife in the areas where well stimulation treatments are used. Well stimulation treatments also emit pollutants, including carcinogens and endocrine disruptors, into the air. And the high pressures used in these treatments can increase the risk

³ This case also involves the use of acid fracturing and matrix acidizing. Acid fracturing is similar to fracking but involves applying an acid solution at a high pressure to etch channels into the rock. Matrix acidizing involves injecting a mixture of acids to dissolve the rock, rather than fracture it. All three types of treatments make it easier for oil and gas to pass through the subterranean rock for extraction.

of oil spills, especially because well stimulation treatments are often used on old wells. Enhanced well life and increased production thus come with a potential environmental price.

B. Procedural History

This appeal stems from prior litigation between the parties concerning the use of well stimulation treatments off the coast of California. In 2012, Plaintiff EDC began to suspect the use of well stimulation treatments on platforms in the Pacific Outer Continental Shelf. Through FOIA requests, EDC discovered that the relevant federal agencies had granted 51 permits authorizing oil companies to perform well stimulation treatments off the coast of California without any environmental review whatsoever.

1. Prior litigation, settlement, and environmental review

After the federal agencies refused to conduct an environmental review of these treatments, EDC and CBD brought separate lawsuits alleging that the agencies had violated NEPA. The lawsuits culminated in similar settlement agreements, in which the agencies agreed to conduct a programmatic EA pursuant to NEPA to study the environmental impacts of well stimulation treatments in the Pacific Outer Continental Shelf. The agencies also agreed to a temporary moratorium on permit approvals authorizing well stimulation treatments until they completed the stated environmental review.

Pursuant to the settlement agreements, the agencies issued a draft EA in February 2016 that examined the programmatic effects of allowing well stimulation treatments in the Pacific Outer Continental Shelf. There was

a thirty-day public comment period, during which the agencies received thousands of comments from individuals, scientists, federal and state agencies, and elected officials. The agencies published a final programmatic EA and FONSI in May 2016.

The “Proposed Action” that the programmatic EA examined was “allow[ing] the use of selected well stimulation treatments on the 43 current active leases and 23 operating platforms” in the Pacific Outer Continental Shelf without restrictions. Under NEPA, agencies must evaluate the environmental impacts of alternatives to the proposed action, and it specifically mandates consideration of a “no action” alternative. 42 U.S.C. § 4332; 40 C.F.R. § 1502.14. In the EA, the agencies considered four courses of action as options: (1) the proposed action of allowing the use of well stimulation treatments without restriction; (2) allowing well stimulation treatments with a minimum depth restriction; (3) allowing well stimulation treatments with a prohibition on the open water discharge of fluids; and (4) the required “no action” alternative of prohibiting well stimulation treatments. The environmental impacts of the first three alternatives were all based on a forecast of authorizing up to five well stimulation treatments per year.

Based on the analysis in the programmatic EA, the agencies determined that the proposed action of allowing well stimulation treatments without restriction “would not cause any significant impacts” and accordingly, the federal agencies issued a FONSI, which concluded the NEPA environmental review process. In doing so, the agencies did not consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service pursuant to the ESA before issuing their final EA and FONSI, nor did they review the proposed action in the EA for consistency with

California's coastal management program pursuant to the CZMA.

2. Consolidated lawsuits and district court orders

The two groups of Plaintiffs (the environmental organizations and California) filed separate suits in 2016 challenging the agencies' programmatic EA and FONSI. All Plaintiffs alleged that the agencies violated NEPA, among other reasons, by failing to take a "hard look," *Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1066 (9th Cir. 2002), at the environmental impacts of allowing well stimulation treatments in the Pacific Outer Continental Shelf. The environmental groups also alleged that the agencies violated NEPA by not preparing an EIS. California additionally alleged that the agencies violated the CZMA by failing to conduct a consistency review to determine if allowing well stimulation treatments in federal waters offshore California is consistent with California's coastal zone management program. The environmental groups also alleged that the agencies violated the ESA by failing to consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to ensure the proposed action in the EA would not jeopardize endangered species or their habitats. The district court consolidated the lawsuits, and allowed Exxon, API, and DCOR to intervene as Defendants.

The agencies and API filed motions to dismiss, arguing that the district court lacked jurisdiction to hear the NEPA and CZMA claims because the EA and FONSI did not constitute reviewable "final agency action" under the APA, 5 U.S.C. § 551 *et seq.*, and arguing that the ESA claims were not ripe and were moot. The district court denied the motions, holding that the EA and FONSI were final agency action because they concluded the agencies' programmatic environmental review and lifted the moratorium on well

stimulation treatments in the Pacific Outer Continental Shelf. As for the ESA claims, the district court held that they were ripe because the agencies made an affirmative and discretionary decision in the EA and FONSI about whether, and under what conditions, to allow well stimulation treatments in the region. The district court also held that the ESA claims were not moot because the consultation process under the ESA was not yet complete.

The parties made cross-motions for summary judgment, which the district court granted in part and denied in part. It granted summary judgment to Defendants on the NEPA claims, concluding that the agencies reasonably decided to conduct an EA rather than an EIS and took a sufficiently hard look at the environmental impacts of allowing well stimulation treatments. The district court granted summary judgment to the environmental groups on the ESA consultation claim, holding that the agencies violated the ESA by not consulting with the expert wildlife agencies. But the district court also held that the ESA claim based upon the National Marine Fisheries Service consultation was moot because that consultation was complete. As to California's CZMA claim, the district court granted summary judgment to California because the agencies did not complete the requisite consistency review under § 1456(c)(1) of the CZMA. The court granted injunctive relief on the ESA and CZMA claims, enjoining the agencies from approving any permits for well stimulation treatments until they completed ESA consultation and CZMA consistency review. Subsequently, intervenor DCOR filed a motion for reconsideration, arguing that the court erred in issuing injunctive relief and requesting it to modify the judgment to allow the agencies to approve DCOR's two pending permit applications for well stimulation treatments in the Pacific Outer Continental Shelf. The district court denied the

motion, holding that the injunction it issued was the appropriate remedy for the ESA and CZMA violations. This appeal followed.

II. JURISDICTION

A. Final Agency Action

As a preliminary matter, we must determine whether we have subject matter jurisdiction to hear Plaintiffs' NEPA and CZMA claims. Because neither NEPA nor the CZMA expressly provide for judicial review, judicial review of these claims is governed by the APA, which limits review to "final agency action." 5 U.S.C. § 704. We do not defer to the agencies' interpretation of whether their actions constitute "final agency action" because Congress did not charge BOEM and BSEE with implementing the APA. *See Karuk Tribe of Cal. v. U.S. Forest Serv.*, 681 F.3d 1006, 1017 (9th Cir. 2012).

Agency action is final and reviewable under the APA when two conditions are met. The action must "mark the consummation of the agency's decision-making process," and it must also determine "rights or obligations" or be one "from which legal consequences will flow." *Bennett v. Spear*, 520 U.S. 154, 177–78 (1997) (internal quotation marks and citations omitted). The agencies contend that the programmatic EA and FONSI are not "final agency actions" because they will still have to approve permits from private entities wishing to use well stimulation treatments before the treatments will actually be used in the region. The agencies would have us wait until the agencies approve site-specific permits before Plaintiffs could challenge the agencies' actions under the APA. We disagree and hold that the programmatic EA and FONSI meet both prongs of *Bennett's* test for final agency action.

1. The EA and FONSI mark the consummation of the agency's decision-making process

The EA and FONSI conclude the agencies' programmatic review under NEPA of allowing well stimulation treatments in the Pacific Outer Continental Shelf and reflect the agencies' understanding that CZMA review is not required for this action. In the programmatic EA, the agencies considered four alternatives ranging from not authorizing well stimulation treatments to authorizing well stimulation treatments without restriction, and, in the FONSI, the agencies found that "the Proposed Action"—authorizing well stimulation treatments without restriction—"would not cause any significant impacts." There is nothing preliminary or tentative about these documents, even if the agencies included a disclaimer in the EA that it is "not itself a decision document."

To be sure, the use of well stimulation treatments will not occur in practice until an individual permit application has been approved. But as the district court explained, the agencies concede that no further programmatic environmental review of these treatments will be conducted. And it is "the effect of the action and not its label that must be considered." *Or. Nat. Desert Ass'n v. U.S. Forest Serv.*, 465 F.3d 977, 985 (9th Cir. 2006) (citations omitted). Here, the effect of the FONSI is that it provides the agencies' final word on the environmental impacts of the proposed action and concludes that the authorization of well stimulation treatments will not have a significant impact. This programmatic conclusion will not be revisited, so Plaintiffs here "are able to show . . . a completeness of action by the agency." *Kern*, 284 F.3d at 1070. Absent the proposed action approved in the EA, no permits could be sought.

We have repeatedly held that final NEPA documents are final agency actions. *Friedman Bros. Inv. Co. v. Lewis*, 676 F.2d 1317, 1318 (9th Cir. 1982); *Te-Moak Tribe of W. Shoshone of Nev. v. U.S. Dep't of Interior*, 608 F.3d 592, 598 (9th Cir. 2010); *Rattlesnake Coal. v. EPA*, 509 F.3d 1095, 1104 (9th Cir. 2007); *Hall v. Norton*, 266 F.3d 969, 975, n.5 (9th Cir. 2001). We are bound by these decisions and see no reason to depart from that principle here. The NEPA review process concludes in one of two ways: (1) the agency determines through an EA that a proposed action will not have a significant impact on the environment and issues a FONSI, or (2) the agency determines that the action will have a significant impact and issues an EIS and record of decision. See 40 C.F.R. §§ 1505.2 (record of decision), 1508.13 (FONSI). Final NEPA documents constitute “final agency action” under the APA, whether they take the form of an EIS and Record of Decision or an EA and FONSI, because they culminate the agencies’ environmental review process.

We reject the agencies’ claim that the EA and FONSI are merely their “first, preliminary steps toward making a decision about the use of well stimulation treatments in the federal waters off the California coast,” particularly in the context of this litigation, where 51 permits authorizing well stimulation treatments were approved without environmental review. There is no argument or evidence that these 51 already-approved permits will be revisited, especially after the agencies approved unrestricted use of well stimulated treatments in the EA and FONSI. It would make no sense to have a full environmental impact evaluation on one permit or multiple individual permits without considering the total environmental impact of the full picture. Environmental law does not require a court to

miss the forest for the trees. The agencies' programmatic approval is not insulated from judicial review.

The FONSI and programmatic EA satisfy the first prong of the *Bennett* test because they are the final step in the agencies' programmatic review under NEPA and reflect the agencies' determination that review under the CZMA is not warranted.

2. The EA and FONSI determine rights and obligations and are actions from which legal consequences will flow

The programmatic EA and ensuing FONSI also satisfy the second prong of the *Bennett* test for final agency actions. By finding that well stimulation treatments have no significant environmental impact, the agencies have allowed the permitting process for these treatments to proceed. This return to the pre-settlement status quo and lifting of the moratorium on well stimulation treatments in the Pacific Outer Continental Shelf strongly affects the legal rights of oil companies, as demonstrated by Intervenor's involvement in this suit and DCOR's request for reconsideration of the judgment to allow the agencies to act on its pending applications. Also, the rights of Plaintiffs to further environmental review, and the obligation of the agencies to prepare a full EIS, are fully and finally determined by the FONSI and are not subject to any further administrative procedure. Legal consequences flow from the FONSI insofar as oil companies do not need to abide by any depth, discharge, or frequency limitations in their permit applications because the agencies have not imposed any such limitations on permit applications. In fact, the FONSI green lights the unrestricted use of well stimulation treatments, with no cautionary limitations.

The agencies urge us to look for a decision document outlining a binding plan that is separate from final NEPA documents for agency action to be “final,” but they concede that their programmatic review of well stimulation treatments offshore California is complete. In fact, the agencies describe their “work left to do” as only reviewing and approving individual, site-specific permits. The conclusion of the programmatic environmental review of offshore well stimulation treatments determines rights, obligations, and legal consequences. The EA and FONSI meet the *Bennett* test for “final agency action,” and we have subject matter jurisdiction over Plaintiffs’ claims.

B. Ripeness

The agencies also contest the ripeness of the NEPA and CZMA claims.⁴ Their ripeness arguments echo their arguments contesting final agency action under the APA. Although they issued final NEPA documents, the agencies contend that Plaintiffs’ claims are not ripe because the agencies have not yet issued a formal plan for well stimulation treatments or acted on site-specific permits. We review *de novo* questions of ripeness. *Laub v. U.S. Dept. of Interior*, 342 F.3d 1080, 1084 (9th Cir. 2003). We note at the outset that the agencies raise concerns of prudential ripeness, which are discretionary. *Thomas v. Anchorage Equal Rights Comm’n*, 220 F.3d 1134, 1140 (9th Cir. 2000). In any event, we conclude that the agencies’ action satisfies the test for prudential ripeness as established in *Ohio*

⁴ Defendants challenge the ripeness of the ESA claim as well. Because NEPA and ESA have different language pertinent to ripeness, we address Defendants’ challenge to ripeness on the ESA claim in our discussion of the ESA appeal *infra* Part IV.

Forestry Ass'n, Inc. v. Sierra Club, 523 U.S. 726, 733 (1998).

Evaluating ripeness in the agency context requires considering “(1) whether delayed review would cause hardship to the plaintiffs; (2) whether judicial intervention would inappropriately interfere with further administrative action; and (3) whether the courts would benefit from further factual development of the issues presented.” *Id.* All three considerations support the conclusion that these claims are ripe for review.

First, delayed review would cause hardship to Plaintiffs because they are alleging only procedural violations in this case. Under NEPA, Plaintiffs challenge the agencies’ decision not to issue an EIS; under the ESA, the agencies’ failure to consult with wildlife experts; and under the CZMA, the agencies’ failure to conduct a consistency review. Delaying review of these procedural injuries would cause hardship to Plaintiffs by denying them the fundamental safeguards provided by the three environmental statutes. The “asserted injury is that environmental consequences might be overlooked.” *Salmon River Concerned Citizens v. Robertson*, 32 F.3d 1346, 1355 (9th Cir. 1994). Delaying review would extend and compound the harms Plaintiffs allege. Programmatic environmental review “generally obviates the need” for subsequent review at the application level “unless new and significant environmental impacts arise.” *Id.* at 1356. And any additional protective measures Plaintiffs could obtain by challenging the agency’s conclusions later, at the time the agencies review specific applications, would only apply at the site-specific, not the programmatic, level. If the programmatic procedures offend the law, they should be reviewed now.

Second, reviewing Plaintiffs' claims at this point would not "inappropriately interfere with further administrative action." *Ohio Forestry*, 523 U.S. at 733. We have established that judicial review does not interfere with further administrative action when the agency's decision is at "an administrative resting place." *Citizens for Better Forestry v. U.S. Dep't of Agric.*, 341 F.3d 961, 977 (9th Cir. 2003). Here, the agencies' NEPA documents, and the decisions contained therein—not to issue an EIS, not to conduct a consistency review, and not to consult with the wildlife services—demonstrate that the agencies' decision making is at an administrative resting place. The agencies have concluded their programmatic review of well stimulation treatments offshore California and maintain that they have met their procedural obligations under the relevant environmental statutes. No further administrative action will be required until oil companies submit permits for site-specific review. We hold that the final NEPA documents in this case constitute an administrative resting place for purposes of procedural injuries. *See Kern*, 284 F.3d at 1071.

Third, there is no need for "further factual development." *Ohio Forestry*, 523 U.S. at 733. For claims of procedural injury, we have held that the need for factual development ceases when the alleged procedural violation is complete. *Cottonwood Env't Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1084 (9th Cir. 2015).

Our ripeness analysis for claims brought pursuant to environmental statutes is affected by whether plaintiffs allege a procedural or substantive violation. This stems from *Ohio Forestry*, in which the Supreme Court distinguished between the ripeness of substantive and procedural claims brought under environmental statutes. 523 U.S. at 737. There, the plaintiff's substantive challenge under the

National Forest Management Act to the agency's forest plans was unripe because the plans had not yet been implemented at the site-specific level. *Id.* at 739. Yet the Court specifically distinguished its holding from cases where procedural injuries are alleged, explaining that, by comparison, a person injured by "a failure to comply with the NEPA procedure may complain of that failure at the time the failure takes place, for the claim can never get riper." *Id.* at 737.

We have endorsed this distinction. *Cottonwood*, 789 F.3d at 1084; *Kern*, 284 F.3d at 1071; *Citizens for Better Forestry*, 341 F.3d at 977. In *Kern*, plaintiffs challenged an EA and an EIS for two proposed actions in an area along the Oregon coast. 284 F.3d at 1066. We concluded that both challenges were ripe and justiciable, differentiating between the substantive claim at issue in *Ohio Forestry* and the procedural rights conferred by NEPA. *Id.* at 1071. Similarly, in *Citizens for Better Forestry*, we concluded that procedural claims challenging an agency's EA, FONSI, and failure to consult under the ESA were ripe, even though site-specific proposals had not been issued. 341 F.3d at 970–71. Site-specific action, we held, is "simply a factual coincidence, rather than a basis for legal distinction." *Id.* at 977. This is because the imminence or occurrence of site-specific action is irrelevant to the ripeness of procedural injuries, which are ripe and ready for review the moment they happen. Plaintiffs need not wait for the agencies to act on site-specific permits authorizing well stimulation treatments. Plaintiffs' procedural challenges under NEPA and the CZMA to the agencies' proposed action allowing the use of well stimulation treatments off the coast of California, as adopted in the final EA and FONSI, are immediately ripe for review.

III. NEPA

After determining that we have subject matter jurisdiction over Plaintiffs' claims and that they are ripe for review, we assess first the merits of Plaintiffs' NEPA claims. The district court granted summary judgment to Defendants on these claims, which we review *de novo*, "applying the same standards that applied in the district court." *Pit River Tribe v. U.S. Forest Serv.*, 469 F.3d 768, 778 (9th Cir. 2006) (citation omitted). Because judicial review of agency decisions under NEPA is governed by the APA, we must consider whether the agencies complied with NEPA's requirements under the APA's deferential arbitrary and capricious standard. *Id.* An agency's action is arbitrary and capricious "only if the agency relied on factors Congress did not intend it to consider, entirely failed to consider an important aspect of the problem, or offered an explanation that runs counter to the evidence before the agency or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Defs. of Wildlife v. Zinke*, 856 F.3d 1248, 1257 (9th Cir. 2017) (quoting *Conservation Cong. v. U.S. Forest Serv.*, 720 F.3d 1048, 1054 (9th Cir. 2013)); see also *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 46–48, 55–57 (1983) (holding that agency action was arbitrary and capricious where the agency "did not even consider" a reasonable alternative that was made known to it and also "failed to articulate a basis" for its action).

NEPA is the statute that launched the environmental movement in the 1970s. Richard J. Lazarus, *The Making of Environmental Law*, 64–67 (2004). It is the "basic national charter for protection of the environment" and, coincidentally, was borne out of a catastrophic oil spill from drilling offshore California. 40 C.F.R. § 1500.1(a); NEPA

is at its heart a procedural statute and requires federal agencies to take a “hard look” at the environmental consequences of their actions. *Kern*, 284 F.3d at 1066 (quotation omitted). NEPA requires agencies to prepare an EIS for all “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). In this review, the agency must evaluate the environmental impact of its proposed action as well as “alternatives to the proposed action.” *Id.* If an agency is unsure whether its proposed action will have significant environmental impacts, it may first prepare an EA. An EA is a “concise, public document” providing “sufficient evidence and analysis” for the agency to determine “whether to prepare an environmental impact statement.” 40 C.F.R. § 1508.9(a)(1). Thus, an EA is intended to help an agency decide if an EIS is warranted; an EA is not meant to replace or substitute for an EIS. *Anderson v. Evans*, 314 F.3d 1006, 1023 (9th Cir. 2002).

When reviewing an EA, we examine it “with two purposes in mind: to determine whether it has adequately considered and elaborated the possible consequences of the proposed agency action when concluding that it will have no significant impact on the environment, and whether its determination that no EIS is required is a reasonable conclusion.” *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1215 (9th Cir. 2008).

Plaintiffs allege that the agencies violated NEPA in two ways. First, Plaintiffs allege that the agencies violated NEPA because the agencies’ EA is inadequate and does not constitute a “hard look” of the environmental impacts of allowing well stimulation treatments offshore California. Specifically, Plaintiffs contend that in issuing the EA, the agencies relied on erroneous assumptions, used too narrow

of a statement of need and purpose, and did not consider a reasonable range of alternatives. Second, the environmental groups additionally contend that the agencies violated NEPA by failing to prepare an EIS. The type of NEPA violation impacts the relief that should be granted, *i.e.*, whether to vacate the existing EA for preparation of a new one or whether to remand with orders to prepare a full EIS. We consider each alleged NEPA violation in turn.

A.

Plaintiffs first allege that the agencies' EA is inadequate and violates NEPA because the agencies relied upon erroneous assumptions instead of taking the requisite "hard look" at the potential environmental effects of authorizing well stimulation treatments offshore California. NEPA requires agencies to take a "hard look" at the environmental effects of a proposed action before implementing it. To take the requisite hard look, an agency "may not rely on incorrect assumptions or data" in arriving at its conclusion of no significant impacts. *Native Ecosystems Council v. U.S. Forest Serv.*, 418 F.3d 953, 964 (9th Cir. 2005). But Plaintiffs contend that the agencies reached their conclusion of no significant impacts by relying on incorrect assumptions. We agree.

1. The faulty assumption that well stimulation treatments would not occur frequently in this region

The central assumption underlying the agencies' entire EA, and driving their conclusion of no significant impact, is that the use of well stimulation treatments in the Pacific Outer Continental Shelf would happen so infrequently that any adverse environmental effects would be insignificant. Based on the available data for past well stimulation treatment usage and the expected future industry needs, the

agencies used what they considered to be a “reasonable forecast of up to five WSTs per year” for all three “action alternatives” evaluated in the EA. Plaintiffs challenge this assumption, and for good reason.

Plaintiffs point to record evidence attacking the historical data used by the agencies. The district court acknowledged the historical data relied upon by the agency “may not have been perfect” but found that it was not “so unreliable” as to be arbitrary and capricious for the agencies to have based their entire projections on it. We disagree. Plaintiffs raise legitimate doubts about the agencies’ recordkeeping of well stimulation treatments and the reasonableness of relying on flawed recordkeeping to formulate an estimate for evaluating environmental impacts under NEPA.

The agencies do not know the actual number of well stimulation treatments that have occurred on the Pacific Outer Continental Shelf because data collection has been incomplete. At the time the EA and FONSI were published, no “formal data collection system [had] been set up” to track the use of offshore well stimulation treatments in federal waters. Critically, the agencies’ contention in the EA that only six well stimulation treatments have been approved on the Pacific Outer Continental Shelf since 2000 is at odds with the numbers that are known. The impetus to this litigation was that the agencies had approved 51 permits without conducting environmental review. A 2016 email among BSEE officials regarding what numbers to use in the EA confirms this. In the email, one official admitted that the agency was “sued on 13” acidizing jobs but “a lot more routine acid jobs have taken place” and they “do not have [a] number between 1984–2011.” This email also reveals that the agency had found more instances of fracking “that were

not in the lawsuit.” In another email, BSEE officials decided to “leave EA Table 4-1 as is in the absence of definitive information on additional WSTs” because “it appears that there is not enough information . . . to identify WSTs.” A BSEE spokesperson acknowledged that the agency “cannot be sure just how often fracking has been allowed.” EDC’s analysis of information gathered from the FOIA requests determined that at least 15 instances of fracking alone occurred offshore California in federal waters.

Aside from questionable and inconclusive historical records, Plaintiffs also raise legitimate questions about the soundness of the agencies’ estimates of future usage of well stimulation treatments in the Pacific Outer Continental Shelf given the age of the reservoirs in this region and their declining production, as noted by the EA. The agencies’ response in the EA that the reservoirs offshore California “are already highly fractured,” which decreases the need for well stimulation treatments, conflicts with statements made by Intervenorors that the wells in this region “lack any value or utility” without the approval of well stimulation treatments. It is also at odds with the agencies’ analysis of the no action alternative in the EA, in which the agencies warn that wells in the Pacific Outer Continental Shelf may have to close if well stimulation treatments are not authorized.

The gaps and errors underlying the agencies’ assumption about well stimulation treatment use would not be as critical if this assumption was not central to the agencies’ finding of no significant impact. But the agencies repeatedly relied upon the purported infrequent use of these treatments as a basis for concluding no significant impacts would occur from offshore treatments with respect to accidents, induced seismicity, air quality, water quality, ecological resources,

and fisheries. In response to the repeated reliance on low estimates of well stimulation treatments in the draft EA, the California Coastal Commission commented that the agencies should “examine several scenarios of future WST activity” in the final EA and “identify thresholds at which environmental effects become significant” to place the impacts (or lack thereof) in context and provide a guide for when additional analysis would be needed if the agencies’ estimates prove to be inaccurate. Nevertheless, the agencies continued to rely on the infrequent use of well stimulation treatments as the driving force behind their finding of no significant impact in the final EA and FONSI. We agree with Plaintiffs that the agencies’ excessive reliance on the asserted low usage of well stimulation treatments distorted the agencies’ consideration of the significance and severity of potential impacts.

Because the EA’s finding relied on the incorrect assumption that well stimulation treatments would be infrequent, we conclude that the agencies acted arbitrarily and capriciously by offering an analysis that ran “counter to the evidence before the agency,” *Zinke*, 856 F.3d at 1257, and that they failed to take the requisite hard look by “rely[ing] on incorrect assumptions or data” in arriving at their conclusion. *Native Ecosystems Council*, 418 F.3d at 964.

2. The assumption that an EPA permit would render impacts insignificant

The agencies also acted arbitrarily and capriciously by assuming in the EA that compliance with a permit issued by the EPA under the Clean Water Act, the National Pollution Discharge Elimination System General Permit (“NPDES permit”), would render the impacts of well stimulation treatments insignificant.

We have previously held that agencies cannot “tier” their environmental review under NEPA to assessments of similar projects that do not “actually discuss the impacts of the project at issue.” *South Fork Band Council of Western Shoshone v. U.S. Dep’t of Interior*, 588 F.3d 718, 726 (9th Cir. 2009). Nor have we allowed federal agencies to rely on state permits to satisfy review under NEPA. *Id.*; see also *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 998 (9th Cir. 2004). The same concerns apply here, and we see several issues with the agencies relying on the NPDES permit to conclude that any impacts from offshore well stimulation treatments to the marine environment would be insignificant. The NPDES permit is issued by a different federal agency, and it does not specifically address “the impacts of the project at issue.” *South Fork Band Council*, 588 F.3d at 726.

First, the NPDES permit was not created or intended to be used for the offshore well stimulation treatments at issue in this appeal. The EPA developed the NPDES permit in 2014 to broadly regulate discharges from a range of offshore oil and gas activities. However, the NPDES permit does not require monitoring for the most common well stimulation treatment fluids. In their comments on the draft EA, Plaintiffs highlighted the risks of relying upon the NPDES permit, explaining that the “NPDES General Permit contains no limitations on the discharge of specific WST chemicals.”

Second, the imperfect fit of *what* the NPDES permit requires operators to monitor is compounded by an imperfect fit on *when* the NPDES permit requires monitoring. The whole effluent toxicity (“WET”) testing required by the permit is inadequate to measure the impacts of well stimulation treatments because WET testing is not conducted in conjunction with the use of well stimulation

treatments. Instead, because the NPDES permit is a general permit broadly encompassing discharges from all offshore oil and gas activities, WET testing is required only on a quarterly basis, which diminishes to annual testing after four consecutive “passing” tests. The agencies acknowledged in the EA that fluids from well stimulation treatments may not actually be present in samples from WET testing because of this timing problem. Internal emails among Department of Interior officials reveal that the monitoring reports associated with the NPDES permit do not contain enough information to identify well stimulation treatments. In the final EA, the agencies minimize the concern over the inadequacy of testing under the NPDES permit by stating that the permit also requires visual monitoring and oil and grease sampling in addition to WET testing. But the agencies do not explain how visual monitoring or oil and grease sampling would account for the permit’s lack of toxicity testing for the constituents specifically discharged from well stimulation treatments. The missing data and unknown impacts that Plaintiffs raise concern the toxicity of the chemicals, not the potential for oil spills, and toxicity cannot be accessed visually. Annual testing that is not conducted in conjunction with the occurrence of well stimulation treatments, and does not test the specific constituents used in the well stimulation treatments, is inadequate to assess the impacts of those treatments.

Third, the EPA—not BOEM or BSEE—oversees the NPDES permit. The district court dismissed Plaintiffs’ concerns about the adequacy of testing under the NPDES permit as a mere “wish that EPA would test more frequently.” This reasoning only highlights the problem of BOEM and BSEE relying on a general permit issued by the EPA to evaluate the impacts from specific well stimulation treatments. Though the NPDES permit, in theory, could be

modified to test the most common fluids used in offshore well stimulation treatments, or be modified to require testing in conjunction with the use of these treatments, the agencies responsible for conducting the NEPA review do not control the permit upon which they rely.

Like the assumption concerning the infrequent use of well stimulation treatments, the agencies repeatedly relied on the NPDES permit to conclude that the proposed action would not significantly affect the environment. The agencies relied on the NPDES permit and its testing to find that impacts of the proposed action would be minimal on marine and coastal fish, marine birds, sea turtles, and fisheries. The agencies acted arbitrarily and capriciously by relying, in significant part, on these two flawed assumptions throughout the EA, *see Native Ecosystems Council*, 418 F.3d at 964. As a result, the EA is inadequate, and the agencies violated NEPA by failing to take the requisite hard look.

B.

Plaintiffs also contend that the EA violates NEPA because the agencies failed to consider a reasonable range of alternatives and relied upon too narrow a statement of “purpose and need” in the EA. NEPA requires agencies to consider alternatives to their proposed action, 42 U.S.C. § 4332(C)(iii), regardless whether an agency issues an EA or EIS. As we held in *Western Watersheds Project v. Abbey*:

NEPA’s requirement that agencies “study, develop, and describe appropriate alternatives . . . applies whether an agency is preparing an [EIS] or an [EA].” Although an agency must still “give full and meaningful consideration to all reasonable alternatives” in an environmental assessment, the agency’s

obligation to discuss alternatives is less than in an EIS. “The existence of a viable but unexamined alternative renders an [EA] inadequate.”

719 F.3d 1035, 1050 (9th Cir. 2013) (alteration in original) (citations omitted). In considering which alternatives to analyze, agencies must provide a “detailed statement” regarding why they were eliminated or not considered. 40 C.F.R. §§ 1502.14(a); 1508.9(b).

1. Purpose and need statement

Whether the range of alternatives considered is reasonable is to some degree circumscribed by the scope of the statement of “purpose and need,” so we begin our analysis there. *Westlands Water Dist. v. U.S. Dept. of Interior*, 376 F.3d 853, 865 (9th Cir. 2004). Agencies enjoy a good deal of discretion in framing the “purpose and need” of an EA or EIS, *id.* at 866, but the statement cannot “unreasonably narrow[] the agency’s consideration of alternatives so that the outcome is preordained.” *Alaska Survival v. Surface Transp. Bd.*, 705 F.3d 1073, 1084–85 (9th Cir. 2013).

Here, the EA explains the “purpose of the proposed action (use of certain WSTs, such as hydraulic fracturing) is to enhance the recovery of petroleum and gas from new and existing wells on the [Pacific Outer Continental Shelf], beyond that which could be recovered with conventional methods.” And the need is “the efficient recovery of oil and gas reserves” from the Pacific Outer Continental Shelf. California contends that by defining the purpose of the EA in terms of the proposed action, the agencies predetermined the outcome. California stresses the EPA’s comments on the draft EA, in which the EPA recommended that BOEM and

BSEE revise the EA's "purpose and need" statement because "[s]uch a narrow and prescriptive statement identifies a solution, rather than the underlying need."

While the "purpose and need" statement is narrow, it does not necessarily fail under our deferential standard of review. The district court found that the "purpose and need" statement was "largely a product of the settlement agreements." The settlement agreements required the agencies to evaluate the environmental effects of continuing to approve well stimulation treatments, which explains why they framed the "purpose and need" statement in this way. The focus of the EA was naturally affected by the settlement agreements. In light of the discretion we must afford the agencies, we do not agree with Plaintiffs that the EA's statement of "purpose and need" unduly constrained the agencies' consideration of alternatives regarding the use of well stimulation treatments.

2. Reasonable range of alternatives

That the statement of "purpose and need" did not violate NEPA's procedural commands does not necessarily mean that the agencies considered a reasonable range of alternatives, which is the question to which we next turn. Agencies do not have to consider infinite, unfeasible, or impractical alternatives, but they must consider reasonable ones. *Westlands Water*, 376 F.3d at 868. The existence of a "viable but unexamined alternative" renders the environmental review conducted under NEPA inadequate. *Id.* (citation omitted).

Here, the proposed action that the agencies examined in the EA was allowing the use of well stimulation treatments on the Pacific Outer Continental Shelf without restriction. The agencies also examined three alternatives:

(1) authorizing well stimulation treatments at depths more than 2,000 feet below the seafloor surface; (2) authorizing well stimulation treatments but prohibiting the open water discharge of waste fluids, and (3) prohibiting the use of well stimulation treatments altogether (the “no action” alternative that NEPA requires agencies to consider). In the EA, the agencies acknowledged that the three “action alternatives” they considered were similar because they all “include the use of the same four types of WST” so the “nature and magnitude” of any impacts will be similar. Plaintiffs argue that the lack of any meaningful difference among the alternatives did not allow the informed decision making that NEPA requires.

California and other commenters had suggested specific alternatives for the agencies to consider in the final EA, such as prohibiting well stimulation treatments in specific locations or at particular times of year, requiring the disclosure of well stimulation treatment constituents and additives, requiring notice to be given to state agencies and the public before well stimulation treatments are conducted, requiring testing of well stimulation fluids, or limiting the number of well stimulation treatments in a given year. Responding to these proposed alternatives in the Final EA, as they were required to do, the agencies summarily dismissed them. The agencies concluded in the appendix: “There were no commenters who proposed that the [programmatic EA] include a wider range of alternatives that also suggested an additional alternative for review that would lend itself to meaningful analysis.” The agencies gave no explanation for why the alternatives proposed did not lend themselves to meaningful analysis. In the body of the EA, the agencies discussed in more detail a few alternatives that they had considered but eliminated, but these alternatives involved imposing stipulations on fluid

volume, constituents, and pressure. The eliminated alternatives relate in substance to only one of the alternatives that Plaintiffs and other commenters suggested the agencies consider.

We conclude that the agencies did not meet their obligation under NEPA to “give full and meaningful consideration to all reasonable alternatives.” *Western Watersheds*, 719 F.3d at 1050 (citation omitted). We first address the proposal to limit the number of treatments per year. The agencies contend that there was no need to consider such an alternative because they “already had one alternative that allowed zero treatments and another alternative that allowed up to five,” so an alternative that allowed “some number in between” would have been unnecessary. The agencies principally rely on *Montana Wilderness Ass’n v. Connell*, 725 F.3d 988, 1004 (9th Cir. 2013), a case in which we determined that an agency did not need to consider a “middle ground” alternative between zero and six airstrips for a proposed action.

The district court found this argument persuasive, but the district court and the Defendants both mistakenly assumed that the proposed action in the EA was limited to five well stimulation treatments per year. In granting summary judgment to Defendants on the NEPA claims, the district court erroneously concluded that the EA “examined a proposal for allowing up to five WST approvals per year” so “there was no need for the agencies to consider imposing different limits on the number of WSTs” allowed per year. This relies upon a misreading of the EA.

Nowhere in the text of “Alternative 1: Proposed Action—Allow Use of WSTs” is there any limit on the number of well stimulation treatments imposed. The agencies argue that they use “a reasonable forecast of . . . up

to five WST applications per year” to calculate potential impacts. In discussing the other “action alternatives” in the EA, the agencies note that these alternatives too are premised on—but not limited to—five well stimulation treatments per year “to analyze the potential impacts.”

The proposed action does not have a five treatments-per-year limit (nor do any of the actions, for that matter). Rather, the agencies used a five-per-year estimate to calculate environmental impacts. Commenters flagged that the EA does not actually limit the use of well stimulation treatments to five per year and that the agencies should revise their analysis in the final EA to account for the possibility that more well stimulation treatments will be used than they estimate. It was highly arbitrary for the agencies repeatedly to premise their finding of no significant impact on a limit of five well stimulation treatments per year, without in fact considering an alternative that imposed such a five-treatment limit.

The agencies have asserted in their briefing what they contend are persuasive reasons as to why the other alternatives proposed by commenters were not considered by the agencies. They contend that agencies can already access a website that gives them notice of well stimulation treatments. They also contend that they could not require the disclosure of fluid constituents because some of the chemicals are proprietary to the oil companies. These reasons fail because they are post-hoc rationalizations not contained in the Final EA. As such, we may not consider them, given the well-established principle that “an agency’s action must be upheld, if at all, on the basis articulated by the agency itself” rather than “appellate counsel’s *post hoc* rationalizations.” *Or. Nat’l Desert Ass’n v. Bureau of Land Mgmt.*, 625 F.3d 1092, 1120 (9th Cir. 2010) (citations

omitted); *see also SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947).

NEPA requires agencies to “give full and meaningful consideration” to all viable alternatives “in [the] environmental assessment”—not in appellate briefing after the fact. *Western Watersheds*, 719 F.3d at 1050 (citation omitted). We hold that the agencies violated NEPA by failing to consider a reasonable range of alternatives in the EA.

In summary, the agencies’ EA is inadequate both because the agencies failed to take the requisite “hard look” by relying on incorrect assumptions and also because the agencies did not consider a reasonable range of alternatives in the EA.

C.

The environmental groups also challenge the agencies’ decision not to prepare an EIS as a separate violation of NEPA. An EIS must be prepared if there are “substantial questions” regarding whether the agency’s proposed action may have significant impacts. *Ocean Advocates v. U.S. Army Corps of Eng’rs*, 402 F.3d 846, 864–65 (9th Cir. 2005). In challenging an agency decision not to prepare an EIS, plaintiffs need not prove that significant environmental effects *will* occur; they need only raise a “substantial question” that they might. *Id.* This presents a “low standard” that is permissive for environmental challenge. *Cal. Wilderness Coal. v. U.S. Dep’t of Energy*, 631 F.3d 1072, 1097 (9th Cir. 2011) (citation omitted). When challenged actions are novel, there is more need for an EIS. *See Monsanto v. Geertson Seed Farms*, 561 U.S. 139, 177 (2010) (Stevens, J., dissenting) (noting that an EIS is especially important where the environmental threat is

novel). If the agency does not prepare an EIS, it must submit a “convincing statement of reasons” to explain why the proposed action’s environmental impacts will not be significant. *Ocean Advocates*, 402 F.3d at 864 (citation omitted). Conclusory assertions about insignificant impacts will not suffice. *Id.* Here, the environmental impacts of extensive offshore fracking are largely unexplored, making it *terra incognita* for NEPA review. For this reason, among others, the important issues here warranted a full NEPA analysis in an EIS. We hold that the agencies acted arbitrarily and capriciously by not preparing an EIS, and by limiting their assessment to an EA that did not fully evaluate the environmental impacts of fracking.

The NEPA regulations in effect at the time the agencies issued the EA set forth criteria for the agencies to consider when determining whether an action will significantly affect the environment and consequently requires a full EIS. 40 C.F.R. § 1508.27.⁵ These regulations required an agency to consider “both context and intensity.” *Id.* Context refers to the setting and circumstances of the proposed action, including “society as a whole (human, national), the affected region, the affected interests, and the locality.” *Id.* § 1508.27(a). Intensity “refers to the severity of impact” and requires analysis of ten specific factors. *Id.* § 1508.27(b). Meeting just one of these “significance factors” may be sufficient for us to require an agency to prepare an EIS, *Ocean Advocates*, 402 F.3d at 865, but here we find multiple factors met.

⁵ The NEPA regulations have been revised, 85 Fed. Reg. 43,304 (July 16, 2020), but we look to the regulations in place at the time of the challenged decision. *See, e.g., California v. Norton*, 311 F.3d 1162, 1167 n.2 (9th Cir. 2002).

1. Offshore well stimulation treatments may adversely affect endangered or threatened species

One significance factor is whether the action “may adversely affect an endangered or threatened species.” 40 C.F.R. § 1508.27(b)(9). After the agencies issued the EA and FONSI and were sued because of the lack of consultation under the ESA, the agencies belatedly commenced consultations with the requisite wildlife agencies. In doing so, the agencies advised that they concluded that the western snowy plover, the California least tern, and the southern sea otter all were likely to be adversely affected by oil spills. This finding of adverse effects, especially *after* the EA was published, is *prima facie* evidence that an EIS should have been prepared. And in responding to the agencies’ request for formal consultation, the Fish and Wildlife Service demanded additional information in order to address potential effects to other endangered species. This significance factor is readily met.

2. Well stimulation treatments in the Pacific Outer Continental Shelf would affect unique geographic areas

Another significance factor weighing in favor of an EIS is that the authorization of well stimulation treatments in this region affects unique geographic areas. 40 C.F.R. § 1508.27(b)(3). The regulations require agencies to consider the existence of “[u]nique characteristics of the geographic area such as proximity to historic or cultural resources.” *Id.* The Santa Barbara Channel, where most of the offshore drilling on the Pacific Outer Continental Shelf takes place, is a unique area with proximity to “park lands . . . or ecologically critical areas.” *Id.* Many of its waters and islands have special designation, including the Channel Islands National Park and Marine Sanctuary. The amicus

brief filed by Members of Congress refers to the area as the “Galapagos of North America” and notes that 25 endangered species are present in the channel on a seasonal or permanent basis.

In the Final EA, the agencies responded to concerns about the unique characteristics of the area by asserting that the platforms’ distance from the Channel Islands Marine Sanctuary would mitigate any effects to the area. But Plaintiffs contend that the entire Santa Barbara Channel region is a unique and globally important ecosystem: “Cool, subarctic waters converge with warmer, equatorial waters in the Channel, fostering a richness of marine and other wildlife, including blue, fin, humpback, minke, and killer whales, porpoises, dolphins, pinnipeds (seals and sea lions), the southern sea otter, and hundreds of species of birds, fishes, and invertebrates.” These species rely on the entire Channel, not just the Park and Sanctuary, for their survival and recovery. And the affected area also has “proximity to historic or cultural resources” including the submerged remains of the Chumash people. Congress expressly designated the Channel Islands National Park to protect important cultural resources, including “archaeological evidence of substantial populations of Native Americans.” 16 U.S.C. § 410ff(6). This significance factor satisfies the standard we apply to evaluate whether preparing an EIS is required.

3. The effects of offshore well stimulation treatments are highly uncertain and involve unknown risks

An EIS is also warranted when the possible effects of the proposed action are “highly uncertain or involve unique or unknown risks.” 40 C.F.R. § 1508.27(b)(5). The lack of data regarding the toxicity of well stimulation fluids, and the uncertainty this poses for evaluating the potential

environmental effects of the proposed action, counsels us that an EIS should have been prepared. The agencies lack toxicity data for “31 of the 48 distinct chemicals” used in offshore well stimulation treatments. During the period for public comment on the agencies’ draft EA, scientists identified as a critical data gap the fact that “no studies have been conducted on the toxicity and impacts of well stimulation fluids discharged in federal waters.” They urged the agencies to conduct a full EIS due to the “many data gaps and uncertainties.” The regulatory body in California that supervises oil and gas development, the Division of Oil, Gas, and Geothermal Resources, also commented on the draft EA that “effects of discharging WST fluids on marine life are not fully understood due to the lack of toxicity data” and urged the agencies to conduct toxicity testing to address this gap.

An agency must prepare an EIS where uncertainty regarding the environmental effects of a proposed action may be resolved through further data collection. *Nat’l Parks & Conserv. Ass’n v. Babbitt*, 241 F.3d 722, 732 (9th Cir. 2001), *abrogated on other grounds by Monsanto*, 561 U.S. 139. In *Babbitt*, we held that the National Park Service needed to prepare an EIS before authorizing more cruise ships to enter Glacier Bay National Park because of the level of uncertainty posed by increased vessel traffic. 241 F.3d at 731–733. We concluded that the agency’s statement of reasons for why the missing information could not be obtained was unconvincing, and we explained that an agency’s “lack of knowledge does not excuse the preparation of an EIS; rather it requires the [agency] to do the necessary work to obtain it.” *Id.* at 733.

In the final EA and FONSI, the agencies acknowledged the “unknown toxicity of WST fluid constituents” but

concluded that the uncertainty is mitigated by several factors. First, the agencies assert that they know the toxicity values of many of the chemicals used in the treatments. Second, the chemicals will be diluted with seawater. Third, the agencies assert that they have no reason to believe that chemicals for which they have no toxicity data are likely to be more toxic than the chemicals for which they have toxicity data. Fourth, the agencies contend that historical discharges of water containing trace amounts of similar chemicals have been discharged into the ocean “for decades” and studies have not detected significant effects. The agencies also contend that it would be impossible to test the toxicity of every chemical used in well stimulation treatments against every potentially exposed species.

We are not persuaded that this reasoning is permissible as a basis to avoid preparing an EIS evaluating alternatives to introducing novel and toxic chemicals in the marine environments at risk here. That the well stimulation fluids will be diluted with seawater does not excuse the data gaps regarding the specific “effects of discharging WST fluids on marine life” nor the lack of data on the “chronic impacts of these chemicals” in seawater. The record reflects that some well stimulation treatment fluids have been tested on land, but this does not help us to assess the unknown effects of these fluids in a marine environment. That the agencies know the toxicity of *some* chemicals used in well stimulation treatments does not adequately respond to the concerns raised about the uncertainty of how these chemicals interact when mixed together, when interacting with subsurface minerals, or when coming into contact with surrounding formation rock. The regulations implementing NEPA require agencies to obtain missing information when it is “essential to a reasoned choice” and the costs of obtaining it are not “exorbitant.” 40 C.F.R. § 1502.22(a). The agencies

have not provided convincing reasons for why these data gaps are not essential or could not be mitigated through further study. Nor did they consider, as discussed above, an alternative that allows offshore well stimulation treatments but requires testing to help fill in these data gaps. Guesswork by the agencies does not discharge their responsibilities under NEPA.

The importance of gathering more information about the toxicity of well stimulation treatment fluids is important here where the programmatic EA represents the first time the agencies have analyzed the environmental impacts of offshore well stimulation treatments. We can agree with the agencies that they need not test every chemical against every marine species. But Plaintiffs point to the lack of toxicity data not to suggest that the agencies must test every chemical but that the unknown risks posed by these chemicals warrant fuller review of the proposed action through an EIS. “No matter how thorough, an EA can never substitute for preparation of an EIS, if the proposed action could significantly affect the environment.” *Anderson*, 314 F.3d at 1023.

Defendants’ reliance on *Salmon River Concerned Citizens v. Robertson* is unpersuasive. In *Salmon River*, we upheld the agency’s analysis of the effects of herbicide formulation when toxicity data was missing for some of the ingredients. 32 F.3d 1346, 1358–60 (9th Cir. 1994). An important point overlooked by Defendants, however, is that the agencies in that case *had* prepared an EIS and had taken steps to reduce uncertainty regarding the missing information. *Id.* at 1358 n.21. The lack of toxicity data in *Salmon River* and the preparation of an EIS in that case give more reason to believe that an EIS should have been prepared in this situation, where there is a lack of toxicity

data and the effects of well stimulation fluids pose unknown risks. The record establishes that Plaintiffs have raised “substantial questions” relating to several significance factors about the effects of allowing well stimulation treatments offshore California.⁶ We hold that the agencies violated NEPA by not providing an EIS on the effects of authorizing offshore well stimulation treatments.

D.

To summarize our discussion of the alleged NEPA violations, we are compelled to conclude that the agencies did not take the “hard look” mandated by NEPA. They relied on flawed assumptions in the EA that distorted and rendered irrational their finding of no significant impact. They did not give full and meaningful consideration to a reasonable range of alternatives. This failure to take the requisite “hard look” renders the EA inadequate under NEPA. The agencies also should have prepared a full EIS in light of the unknown risks posed by the well stimulation treatments and the significant data gaps that the agencies acknowledged. NEPA review cannot be used “as a subterfuge designed to rationalize a decision already made.” *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000). But that appears to be what happened here. The agencies, which had already ventured down the path of allowing well stimulation treatments without environmental review until they were sued by the environmental groups, did not give a meaningful assessment of reasonable alternatives, offered

⁶ Having determined that several significance factors are present and an EIS is warranted, we need not reach Plaintiffs’ additional arguments that the impacts of offshore well stimulation treatments are highly controversial or that the agencies did not adequately analyze the cumulative impacts of allowing well stimulation treatments.

post-hoc rationalizations for their decision, and disregarded necessary caution when dealing with the unknown effects of well stimulation treatments and the data gaps associated with a program of regular fracking offshore California in order to increase production and extend well life.

We reverse the district court's grant of summary judgment upholding the EA and hold that the agencies violated NEPA both because their EA was inadequate and also because they should have prepared an EIS. We vacate the inadequate EA, which is the presumptive remedy for agency action that violates the NEPA as reviewed through the APA. *See All. for the Wild Rockies v. U.S. Forest Serv.*, 907 F.3d 1105, 1121 (9th Cir. 2018). We remand to the district court with instructions to amend its injunction to prohibit the agencies from approving permits for well stimulation treatments until the agencies have issued an EIS and have fully and fairly evaluated all reasonable alternatives.

IV. ESA

The environmental groups also sued the agencies under the ESA, alleging that they violated the ESA's consultation requirement. On this issue, the district court granted summary judgment to Plaintiffs, and Defendants appeal. We review this issue *de novo*. *Grand Canyon Trust v. U.S. Bureau of Reclamation*, 691 F.3d 1008, 1016 (9th Cir. 2012). The agencies' sole argument in appealing the district court's ESA ruling is that the ESA claim is not ripe. They argue that there was no "agency action" requiring consultation. The district court rejected this argument, as do we.

The fundamental purpose of the ESA is to conserve endangered and threatened species as well as their critical habitats. 16 U.S.C. § 1531(b). The ESA provides

protections for listed species such as prohibiting unauthorized taking of the species, preserving necessary habitat for species' survival, and, as pertinent here, requiring consultations with expert wildlife agencies about the risks to wildlife species from any proposed federal action. Section 7(a)(2) of the ESA requires agencies to consult with expert wildlife agencies to ensure that any agency action "is not likely to jeopardize" any endangered or threatened species or result in the "adverse modification" of their habitats. *Id.* § 1536(a)(2). The statute defines agency action as "any action authorized, funded, or carried out" by an agency. *Id.*; *see also* 50 C.F.R. § 402.02 (further defining agency action as "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies"). Depending on the species, the federal agency must consult with one of two expert wildlife agencies, the U.S. Fish and Wildlife Service or the National Marine Fisheries Service. The ESA's implementing regulations require agencies to review proposed actions "at the earliest possible time." 50 C.F.R. § 402.14(a).

The ESA provides for two types of consultation. Informal consultation is proper if the acting federal agency concludes that its action is not likely to adversely affect any species listed in the ESA. 50 C.F.R. § 402.13(a). If the wildlife expert agency concurs in writing, informal consultation is complete, and no further action is required under the ESA. *Id.* § 402.13(c). If, on the other hand, the acting agency concludes that its proposed action is likely to adversely affect any listed species, formal consultation is required. *Id.* § 402.14(a). In the case of formal consultation, the acting agency must first prepare a biological assessment, and then send a letter to the expert wildlife agency requesting formal consultation and providing information about the proposed action. *Id.* § 402.14(c). The expert wildlife agency

will then prepare a biological opinion that determines whether the action is likely to cause “jeopardy” for a listed species or its critical habitat. 16 U.S.C. § 1536(b); 50 C.F.R. §§ 402.14(g), (h).

Here, the agencies did not engage in consultation before issuing the EA. In the final EA, they responded to comments expressing concern over the lack of ESA consultation, explaining that they believed consultation was unnecessary because the EA is a “decision support tool for future proposals” but does not approve any well stimulation treatments itself. After being sued over the lack of consultation, and a week before filing their motion to dismiss, the agencies initiated the ESA consultation process by sending biological assessments to the expert wildlife agencies. In the biological assessment sent to the National Marine Fisheries Service, BOEM and BSEE determined that no species would likely be adversely affected by the use of well stimulation treatments. The National Marine Fisheries Service concurred in the agencies’ no adverse effects determination, which concluded the ESA consultation process because no formal consultation was required. For species under the jurisdiction of the Fish and Wildlife Service, BOEM and BSEE determined that three species—the western snowy plover, California least tern, and southern sea otter—were likely to be adversely affected by oil spills. The Fish and Wildlife Service requested more information before beginning formal consultation, which was required because of the agencies’ conclusion that three species were likely to be adversely affected.

The district court held that the ESA claim regarding the initial failure to consult with the National Marine Fisheries Services was cured, and consequently mooted, by completion of the consultation with that agency. But

because the agencies had not completed consultation with the Fish and Wildlife Service, the district court held that this claim was not moot. BOEM and BSEE have advised us that consultation with the Fish and Wildlife Service is still ongoing, making this claim ripe for our review.

We use a two-step test to determine whether an action qualifies as a sufficient “agency action” under the ESA. First, relying on the text of the statute, which is always the appropriate starting place for analysis, *Blue Lake Rancheria v. United States*, 653 F.3d 1112, 1115 (9th Cir. 2011), we consider whether an agency “affirmatively authorized, funded, or carried out the underlying activity.” *Karuk Tribe*, 681 F.3d at 1021. If this standard is met, we next determine whether the action was discretionary, in this context meaning that the agency had “some discretion to influence or change the activity for the benefit of a protected species.” *Id.*

The district court correctly held that by issuing the EA and FONSI for the proposed action of allowing well stimulation treatments offshore California, the agencies “affirmatively authorized” private companies to proceed with these treatments. In a case such as this where a mix of federal and private action is involved, *Karuk Tribe* instructs that there is agency action for ESA purposes if the agency made an “affirmative, discretionary decision about whether, or under what conditions, to allow private activity to proceed.” *Id.* at 1027. There, we held that the Forest Service violated the ESA by not consulting with wildlife agencies before approving four notices of intent to conduct mining activities within a national forest. *Id.* at 1022–27. The approval of the notices of intent “affirmatively decide[d] to allow the mining to proceed,” even though, like here, the private companies would still need to obtain subsequent

federal permits before conducting the challenged activity. *Id.* at 1024. By issuing the EA and FONSI, and concluding that well stimulation treatments would have no significant impact, the agencies “affirmatively decide[d]” to allow the treatments to proceed. *Id.*

The second step of the *Karuk Tribe* test is also met because the agencies had “discretion to influence or change the activity for the benefit of a protected species.” *Id.* at 1021. This standard is met by agency action that itself does not directly authorize private activity but rather establishes criteria for *future* private activity and has an “ongoing and long-lasting effect.” *Pacific Rivers Council v. Thomas*, 30 F.3d 1050, 1053 (9th Cir. 1994); *see also Washington Toxics Coal. v. EPA*, 413 F.3d 1024, 1031–33 (9th Cir. 2005), *abrogated on other grounds as recognized in Cottonwood*, 789 F.3d at 1089 (holding that the agency’s registration of pesticides triggered ESA consultation even though implementation of the pesticides might approve additional, later approvals). In *Pacific Rivers*, we rejected the Forest Service’s argument that the ESA did not apply to programmatic documents that themselves did not “mandate any action.” 30 F.3d at 1055. We disagreed, concluding that these programmatic documents constituted agency action because they “set forth criteria” that would influence future activities. *Id.*

The agencies argue that these cases do not apply here because the EA did not establish binding criteria for well stimulation treatment use. This argument is without merit. Throughout the EA, the agencies presented and dismissed alternative options that would have imposed restrictions affecting the oil companies’ subsequent applications. In other words, the agencies had “discretion to influence or change the activity for the benefit of a protected species.”

Karuk Tribe, 681 F.3d at 1021. Choosing the alternative without any restrictions as their proposed action sets an unregulated and uncontrolled future direction for the use of well stimulation treatment. The agencies rejected Alternative 2, which set depth restrictions. They also rejected Alternative 3, which set discharge restrictions. The agencies implemented no restrictions whatsoever. The agencies should not enjoy insulation from ESA consultation for selecting the alternative *without* restriction. In substance, the agencies decided to let fracking proceed unregulated.

The programmatic analysis and approval of the use of offshore well stimulation treatments without restriction in the EA and FONSI meets our definition of “agency action.” The agencies make no other arguments about the merits of the ESA claims brought by the environmental groups. Concluding that the proposed action in the agencies’ EA and FONSI constitutes “agency action” under the ESA, we affirm the district court’s grant of summary judgment to the environmental groups on the ESA claims.

V. CZMA

We next turn to California’s CZMA claim. Congress enacted the CZMA to “preserve, protect, develop, and where possible, to restore or enhance, the resources of the Nation’s coastal zone for this and succeeding generations.” 16 U.S.C. § 1452(1). When a “Federal agency activity” affects the coastal zone of a state, the CZMA requires the federal agency to review the proposed activity and determine whether it is consistent with the affected state’s coastal management program. *Id.* § 1456(c)(1)(A). California alleges that the agencies violated the CZMA because they did not conduct a consistency review to determine whether the use of offshore well stimulation treatments is consistent with California’s coastal management program. The

agencies contend that the proposed action in the programmatic EA and FONSI is not a “Federal agency activity” and does not warrant CZMA consistency review because private companies would still have to obtain permit approval before performing well stimulation treatments.

Upon *de novo* review of this question of statutory interpretation, we agree with the district court that the agencies’ proposed action to allow well stimulation treatments in the Pacific Outer Continental Shelf qualifies as a “Federal agency activity” under § (c)(1) of the CZMA. We hold that the agencies violated the CZMA by failing to conduct the requisite consistency review with California’s coastal management program. Summary judgment was properly granted to California on the CZMA claims.

A.

Whenever a “Federal agency activity” may affect a state’s coastal zone, the CZMA requires review of the action to confirm that it is consistent with the affected state’s coastal management program. 16 U.S.C. § 1456. Not all consistency review under the CZMA is the same, however. If the federal agency takes the action itself, then § 1456(c)(1) of the CZMA requires the agency to “provide a consistency determination” to the designated state agency specifying whether the proposed action is consistent with the state’s coastal management program. But if the agency is not taking the action itself, and instead is approving a proposed plan or issuing a federal license or permit to an applicant, then § 1456(c)(3) requires the applicant to conduct the consistency review and include a “consistency certification” in its application confirming that the proposed activity complies with the affected state’s coastal management program. *Id.* § 1456(c)(3). In other words, § (c)(1) review reaches activities where the federal agency is the “principal

actor” while § (c)(3) review encompasses the “federally approved activities of third parties.” *Sec’y of the Interior v. California*, 464 U.S. 312, 332 (1984). If a proposed federal agency activity can be reviewed under § (c)(3), the CZMA specifically provides that it cannot be reviewed under § (c)(1). 16 U.S.C. § 1456(c)(1)(A). Review under § (c)(1) and § (c)(3) is therefore mutually exclusive. *California v. Norton*, 311 F.3d 1162, 1170 (9th Cir. 2002).

Classification of a proposed activity under § (c)(1) or § (c)(3) impacts more than who is required to conduct the consistency review. The speed of review also differs. Review of a “Federal agency activity” under § (c)(1) requires more than three months because the agency must complete the CZMA review process at least 90 days before giving final approval to the proposed activity. *Id.* § 1456(c)(1)(C).⁷ By contrast, if a state does not respond to a private applicant’s consistency certification within three months, the state’s concurrence is “conclusively presumed” by statute. *Id.* § 1456(c)(3)(B)(ii). Review under § (c)(3) also allows the Secretary of Commerce to approve a proposed activity over a state’s objections that the activity is not consistent with its coastal management program. In this way, § (c)(3) review encourages oil and gas development by expediting the consistency review process and giving states less leverage to block proposed activities.

B.

We must first decide whether the proposed action in the programmatic EA and FONSI is a “Federal agency activity.” If it is a “Federal agency activity,” then we must then decide

⁷ The agencies contend that this review could take years due to their resource limitations.

whether the action falls outside the scope of the permit and license review of § (c)(3). We answer both questions in the affirmative.

1. The proposed action is a “Federal agency activity”

The CZMA does not define “Federal agency activity,” but the implementing regulations do. The regulations broadly define “Federal agency activity” as encompassing “any functions performed by or on behalf of a Federal agency in the exercise of its statutory responsibilities.” 15 C.F.R. § 930.31(a). The proposed action in the programmatic EA and FONSI—“Alternative 1: Proposed Action—Allow Use of WSTs”—readily meets this definition. Deciding whether, and under what circumstances, to allow certain drilling activities on the Pacific Outer Continental Shelf is a function performed by the agencies pursuant to their “statutory responsibilities” under the OCSLA to make oil and gas reserves in this region “available for expeditious and orderly development, subject to environmental safeguards, in a manner which is consistent with the maintenance of competition and other national needs.” 43 U.S.C. § 1332(3). And the agencies prepared the EA and FONSI as an “exercise of [their] statutory responsibilities” under NEPA, also satisfying the definition of “Federal agency activity” provided by the regulations. 15 C.F.R. § 930.31(a).

The CZMA regulations further provide that “Federal agency activity” covers a “range of activities where a Federal agency makes a *proposal for action* initiating an activity or a series of activities when coastal effects are reasonably foreseeable,” such as a “plan that is used to direct future agency actions.” 15 C.F.R. § 930.31(a) (emphasis added). It would strain the English language for us to say that the “Proposed Action” in the programmatic EA is not a

“proposal for action.” *Id.* And we are further convinced that the proposed action here is a plan that BSEE and BOEM will use to “direct future agency actions.” *Id.* The proposed action in the EA and FONSI is for the agencies to “approve the use of fracturing and non-fracturing WSTs” at all oil platforms on the Pacific Outer Continental Shelf if the treatments are “deemed compliant with performance standards identified in BSEE regulations.” This proposed action is a “plan that is used to direct future agency actions,” and meets the regulatory definition of a “Federal agency activity.” 15 C.F.R. § 930.31(a).

We reject the agencies and Intervenor’s contention that the programmatic EA is a “bare NEPA analysis” document divorced from any agency action. The district court correctly determined that the EA and its proposed action “reflects a plan for allowing WSTs” on the Pacific Outer Continental Shelf and “is not merely an abstract analytical document unmoored from any proposed action.” By concluding that the proposed action of allowing well stimulation treatments would not lead to significant environmental impacts, the agencies return to the pre-moratorium status quo of approving well stimulation treatments offshore California that existed prior to Plaintiffs’ FOIA requests and the ensuing litigation. As described *supra* in our discussion of the ESA claims, the agencies’ proposed action of allowing well stimulation treatments without restrictions on a programmatic level constitutes a plan that will shape and direct future agency activity in consideration of site-specific permits.

2. The proposed action falls outside the scope of § (c)(3) of the CZMA

After determining that the proposed action is a “Federal agency activity” under the CZMA, we must next decide

whether it falls outside the scope of § (c)(3) of the CZMA, which covers applications for federal permits and licenses authorizing activities in the coastal zone. 16 U.S.C. § 1456(c)(3)(A). This is because an action cannot be reviewed under § (c)(1) if it can be reviewed under § (c)(3) of the CZMA. *Id.* § 1456(c)(1)(A). Our decision in *Norton* is instructive.

Norton involved the Department of the Interior's decision to grant suspensions of oil leases off the coast of California to extend the lives of the leases and avoid their premature expiration. 311 F.3d at 1165. Like in this case, California sued, seeking an injunction that would require the agencies to conduct CZMA consistency review under § (c)(1) and to issue an EIS under NEPA. *Id.* at 1169. In explaining why § (c)(1) review applied to the lease suspensions in *Norton*, we provided a history of the CZMA, which we briefly repeat here.

In 1990, Congress specifically amended the CZMA to overturn the Supreme Court's decision in *Secretary of the Interior v. California*, 464 U.S. 312 (1984). In *Secretary of the Interior*, the Court held that the original sales of leases to oil companies were not subject to consistency review because the activities specifically affecting the coastal zone would be reviewed later, under § (c)(3), when the oil companies submitted plans to the federal agencies for approval. *Id.* at 667–68. Amending the CZMA in 1990 to overturn *Secretary of the Interior*, Congress specifically provided that the sale of leases could be reviewable under § (c)(1) of the CZMA even if site-specific activities conducted under those leases would be subsequently reviewed under § (c)(3). *See* H.R. Conf. Rep. No. 01-508 at 970 (1990); H.R. Conf. Rep. No. 01-508 at 970 (1990);

see also Norton, 311 F.3d at 1173 (discussing this legislative history).

In *Norton*, we interpreted Congress’s 1990 amendments to the CZMA as allowing duplicative review for actions of different scope and at different stages in oil production. We held that “section (c)(3) review will be available to California at the appropriate time for specific individual new and revised plans as they arise, and section (c)(1) review is available now for the broader effects implicated” by the agency action. 311 F.3d at 1174. We emphasized that the lease suspensions at issue in *Norton* “[had] *never* been reviewed by California,” and the agency decision “represent[ed] a significant decision to extend the life of oil exploration and production off of California’s coast, with all of the far reaching effects and perils that go along with offshore oil production.” *Id.* at 1173. We reject the attempts by the agencies and Intervenor to cabin *Norton*’s application to lease suspensions and find it on all fours with the facts of this case.

Like the agency action at issue in *Norton*, the proposed action of allowing well stimulation treatments without restriction in the Pacific Outer Continental Shelf “has never been reviewed by California” and is a “significant decision to extend the life of oil exploration and production” by allowing companies to access oil they could otherwise not obtain through conventional drilling methods. *Id.* As in *Norton*, we are not concerned about duplicative review because there is none: the agencies’ programmatic decision differs in scope and in stage from the agencies’ later decisions about specific permit applications.

And even though the agencies and Intervenor urge us to hold that the authorization of well stimulation treatments should be subject to the expedited consistency review of

§ (c)(3) and not § (c)(1), they concede that permits for well stimulation treatment would not necessarily require review under § (c)(3). Further, the CZMA does not apply to development and production undertaken pursuant to an oil and gas lease that was issued prior to September 18, 1978, in an area in which oil or gas had been discovered prior to that date. *See* 43 U.S.C. § 1351(a)(1). In fact, Intervenor DCOR maintains that it is not required to file a Supplemental Development and Production Plan for its proposed use of well stimulation treatments because of this exemption. This means that well stimulation treatments very well could continue to evade environmental review, just as they did before this litigation. These facts underscore to us the need for programmatic-level consistency review to take place under § (c)(1) of the CZMA for the programmatic-level proposed action by the agencies to authorize offshore well stimulation treatments. Even if site-specific permits could, or would, be reviewed later pursuant to § (c)(3) of the CZMA, this does not change our interpretation of the statute or our decision in *Norton*. We hold that the agencies' proposed action falls outside the scope of § (c)(3) review and is "Federal agency activity" requiring the agencies to conduct a consistency review pursuant to § (c)(1) of the CZMA. Section (c)(1) review must be available now for the "broader effects implicated" by the agencies' proposed action. *Norton*, 311 F.3d at 1174.

It is important to keep in mind that in this sphere of the law, both the federal government and California have an important role to play to keep the coastline safe and prosperous. Indeed, management of the coastal zone is a paradigmatic example of complementary joint regulation by state and federal governments to advance important interests through our dual federalism system. *See, e.g., Nat'l Fed'n of Indep. Bus. v. Sebelius*, 567 U.S. 519, 630 (2012)

(Ginsburg, J., concurring in part and dissenting in part) (“[T]he interests of federalism are better served when States retain a meaningful role in the implementation of a program of such importance.”); *see also* 16 U.S.C. § 1451(i) (discussing cooperation among federal, state, and local governments as the key to protection of the coastal zone).

VI. RELIEF

Intervenors Exxon and DCOR challenge the injunctive relief the district court awarded to remedy the ESA and CZMA violations, which enjoined the agencies from approving any permits allowing well stimulation treatments offshore California until the agencies completed consultation with the Fish and Wildlife Service and consistency review with California.

We review a district court’s decision to issue injunctive relief for an abuse of discretion. *California v. Azar*, 911 F.3d 558, 568 (9th Cir. 2018). We first must determine, upon *de novo* review, whether the district court “identified the correct legal rule to apply.” *Id.* (citation omitted). If the district court applied the correct legal standard, we will reverse only if the district court’s application was “(1) illogical, (2) implausible, or (3) without support in inferences that may be drawn from the facts in the record.” *Id.* (citation omitted).

The district court applied the correct four-factor test for injunctive relief. Before issuing a permanent injunction, a district court must find that a plaintiff demonstrated:

- (1) that it has suffered an irreparable injury;
- (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between

the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.

Monsanto, 561 U.S. at 156–57 (citation omitted). The district court identified this standard and found that Plaintiffs established all four factors in both the ESA and CZMA contexts. We cannot conclude that the district court’s application of this test was illogical, implausible, or without support from the record. *Azar*, 911 F.3d at 568. The injunction is narrowly tailored to remedy the agencies’ ESA and CZMA violation—prohibiting the agencies from approving permits allowing offshore well stimulation treatments until the consultation with the Fish and Wildlife Service and the consistency review with California have been completed.

Intervenors’ primary contention is that the district court presumed irreparable harm to Plaintiffs from the procedural violations of the ESA and CZMA. We agree with Exxon and DCOR that *Monsanto* makes clear that courts may not make such a presumption, but we do not agree that the district court did so here. As the district court points out in its order, the irreparable harm in this case extends beyond the mere procedural violation of the ESA and encompasses the issuance of permits that could lead to harm to endangered species or be inconsistent with California’s coastal zone management program. The district court recognized that a risk of irreparable harm is present here because the agencies “have made no clear commitment” to withhold the issuance of well stimulation permits pending the completion of consultation. We agree that the failure to consult with the wildlife agencies and conduct a consistency review with

California “can no longer be cured” once drilling permits are issued.

The district court’s conclusion on irreparable harm is also supported by facts in the record and inferences that follow. The programmatic EA identifies harmful effects of well stimulation treatments on listed species, and the agencies’ Biological Assessment determined that three species were likely to be adversely affected. The environmental groups submitted declarations with their summary judgment briefs detailing how their members face imminent harm from the harm that well stimulation treatments pose to wildlife.

This potential harm to endangered species supports a finding of irreparable harm because “[o]nce a member of an endangered species has been injured, the task of preserving that species becomes all the more difficult.” *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 886 F.3d 803, 818 (9th Cir. 2018) (citation omitted). Environmental injury, by its nature, “is often permanent or at least of long duration, i.e., irreparable.” *Amoco Prod. Co. v. Vill. of Gambell*, 480 U.S. 531, 545 (1987). That the agencies might conduct ESA review on individual permits in the future does not affect our analysis. Site-specific review cannot cure a failure to consult at the programmatic level, and incremental-step consultation is inadequate to comply with the ESA. *See Conner v. Burford*, 848 F.3d 1441, 1455 (9th Cir. 1988). Were it otherwise, “a listed species could be gradually destroyed, so long as each step on the path to destruction is sufficiently modest.” *Nat’l Wildlife Fed’n*, 524 F.3d at 930.

It was reasonable for the district court to conclude that the agencies’ violations of the ESA and CZMA would result in irreparable harm if the agencies could approve well stimulation treatment permits before the protective

environmental requirements of these statutes were followed. And the district court did not abuse its discretion in its analysis of the other three factors. The Supreme Court has recognized that injury to the environment “can seldom be adequately remedied by money damages and is often permanent.” *Amoco*, 480 U.S. at 545. Nor did the district court abuse its discretion in finding that the balance of hardships and the public interest favors injunctive relief. It determined that “any interest in proceeding forward” with well stimulation treatments is outweighed by the public interest in ensuring that the proposed action is reviewed for consistency with California’s coastal management plan and undergoes consultation with expert wildlife agencies. The ESA, as one of the most far-reaching environmental statutes, “did not seek to strike a balance between competing interests” but rather “singled out the prevention of species . . . as an overriding federal policy objective.” *Lazarus, supra*, at 73. The district court did not abuse its discretion by fashioning relief that advances this overriding federal policy objective. And upon DCOR’s motion for reconsideration, and after receiving full briefing on the *Monsanto* factors, the district court determined that DCOR’s “projection of tens of millions” of dollars in injuries were speculative and temporary. Because the oil “will still remain in the ground,” the district court reasonably concluded that DCOR’s lost profits will likely be delayed, not lost. And the district court doubted whether any claimed losses would even be attributed to the injunction it granted because DCOR did not submit the supplemental development and production plan the agencies requested in January 2017.

The district court’s findings on injunctive relief do not amount to an abuse of discretion. The district court applied the correct test and gave additional consideration to the *Monsanto* factors when considering the merits of DCOR’s

motion for reconsideration.⁸ We affirm the injunctive relief previously fashioned by the district court and remand with instructions that the district court amend its injunction to enjoin the agencies from approving well stimulation treatment permits until the agencies issue a complete EIS, rather than the inadequate EA on which they had relied.

CONCLUSION

The district court had subject matter jurisdiction and properly held that Plaintiffs' claims were ripe. We reverse the grant of summary judgment to Defendants on the NEPA claims, and we affirm the grant of summary judgment to Plaintiffs on the ESA and CZMA claims. We remand for further proceedings consistent with this opinion.

AFFIRMED IN PART, REVERSED IN PART, AND REMANDED.

⁸ DCOR also challenges the district court's denial of its motion for reconsideration. In that motion, DCOR sought to have the district court amend the injunction to allow the agencies to consider DCOR's two pending permits to conduct well stimulation treatments in the Pacific Outer Continental Shelf. We review for an abuse of discretion a district court's decision to deny a motion to alter or amend a judgment. *McQuillion v. Duncan*, 342 F.3d 1012, 1014 (9th Cir. 2003). The district court did not abuse its discretion in determining that DCOR did not meet the standards articulated in Rule 59(e) or 60(b) for this exceptional type of relief.