Heidi J. McIntosh (CO Bar No. 48230)
(pro hac vice pending)
Stuart C. Gillespie (CO Bar No. 42861)
(pro hac vice pending)
Caitlin Miller (CO Bar No. 50600)
(pro hac vice pending)
Earthjustice
633 17th Street, Suite 1600
Denver, CO 80202
sgillespie@earthjustice.org
cmiller@earthjustice.org
Phone: (303) 996-9616
Fax: (720) 550-5757

Attorneys for Plaintiffs Tohono O'odham Nation; Pascua Yaqui Tribe; and Hopi Tribe

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Tohono O'odham Nation; Pascua Yaqui Tribe; and Hopi Tribe, Plaintiffs, v. D. Peter Helmlinger, in his official capacity as Brigadier General of the U.S. Army Corps of Engineers; and the U.S. Army Corps of Engineers, Defendants.	No. _____ COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

INTRODUCTION

1. The Santa Rita Mountains rise as a "sky island" from the desert southwest of Tucson, Arizona. They are a place of remarkable scenic beauty and ecological richness, whose wildlife, water, and sacred places have sustained Native American cultural and religious life for over 10,000 years. Unique cultural sites evidencing the life of early O'odham and other Indian inhabitants include the remnants of villages where groups of hunters and their families lived in community settings adjacent to the desert washes that drain this immense landscape. One site includes the only known ballcourt in the northern Santa Ritas, where the early ancestors of today's tribal members once competed. Graves containing the remains of the early native peoples exist throughout the mountains. Seeps and springs fed by groundwater create pools and streams flowing from the flanks of the Santa Ritas. These sites were not only critical to the early survival of native peoples in the area, but are so important that the tribes to this day imbue them with religious significance. Surface waters, either fed by groundwater or storm runoff, are likewise an essential element of tribal culture, and they sustain the plant and animal life on which human life has depended for thousands of years.

2. In disregard of the unique importance of the Santa Ritas, Rosemont Mining Company ("Rosemont") plans to excavate a mile-wide, half-mile deep pit to extract copper, a proposal that would spell the permanent devastation of this important center of Native American cultural and religious life.

3. The proposed mine would not only mark the loss of some of the most significant religious and cultural sites to Native American tribes, it would degrade the Cienega Creek watershed and destroy an intricate network of drainages containing some of the highest quality streams and wetland ecosystems in Arizona.

4. These drainages qualify as Waters of the United States ("WOTUS") protected by the Clean Water Act ("CWA"). Rosemont cannot disturb these drainages, in any way, unless it obtains a dredge and fill permit from the U.S. Army Corps of Engineers ("Corps") pursuant to Section 404 of the CWA, 33 U.S.C. § 1344.

Accordingly, in 2011, Rosemont applied for a CWA Section 404 Permit ("404 Permit") to construct the mine pit and discharge the excavated waste rock into approximately 39.25 acres of WOTUS.

5. For almost eight years, the Environmental Protection Agency ("EPA"), Pima County, Native American tribes, and the overwhelming majority of the public vigorously opposed the 404 Permit. EPA alone submitted hundreds of pages of technical analysis demonstrating that the mine would violate the CWA by causing unacceptable adverse impacts to WOTUS due to the destruction of 18 miles of streams, the loss of critical surfacewater flows, the contamination of downstream waters with acid-rock runoff, and the significant drawdown of the regional aquifer. At the same time, multiple Native American tribes documented the severe, irreversible, and irreparable impacts of the mine on their cultural resources and the public interest.

6. The Corps' Los Angeles District Office ("L.A. District") refused to grant a 404 Permit for the mine, concluding that the construction of the mine pit and discharge of waste rock would cause significant degradation of WOTUS, violate state water quality standards, and be contrary to the public interest. Furthermore, the L.A. District found that the proposed mitigation plan would not adequately offset the adverse impacts to WOTUS. The L.A. District referred its final decision to the Corps' South Pacific Division Office ("South Pacific Division") for review after Arizona's governor expressed his support for the mine despite its harmful impacts.

7. On March 8, 2019, the South Pacific Division abruptly reversed course, modifying the proposed action at the last minute to circumvent the adverse findings of the L.A. District, EPA, Pima County, the Tribes, and the public. Instead of reviewing the proposal that had been under consideration since 2011, which involved the discharge of thousands of tons of waste rock and tailings into WOTUS, the South Pacific Division instructed Rosemont to prefill all of the washes on the mine site with "native material."

8. The South Pacific Division reasoned that these prefilling activities (clearing, grubbing, and grading the site) would eliminate not only all of the WOTUS on

the mine site, but with them, the Corps' very jurisdiction under the CWA. With the permit issued and the washes filled, the South Pacific Division reasoned that the construction of the mine pit and dumping of waste rock could occur *in the same exact area,* but without any analysis under the CWA or their implementing regulations, known as the "404(b)(1) Guidelines" or the "Guidelines," *see* 40 C.F.R. pt. 230.

9. Based on this novel theory, the South Pacific Division artificially constrained its scope of analysis to the initial prefilling activities. As a result, the South Pacific Division failed to carefully consider EPA's factual determinations regarding the significant adverse impacts to WOTUS due to the construction and operation of the Rosemont Mine.

10. The South Pacific Division compounded this error by claiming that Rosemont would offset the impacts of prefilling the washes with native material by relocating the streambed at Sonoita Creek Ranch—which itself would destroy an additional 8.9 acres of WOTUS. But this mitigation proposal does not offset the secondary effects to downstream WOTUS due to the construction and operation of the mine. Furthermore, this highly contentious and risky proposal was never subject to public notice and comment. Nor did the South Pacific Division prepare a thorough Environmental Impact Statement ("EIS") to assess the proposed mitigation measures or its last-minute modification to the 404 Permit, despite the significant impacts to WOTUS.

11. Based on this faulty analysis, the South Pacific Division issued a Record of Decision ("ROD") and Supplemental Environmental Assessment ("Supplemental EA") granting Rosemont a 404 Permit to prefill all of the washes with native material. Just twelve days later, on March 20, 2019, the United States Forest Service approved the revised Mining Plan of Operations ("MPO"), authorizing the construction and operation of the Rosemont Mine.[1] Rosemont intends to commence ground-disturbing activities in

[1] The Tribes challenged the Forest Service's Record of Decision authorizing the Rosemont Mine. *Tohono O'odham Nation v. U.S. Forest Serv.*, No. 4:18-cv-00189-

the near future, starting with the excavation and removal of ancestral villages and burial sites of deep religious and cultural significance to Native American tribes.

12. The Tohono O'odham Nation, Pascua Yaqui Tribe, and Hopi Tribe (collectively, "the Tribes" unless otherwise specified) challenge the Corps' reversal of the L.A. District's decision recommending denial of a 404 Permit for the Rosemont Mine, asserting violations of the CWA, 33 U.S.C. §§ 1251 *et seq.*; the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321 *et seq.*; the Administrative Procedure Act ("APA"), 5 U.S.C. §§ 701–06; and, their implementing regulations.

13. First, the Corps violated the CWA and basic principles of administrative law by abruptly modifying the 404 Permit and instructing Rosemont to prefill the washes with native material. The South Pacific Division did not identify any need to prefill the washes with native material to construct the Rosemont Mine, precluding issuance of a 404 permit for these activities. The Corps not even acknowledge that the prefilling activities violate the MPO approved by the Forest Service, which *prohibits* Rosemont from burying the native material cleared from the site under the waste rock piles. The Corps only discussed the prefilling activities as its newfound basis to constrain the scope of analysis and disregard the unacceptable impacts on WOTUS. This sleight of hand violates the CWA.

14. Second, even if the Corps could grant a 404 Permit for the sole purpose of preemptively destroying WOTUS on the mine site, it cannot evade its obligation to analyze the secondary effects associated with those discharges, including the construction and operation of the proposed mine on the "fast lands" created by the native material.

15. Third, due to its failure to consider the secondary effects associated with the proposed fill activities, the Corps did not carefully examine EPA and Pima County's

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TUC-JAS (D. Ariz.). Their lawsuit was consolidated with two other cases, all of which have been fully briefed on the merits. *See Ctr. for Biological Diversity v. U.S. Fish and Wildlife Serv.*, No. 4:17-cv-00475-TUC-JAS (Lead); *Save the Scenic Santa Ritas v. U.S. Forest Serv.*, No. 4:17-cv-00576-TUC-JAS.

determinations that the proposed action would cause significant degradation to WOTUS and violate state water quality standards.

16. Fourth, the Corps impermissibly skewed its analysis of the public interest, considering only the benefits of the mine and not the associated costs. The Corps claimed that the project was in the public interest due to the jobs and minerals created by mine operations. But the Corps categorically refused to consider the associated impacts of mine operations, including the economic and environmental impacts of the projected groundwater drawdown, polluted stormwater runoff, formation of a toxic pit lake, and destruction of the Santa Rita Mountains. As a result, the Corps granted a permit that will have a devastating impact on the religious and cultural sites of profound significance to the Tribes.

17. Fifth, the Corps refused to analyze or mitigate the significant degradation that would be caused by the fill activities, including the loss of downstream WOTUS due to groundwater drawdown, reduced stormwater runoff, acid-rock drainage, and the toxic pit lake that would form after operations cease.

18. Sixth, the Corps failed to provide the public with any notice regarding the significant modifications to the 404 Permit. The Corps instructed Rosemont to discharge "native material" into WOTUS located at the waste rock and tailings sites, and modified the scope of analysis to exclude the impacts from the waste rock and tailings piles. The Corps also authorized new discharges of 8.9 acres of fill into Sonoita Creek, destroying the existing channel to purportedly create mitigation credits for the mine. The Corps never issued a Public Notice for these proposed discharges, undermining the public and the Tribes' ability to participate meaningfully in the permitting process.

19. Finally, the Corps arbitrarily refused to prepare a thorough EIS to analyze the significant controversy and uncertainty regarding Rosemont's newly proposed mitigation measures and modifications to the 404 Permit. Rather, the Corps relied on an inadequate Supplemental EA, leading to an uninformed analysis in violation of NEPA.

20. Given the imminent threat of ground-disturbing activities in this case, the Tribes have provided footnotes and citations for all of the allegations in the factual background section below. The Tribes have also provided true and accurate copies of the cited agency records and court-filed documents, including a table of exhibits for the Court's convenience.

JURISDICTION AND VENUE

21. The Tribes bring this case pursuant to the laws of the United States; jurisdiction is therefore proper pursuant to 28 U.S.C. § 1331 (federal question jurisdiction).

22. This court also has jurisdiction pursuant to 28 U.S.C. § 1362, which provides that "district courts shall have original jurisdiction of all civil actions, brought by any Indian tribe or band with a governing body duly recognized by the Secretary of the Interior, wherein the matter in controversy arises under the Constitution, laws, or treaties of the United States."

23. The Defendants' sovereign immunity is waived under the APA, 5 U.S.C. §§ 701–06.

24. This Court has authority to grant declaratory and injunctive relief pursuant to 28 U.S.C. §§ 2201–02, 5 U.S.C. §§ 705–06, and Rule 65 of the Federal Rules of Civil Procedure. This Court also has inherent authority to award injunctive relief.

25. This Court has authority to award costs and attorneys' fees under 28 U.S.C. § 2412.

26. Venue in the Tucson Division of the District of Arizona is proper pursuant to 28 U.S.C. § 1391 because the Tohono O'odham Nation and Pascua Yaqui Tribe reside in the Tucson Division; the lands at issue in this suit are located approximately 30 miles south of Tucson in Pima County, Arizona; and a substantial part of the events giving rise to the Tribes' legal claims occurred in the Tucson Division.

PARTIES

27. The TOHONO O'ODHAM NATION, headquartered in Sells, Arizona, is a federally-recognized sovereign tribe with approximately 33,000 enrolled members. For thousands of years, members of the Nation and their ancestors occupied much of Sonora, Mexico, and southern Arizona from the San Pedro River in the east to the Colorado River in the west—an aboriginal homeland that includes the Santa Rita Mountains. The Nation now holds a combined area of 2.8 million acres of reservation land located west of the Santa Rita Mountains.

28. The Nation's Constitution prioritizes the protection of the environment. The Nation's stated policy, reflected in its Constitution, is to:

> encourage productive and enjoyable harmony between members of the nation and their environment; to promote efforts which will preserve and protect the natural and cultural environment of the Tohono O'odham Nation, including its lands, air, water, flora and fauna, its ecological systems, and natural resources, and its historic and cultural artifacts and archeological sites; and to create and maintain conditions under which members of the nation and nature can exist in productive harmony and fulfill the social, economic, and other requirements of present and future generations of members of the Tohono O'odham Nation.

Tohono O'odham Const., art. XVIII, § 1.

29. Before their reservation was created by executive orders in the late 1800s, members of the Nation and their ancestors, the Hohokam people, lived in the Santa Rita Mountains for approximately 10,000 years. Today, many members of the Nation visit the Santa Rita Mountains, including the proposed Rosemont Mine site, to observe religious rituals, honor the ancestors who lived and were buried there, visit sacred seeps and springs, and gather the bear grass, yucca, and Devil's Claw they use to craft their renowned woven baskets, the sales of which provide important income for members of the Nation. The Nation's members also visit locations at, adjacent to, or downstream from the proposed discharges of fill material at Sonoita Creek.

30. The Nation's ancestral lands would be severely and irreversibly damaged by the mine and its excavation of ancestral graves and other sites of cultural land religious importance, which would harm their interests in the preservation of the mine area. If the mine is constructed, their cultural and religious ties to the land would be irreparably severed.

31. The Nation's Legislative Council passed Resolution No. 09-569 opposing the mine on October 22, 2009. It has produced and publicly distributed a video documenting its opposition to the mine and the impacts of the mine.[2]

32. Members of the Nation intend to visit the Santa Rita Mountains in the near future, including the proposed mine site, to engage in the same activities the O'odham people have engaged in for hundreds of generations: to honor the ancestors who are buried there, enjoy the natural environment, collect medicines and basket making materials, and pray and ask for blessings at the seeps and springs that would be affected by the mine and activities under the 404 Permit. Members of the Nation also intend to visit areas at, adjacent to, or downstream from the proposed discharges of fill material at Sonoita Creek.

33. THE PASCUA YAQUI TRIBE is a federally recognized Indian tribe with approximately 11,000 members in southern Arizona. The Yaqui have lived, travelled, and hunted throughout the Gila and Santa Cruz River Valleys for hundreds of years. In 1964, the Pascua Yaquis received 202 acres of land southwest of Tucson, which forms their present-day reservation. The Pascua Yaqui Tribe of Arizona was federally recognized in 1978.

34. The Tribe's ancestral homelands encompass the Santa Rita Mountains, which are known as the Blue Flower Mountains in the Yaqui language. The Yaqui's

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[2] *Ours is the Land* is available at https://vimeo.com/223976575. This short film was produced by the Nation and depicts in powerful detail the Nation's spiritual, cultural, and physical connection to the Santa Rita Mountains.

ancestors have long used and inhabited these mountains, which provide a source of food, water, medicinal herbs, traditional materials, and shelter. Members of the Yaqui Tribe believe these mountains link their ancestors, who are buried there, to current and future generations.

35. The proposed Rosemont Mine and activities under the 404 Permit would significantly impact, destroy, or alter cultural and archaeological sites containing numerous burial sites, funerary objects, sacred objects, and other archaeological and cultural items of the Yaqui people, as well as permanently degrade the cultural and natural landscape of the area.

36. Members of the Yaqui Tribe intend to visit the Santa Rita Mountains, including the area around the proposed Rosemont Mine site in the near future to gather materials used in traditional ceremonies, such as the Deer Dance, and document the presence of medicinal plants and traditional materials in this area.

37. The HOPI TRIBE is a federally recognized Indian tribe located in northeastern Arizona with approximately 14,475 members. The Hopi reservation occupies part of Coconino and Navajo counties, encompasses more than 1.5 million acres, and comprises twelve villages situated on three mesas.

38. The Hopi Tribe considers the Coronado National Forest, including the site of the proposed Rosemont Mine, part of their ancestral homelands. Hopi migration traditions and traditional knowledge reveal significant long-term cultural ties to the area. The archaeological record also reveals ties between Hopi ancestors and material remains found in the area, including archaeological sites, human burials, shrines, springs, plants, and animals. These resources have spiritual meaning and represent an ongoing connection to the present-day Hopi people.

39. Members of the Hopi Tribe have visited, and intend to visit, the Santa Rita Mountains, including the area around the proposed Rosemont Mine, in the near future to offer prayers to their ancestors, connect with their cultural history, and appreciate the beauty of the Santa Rita Mountains.

40. In an effort to protect this sacred place, the Tribes have consistently opposed the 404 Permit and Rosemont's mine proposal in meetings and in written correspondence with the Corps' representatives. The Tribes submitted a lengthy letter to the Corps in 2017 based on the understanding that the South Pacific Division was reviewing Rosemont's request for a permit to construct the mine pit and discharge waste rock into WOTUS, as required to develop the Rosemont Mine.

41. The Tribes have a right to any culturally affiliated Native American cultural items and ancestral remains that are excavated or discovered on federal lands within the project area. The Tribes can, upon notice, state a claim for such remains or objects. *See* 25 U.S.C. § 3002(a); 43 C.F.R. § 10.6.

42. Defendant GENERAL D. PETER HELMLINGER is sued in his official capacity as the Commander of the Northwestern Division of the Corps and is the Corps official who issued and is responsible for the challenged 404 Permit. Although General Helmlinger was recently installed as the Commander of the Northwestern Division, he retained his authority over the Rosemont 404 Permit from his previous post as Commander of the South Pacific Division.

43. Defendant UNITED STATES ARMY CORPS OF ENGINEERS is the federal agency within the Department of Defense responsible for issuing dredge and fill permits under CWA Section 404.

STATUTORY BACKGROUND

I. The Clean Water Act

44. Congress enacted the CWA to establish a comprehensive program to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," to conserve the recreational value of such waters, and to protect wildlife species that rely on aquatic resources for their survival. 33 U.S.C. § 1251(a).

A. The Clean Water Act Prohibits the Unpermitted Discharge of Pollutants into WOTUS

45. The CWA prohibits the unpermitted discharge of any pollutant by any person into WOTUS. *See id.* § 1311(a). A "discharge" is defined as "any addition of any pollutant to navigable waters from any point source." *Id.* § 1362(12), (16). "[F]ill material" includes any material placed in waters of the United States that has the effect of "[r]eplacing any portion of a water of the United States with dry land" or "[c]hanging the bottom elevation of any portion of a water of the United States." 33 C.F.R. § 323.2(e)(1)(i)–(ii). The "discharge of fill material" includes the "placement of overburden, slurry, or tailings or similar mining-related materials." *Id.* § 323.2(f).

46. "[N]avigable waters" means the "waters of the United States." 33 U.S.C. § 1362(7). "[W]aters of the United States" includes "[a]ll interstate waters," "[a]ll tributaries . . . of [interstate] waters," and "[a]ll waters . . . where they are determined . . . to have a significant nexus to a[n interstate] water." 33 C.F.R. § 328.3(a)(2), (5), (7).

47. Section 404 of the CWA authorizes the Corps to issue federal permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites." 33 U.S.C. §1344(a). Before it can issue a 404 permit, however, the Corps must comply with its own regulations, *see* 33 C.F.R. pt. 325, as well as the binding guidelines established by the Corps and the EPA, known as the "404(b)(1) Guidelines" or the "Guidelines," *see* 40 C.F.R. pt. 230. These regulations impose a number of procedural and substantive restrictions on the Corps' authority to grant 404 permits.

B. The Corps Must Provide a Public Notice Clearly Identifying the Proposed Fill Activity

48. The Corps must provide the public with notice and an opportunity to comment on the proposed discharge of dredged or fill material into the waters of the U.S. at specified disposal sites. 33 C.F.R. § 325.3(a). The notice must "include sufficient information to give a clear understanding of the nature and magnitude of the activity to generate meaningful comment." *Id.*

49. Among other things, the notice must provide "a brief description of the proposed activity, its purpose and intended use, so as to provide sufficient information concerning the nature of the activity to generate meaningful comments," including "a description of the type, composition, and quantity of materials" to be discharged. *Id.* § 325.3(a)(5).

C. The Corps Must Avoid Impacts to WOTUS in the First Instance

50. The 404(b)(1) Guidelines require the Corps to avoid any adverse impacts to WOTUS. 40 C.F.R. § 230.91(c)(2). The Corps must therefore ensure that the proposed fill activity is essential to meet the overall project purpose, *i.e.*, that that there are no "practicable" alternatives that would avoid discharges into WOTUS. *See id.* § 230.10(a).

51. The Corps shall not issue a Section 404 permit "if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." *Id.* "An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." *Id.* § 230.10(a)(2). Practicable alternatives include "[a]ctivities which do not involve a discharge of dredged or fill material." *Id.* at § 230.10(a)(1)(i).

52. The Corps cannot grant a permit for "merely incidental" fill activities that are not essential to the proposed project. *Utahns for Better Transp. v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1190 (10th Cir. 2002).

D. The Corps May Not Grant a 404 Permit That Would Cause Significant Degradation to WOTUS

53. Even if filling WOTUS is essential to a proposed project, the Guidelines still prohibit the Corps from issuing a 404 permit if the proposed discharge of dredged or fill material "will cause or contribute to significant degradation of the waters of the United States." 40 C.F.R. § 230.10(c). Effects contributing to significant degradation include adverse effects on human health or welfare; life stages of aquatic life and other

water-dependent wildlife; aquatic ecosystem diversity, productivity, and stability; and recreational, aesthetic, and economic values. *Id.*

54. In assessing whether a permit would cause significant degradation, the Corps must consider the direct, secondary, and cumulative effects of the proposed discharge on water circulation, fluctuation, salinity, suspended particulate/turbidity, contaminants and aquatic ecosystems of organisms. *Id.* § 230.11(b)–(e).

55. Direct impacts result from the actual placement of the dredged or fill material into WOTUS. *See id.* § 230.11(h)(1). "Secondary effects are the effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material." *Id.*

56. Information about secondary effects on aquatic ecosystems "shall be considered prior to the time final section 404 action is taken by permitting authorities." *Id.* Secondary effects include "fluctuating water levels in an impoundment and downstream associated with the operation of a dam, septic tank leaching and surface runoff from residential or commercial developments on fill, and leachate and runoff from a sanitary landfill located in waters of the U.S" *Id.* § 230.11(h)(2). In addition, "[a]ctivities to be conducted on fast land created by the discharge of dredged or fill material in waters of the United States may have secondary impacts within those waters which should be considered in evaluating the impact of creating those fast lands." *Id.*

57. The "cumulative effects" of the proposed discharge of fill material include "the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material. Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of the existing aquatic ecosystems." *Id.* § 230.11(g)(1).

58. The Corps must make a finding of non-compliance with the 404(b)(1) Guidelines where "[t]here does not exist sufficient information to make a reasonable

judgment as to whether the proposed discharge will comply with these Guidelines." *Id.* § 230.12(a)(3)(iv).

E. The Corps May Not Issue a 404 Permit that Would Result in a Violation of State Water Quality Standards

59. The Corps may not issue a 404 permit if the discharge of dredged or fill material under the permit "[c]auses or contributes . . . to violations of any applicable State water quality standard." *Id.* § 230.10(b)(1).

60. The Corps considers a state water quality certification, issued pursuant to Section 401(a) of the CWA, 33 U.S.C. § 1251 *et seq.*, as "conclusive with respect to water quality considerations unless the Regional Administrator, Environmental Protection Agency (EPA), advises of other water quality aspects to be taken into consideration." 33 C.F.R. § 320.4(d).

F. The Corps Must Minimize Impacts to WOTUS

61. The 404(b)(1) Guidelines prohibit the Corps from issuing a 404 permit "unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem." 40 C.F.R. § 230.10(d).

62. Consequently, those seeking a 404 permit must mitigate the impacts of the proposed dredge and fill activities by "avoiding, minimizing, rectifying, reducing, or compensating for resource losses." 33 C.F.R. § 320.4(r)(1). The Corps "must determine the compensatory mitigation to be required in a DA [404] permit, based on what is practicable and capable of compensating for the aquatic resource functions that will be lost as a result of the permitted activity." 40 C.F.R. § 230.93(a)(1). In making this determination, "the district engineer must assess the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project." *Id.* Adverse effects to aquatic resource functions, whether direct or indirect, must be mitigated. *See* 33 C.F.R. § 320.4(r)(2); 40 C.F.R. § 230.93(a).

G. The Corps May Not Issue a 404 Permit Unless It is in the Public Interest

63. In addition to the 404(b)(1) Guidelines, the Corps has promulgated regulations that prohibit issuance of a permit if the "district engineer determines that it would be contrary to the public interest." 33 C.F.R. § 320.4(a)(1). This far-reaching inquiry requires "a careful weighing" of "the probable impacts" of a proposed project on "[a]ll factors which may be relevant to the proposal[,] including the cumulative effects." *Id.* The decision should "reflect the national concern for both protection and utilization of important resources." *Id*.

64. To ensure an objective analysis, the Corps must use the same scope of analysis for the benefits and impacts of a proposal. *See id.* pt. 325, App. B § 7(b)(3).

II. The National Environmental Policy Act

65. NEPA is "our basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). Congress enacted NEPA "to protect the environment by requiring that federal agencies carefully weigh environmental considerations and consider potential alternatives to the proposed action before the government launches any major federal action." *Lands Council v. Powell*, 395 F.3d 1019, 1026 (9th Cir. 2005).

66. NEPA implements the precautionary principle to think first, then act by requiring agencies, "to the fullest extent possible . . . [u]se all practicable means, consistent with the requirements of [NEPA] and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment." 40 C.F.R. § 1500.2(f).

67. NEPA requires agencies to take a hard look at the direct, indirect, and cumulative impacts of a proposed action to inform its decision about whether a proposed action significantly impacts the environment. *Id*. §§ 1502.16, 1508.8, 1508.25(c).

68. NEPA requires that all federal agencies "[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures." *Id.* § 1506.6(a). The

agencies "shall involve environmental agencies, applicants, and the public, to the extent practicable, in preparing assessments required by [40 C.F.R.] § 1508.9(a)(1)." *Id.* § 1501.4(b).

69. NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and actions are taken. *Id.* § 1500.1(b). The information must be of high quality. *Id.* Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. *Id.*

70. NEPA and its implementing regulations require federal agencies to prepare an EIS for "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1508.11.

71. If an agency is unsure whether a proposed action will have significant environmental effects, it may prepare a shorter document called an "environmental assessment" ("EA") to determine if the proposed action may have significant environmental effects and whether an EIS is necessary. 40 C.F.R. § 1501.4(b).

72. An agency must prepare an EIS when there are substantial questions about whether a project "may" significantly degrade the environment. *Native Ecosystems Council v. U.S. Forest Serv.*, 428 F.3d 1233, 1239 (9th Cir. 2005) (emphasis omitted). "[T]his is a low standard." *California Wilderness Coal. v. Dep't of Energy*, 631 F.3d 1072, 1097 (9th Cir. 2011) (quoting *Klamath Siskiyou Wildlands Ctr. v. Boody*, 468 F.3d 549, 562 (9th Cir. 2006)).

73. Where an agency relies upon a previously prepared and issued EIS, NEPA's regulations require an agency to supplement its prior NEPA review when "[t]he agency makes substantial changes in the proposed action that are relevant to environmental concerns," or "[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. § 1502.9(c).

74. "Significantly" as used in NEPA requires considerations of both context and intensity." *Id.* § 1508.27. In determining whether a proposed project may result in

significant impacts, the agency must analyze ten "intensity" criteria listed in 40 C.F.R. § 1508.27(b), including:

- The degree to which the effects on the quality of the human environment are likely to be highly controversial.
- The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.
- Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Id. § 1508.27(b)(4)–(5), (7), (10).

75. The potential presence of even one significance factor is sufficient to require the preparation of an EIS. *Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 865 (9th Cir. 2005) (citing *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 731 (9th Cir. 2001)).

76. Agencies must also take a hard look at mitigation measures for a proposed action in order to evaluate the severity of the action's adverse effects. 40 C.F.R. §§ 1502.14(f), 1502.16(h), 1508.25(b)(3). A reasonably complete discussion of mitigation measures requires an assessment of whether the proposed mitigation measures will be effective.

III. The Administrative Procedure Act

77. The APA confers a right of judicial review on any person adversely affected by final agency action, and provides for a waiver of the federal government's sovereign immunity. 5 U.S.C. §§ 701–06.

78. Upon review of agency action, the court shall "hold unlawful and set aside agency action . . . found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Id.* § 706(2). An action is arbitrary and

capricious "if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision 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." *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). Further, "the agency must . . . articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made." *Id.* (quotations and citations omitted).

STATEMENT OF FACTS

The Ecological Significance of the Cienega Creek Watershed

79. The 404 Permit authorized Hudbay to fill 18 miles of streams that quality as WOTUS in the Santa Rita Mountains, all of which are located in the Cienega Creek watershed. This watershed is an aquatic resource of conservation value exceeding or equal to any other in the American Southwest.[3]

80. The location of the open-pit mine and the lands on which waste rock and tailings would be dumped, and their relationship to the Cienega Creek watershed is depicted in the map below.[4]

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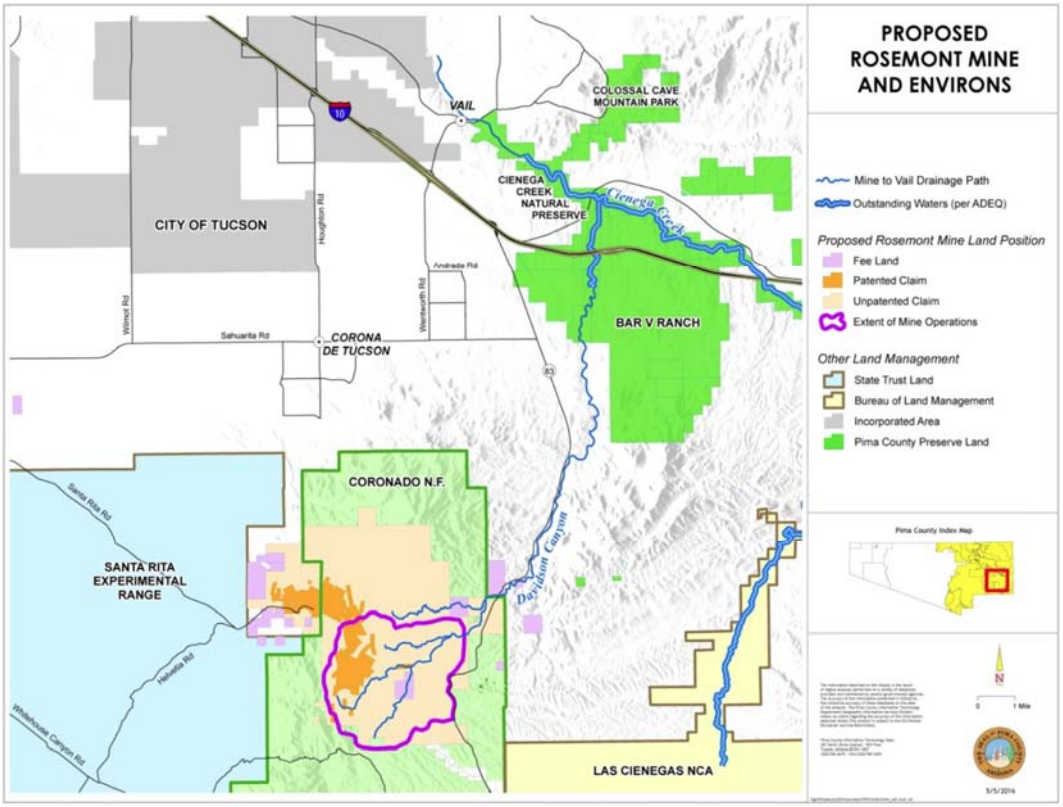
[3] Letter from Nancy Woo, Assoc. Dir., Water Div., U.S. Envtl. Prot. Agency, to Edwin S. Townsley, Operations and Regulatory Div. Chief, S. Pac. Div., U.S. Army Corps of Eng'rs, Environmental Consequences of the Proposed Rosemont Copper Mine: Significant Degradation to Waters of the United States at 34 (Nov. 30, 2017) [hereinafter "EPA Nov. 2017 Significant Degradation Letter"] (attached as Ex. 1).

[4] Letter from C.H. Huckelberry, Cty. Adm'r, Pima Cnty., Ariz., to Colonel D. Peter Helmlinger, Commander, S. Pac. Div., U.S. Army Corps of Eng'rs, and Alexis Strauss, Acting Regional Adm'r, Region 9, U.S. Envtl. Prot. Agency (June 6, 2017) [hereinafter "Pima County June 2017 Letter to the Corps and EPA"] (attached as Ex. 2).



81. Several major drainages of the Cienega Creek watershed occur within the Rosemont Mine project area, including Barrel and Davidson Canyon, Empire Gulch, and Cienega Creek.[5] Empire Gulch and Cienega Creek contain perennial stream reaches and support hundreds of acres of high quality riparian and wetlands, many of which qualify as WOTUS.[6]

82. The Rosemont Mine site is also an important source of groundwater recharge within the Cienega Creek watershed. Recent isotope and tracer studies conducted by the University of Arizona show that wetlands within the Las Cienegas National Conservation Area ("Las Cienegas NCA"), downgradient from the mine site, depend on water recharging in the Santa Rita Mountains, not from recently recharged

[5] EPA Nov. 2017 Significant Degradation Letter at 34.
[6] *Id.*

runoff infiltrating through streambeds in the basin.[7] This research clearly links the springs and wells in Las Cienegas NCA to the Santa Rita Mountains.[8]

83. The Cienega Creek watershed, in turn, contributes to the groundwater under Tucson.[9] The watershed where the Rosemont Mine would be located provides 20% of the groundwater recharge in the Tucson Basin.[10]

84. Recognizing the exceptional value of this area, the State of Arizona designated reaches of both Davidson Canyon and Cienega Creek as Outstanding Arizona Waters ("OAW"). Ariz. Admin. Code § R18-11-112(G). Davidson Canyon is a rare, spring-fed, low elevation desert stream, supporting a variety of uncommon flora and fauna.[11] The designated reach of Davidson Canyon begins approximately 12 river miles downstream of its confluence with Barrel Canyon and extends 3.2 miles to its confluence with Cienega Creek.[12]

85. All of Cienega Creek was designated an OAW by the Arizona Department of Environmental Quality ("ADEQ") after Pima County nominated it in 1990. *Id.*[13] Cienega Creek contributes flows to the Santa Cruz River, and contains remnants of a

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[7] *See* Letter from C.H. Huckelberry, Cty. Adm'r, Pima Cty., Ariz., to William James, Nat'l Mining Expert, U.S. Army Corps of Eng'rs at 1–2 (Sept. 7, 2018) [hereinafter "Pima County Sept. 2018 Letter to the Corps"] (attached as Ex. 3).
[8] *Id.*
[9] Letter from C.H. Huckelberry, Cty. Adm'r, Pima Cty., Ariz., to William James, Nat'l Mining Expert, U.S. Army Corps of Eng'rs, and Kerwin Dewberry, Forest Supervisor, U.S. Forest Serv. At 2–3 (Sept. 28, 2017) [hereinafter "Pima County Sept. 2017 Letter to the Corps and Forest Service"] (attached as Ex. 4).
[10] EPA Nov. 2017 Significant Degradation Letter at 22.
[11] *Id.* at 35.
[12] U.S. Forest Serv., Final Environmental Impact Statement for the Rosemont Copper Project Vol. 2 at 523 (2013) [hereinafter "FEIS Vol. 2"] (attached as Ex. 5). In order to limit the number of pages provided, the Tribes have excerpted the relevant portions of FEIS Vol. 2, and all other FEIS volumes cited herein, without altering the excerpted pages.
[13] *See also id.*

historically extensive cienega system, defined by springs and marsh areas supporting habitat for native wildlife and plants, including threatened and endangered species.[14]

86. The OAW designation ensures that existing surface water quality will be maintained and protected for the designated use of the surface water.[15] With respect to OAW in Davidson Canyon, degradation of existing water quality is prohibited.[16] With respect to the OAW in Upper and Lower Cienega Creek, both anti-degradation and wadeable, perennial standards must be met.[17]

87. The EPA also determined that Cienega Creek and its major tributary, Davidson Canyon, are aquatic resources of national importance.[18] These aquatic resources are "extraordinary, rare and intact ecosystems in a desert environment, and their protection is an explicit priority of local, state and federal agencies, environmental organizations, and the public."[19]

88. Congress included portions of Cienega Creek and Empire Gulch within the federally-protected Las Cienegas NCA.[20]

89. Pima County has spent almost 40 years acquiring land along Cienega Creek and Davidson Canyon for conservation purposes. In 1980, the County purchased the Cienega Creek Natural Preserve.[21] Pima County subsequently acquired the Cienega Valley Empire Ranch Reserve, the Bar-V Ranch, Sands Ranch, Clyne Ranch, and Empire

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[14] EPA Nov. 2017 Significant Degradation Letter at 35.
[15] FEIS Vol. 2 at 523.
[16] *Id.* at 512.
[17] *Id.*
[18] EPA Nov. 2017 Significant Degradation Letter at 35.
[19] *Id.*
[20] *Id.* at 3, 26, 35.
[21] Letter from C.H. Huckelberry, Cty. Adm'r, Pima Cty., Ariz., to Colonel Kim Colloton, Dist. Eng'r, L.A. Dist., U.S. Army Corps of Eng'rs at 2 (Dec. 30, 2013) [hereinafter "Pima County Dec. 2013 Letter to the Corps"] (attached as Ex. 6).

Ranch.[22] Pima County acquired all of these lands to protect the watershed basin and these unique groundwater-based stream ecosystems.[23]

90. Three of the six Special Aquatic Sites identified in the 404(b)(1) Guidelines occur on or adjacent to the Rosemont Mine site, including wetlands, sanctuaries and refuges, and riffle and pool complexes, as well as the OAWs discussed above.[24] Collectively, these special aquatic sites play a regionally significant role in maintaining the existing, high quality functions and services of this watershed.[25]

91. Groundwater under the Rosemont Mine—which would be depleted as a result of the mine operations—also supports ninety-five seeps and springs that are critical to the survival of many wildlife species.[26]

The Cultural Significance of the Santa Rita Mountains

92. For the Tribes, the Santa Rita Mountains, or *Ce:wi Duag* ("Long Mountain" in the O'odham language), is a landscape imbued with cultural significance—a location of sacred sites, ancestral villages and burial sites, and a source of plant, animal, and mineral resources critical to maintaining traditional O'odham culture.[27]

93. Archaeological investigations confirm Native American use and occupation of the Santa Rita Mountains, and in particular, the site of the proposed Rosemont Mine, over the course of approximately 10,000 years for ceremonial, religious, and other purposes.[28] The densest occupation occurred during the Hohokam period (AD. 200-

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[22] *Id.*
[23] *Id.*
[24] EPA Nov. 2017 Significant Degradation Letter at 34.
[25] *Id.*
[26] *Id.*
[27] Suzanne Griset, SWCA Envtl. Consultants, William Gillespie, Coronado Nat'l Forest, and Mary Farrell, Trans-Sierran Archaeological Research, National Register of Historic Places Registration Form for Ce:Wi Duag ("Long Mountain" in O'odham) at 3–15 (2012) [hereinafter "Ce:wi Duag NRHP Registration Form"] (attached as Ex. 7).
[28] Ned Norris, Jr., Chairman and Wavalene M. Romero, Vice Chairwoman, Tohono O'odham Nation, Objection to the Rosemont Copper Project Final Environmental Impact Statement ("FEIS") and Proposed Record of Decision ("ROD"), Responsible Official:

1450), when O'odham and Hopi ancestors built permanent villages, ceremonial structures, and extensive irrigation systems throughout the Santa Cruz basin.[29] Some of these villages contained ceremonial centers, as evidenced by the presence of a unique ballcourt adjacent to the proposed Rosemont Mine.[30]

94. There are 49 known historic properties from this time period within the area of the Rosemont Mine.[31] Many of these ancestral villages were located on ridges adjacent to washes that drain the Santa Rita Mountains and provide the lifeblood for the Cienega Creek watershed.[32]

95. In the 1980s, archaeological investigations were conducted for the proposed ANAMAX copper mine, which was located in approximately the same area as the current proposed mine.[33] Archaeologists unearthed 193 Native American burial sites from the lands now included in the proposed Rosemont Mine site.[34] The excavated archaeological sites were never backfilled, and the human remains removed from the site were not repatriated to the Nation for almost 30 years.[35]

96. The ANAMAX excavations—including the disturbance of ancient burial grounds, and the removal of the remains and artifacts—caused tremendous damage to the cultural and religious traditions and beliefs of the Tribes, impacts that would be

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James Upchurch, Forest Supervisor, Coronado National Forest, Nogales Ranger District at 5 (2014) [hereinafter "Nation's Protest"] (attached as Ex. 8); U.S. Forest Serv., Final Environmental Impact Statement for the Rosemont Copper Project Vol. 3 at 1029 (2013) [hereinafter "FEIS Vol. 3"] (attached as Ex. 9); Ce:wi Duag NRHP Registration Form at 9–11.

[29] Ce:wi Duag NRHP Registration Form at 10.

[30] *Id.* at 14.

[31] FEIS Vol. 3 at 1029.

[32] *Id.*

[33] *Id.* at 1027.

[34] *Id.*

[35] *Id.* at 1031.

exacerbated by the Rosemont Mine.[36] The Tribes believe that their ancestors' spirits continue to live in the Santa Rita Mountains and that their burial sites are sacred places.[37]

97. There is evidence that additional burials are present in the area of the proposed Rosemont Mine.[38] The proposed Rosemont Mine would directly impact at least 30 prehistoric sites that contain or likely contain human remains.[39] The Forest Service identified an additional nine prehistoric sites that would be indirectly impacted by the Barrel Alternative, one of which contains human remains.[40]

98. The Santa Rita Mountains also provide traditional cultural resources, including beargrass and yucca, which are not available in the lowlands of the Tohono O'odham Nation, yet are integral to the O'odham traditional way of life.[41] For hundreds of years, the Nation has used the Santa Rita Mountains to gather materials for making traditional baskets.[42]

99. The Santa Ritas are an optimal source of three materials that are needed to make traditional O'odham basketry, including 1) beargrass (Nolina microcarpa), the primary core or bundle material for coiled baskets; 2) the leaves of soaptree yucca (Yucca elata), used for stitching coiled baskets; and 3) the roots of banana yucca (Y. baccata), for decorative red stitches.[43]

100. All of these plants are available in the Santa Rita Mountains but are scarce at the lower elevations of much of the current O'odham reservation.[44] Furthermore,

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[36] Nation's Protest at 10.
[37] *Id.* at 2; Decl. of Arthur Wilson at 3, ECF No. 98-2, *Ctr. for Biological Diversity, et al. v U.S. Fish and Wildlife Serv., et al.*, Case No. 4:17-cv-00475-TUC-JAS; 4:17-cv-00576-TUC-JAS; 4:18-cv-00189-TUC-JAS (D. Ariz.) [hereinafter "Art Wilson Decl."] (attached as Ex. 10).
[38] FEIS Vol. 3 at 1039.
[39] *Id.* at 1040.
[40] *Id.*
[41] Ce:wi Duag NRHP Registration Form at 13.
[42] Nation's Protest at 2.
[43] Ce:wi Duag NRHP Registration Form at 13.
[44] *Id.*

plants take on the specific characteristics of the locales in which they grow naturally, which is why native people travel to specific locations to pick specific plants, including the site of the proposed Rosemont Mine.[45]

101. The Santa Rita Mountains sustain numerous sacred springs and seeps that bring special spiritual and ecological importance to the land.[46]

102. The mine site is also home to the endangered jaguar, an animal that members of the Tribes believe is sacred and imbued with spiritual significance.[47] The jaguar is known to the O'odham as *ooshad*, "the spotted one," and regarded by the O'odham as part of the spirit world that appears to give them strength.[48] Likewise, the Yaqui have long honored the jaguar, as documented by traditional Yaqui warrior shields that contain images of this sacred animal.[49]

The Proposed Rosemont Mine

103. The Rosemont Mine would be a large-scale open-pit copper mine, covering well over 5,000 acres.[50] Rosemont would construct a mile-wide open pit, with a final depth of up to 3,000 feet, depending on the elevation of the pit rim.[51] Over the life of the mine, Rosemont would remove approximately 1,249,161,000 tons of waste rock and 661,429,000 tons of sulfide ore from the pit.[52]

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[45] FEIS Vol. 3 at 1034.
[46] *Id.* at 1041; Nation's Protest at 21.
[47] FEIS Vol. 2 at 600; Nation's Protest at 13.
[48] Nation's Protest at 13.
[49] Peter S. Yucupiero, Tribal Chairman, Pascua Yaqui Tribe, Rosemont Copper Project Objection at 3 (2014) [hereinafter "Pascua Yaqui Protest"] (attached as Ex. 11).
[50] S. Pac. Div., U.S. Army Corps of Eng'rs, Record of Decision for the Rosemont Copper Project (SPL-2008-00816-MB) at 5 (2019) [hereinafter "Corps ROD"] (attached as Ex. 12).
[51] U.S. Forest Serv., Final Environmental Impact Statement for the Rosemont Copper Project Vol. 1 at 31 (2013) [hereinafter "FEIS Vol. 1"] (attached as Ex. 13).
[52] U.S. Forest Serv., Record of Decision: Rosemont Copper Project and Amendment of the Coronado Land and Resource Management Plan at 35 (2017) [hereinafter "Forest Serv. ROD"] (attached as Ex. 14).

104. The Forest Service approved the "Barrel Alternative," which involves construction of the mine pit and the discharge of all the tailings (mine waste resulting from the initial processing of the copper ore) and waste rock/overburden (rock excavated from the mine pit that never undergoes processing or copper recovery) in upper Barrel Canyon and the lower portion of Wasp Canyon.[53]

105. The Forest Service prepared a Final Environmental Impact Statement ("FEIS") to analyze the impacts of the proposed mine.[54]

106. The FEIS modeled the stormwater flows (i.e. surfacewater runoff) from the watershed surrounding the Rosemont Mine.[55] Under baseline conditions, stormwater flows from this watershed are 1,404 acre-feet annually ("AFA").[56] However, water would be diverted, captured, and lost as a result of the mine. The maximum loss of stormwater runoff would occur during mining operations when runoff from the tailings and processing facilities would be captured, retained onsite, and then recycled as process water.[57] During active mining, the loss of runoff would vary, but is likely to approach a reduction in annual average runoff of about 30 to 40 percent compared with baseline conditions.[58] This equates to a reduction in stormwater runoff of about 421 AFA to 562 AFA, as compared to the baseline condition of 1,404 AFA.[59]

107. After mining operations cease, Rosemont would remove the stormwater retention points on the waste rock and tailings facility, allowing runoff to be discharged

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[53] U.S. Forest Serv., Final Environmental Impact Statement for the Rosemont Copper Project Vol. 5 – Appendix at 53, pdf. 81 (2013) [hereinafter "FEIS Vol. 5"] (attached as Ex. 15).
[54] *See* FEIS Vol. 1 at vii.
[55] FEIS Vol. 2 at 401.
[56] *Id.* at 435. One acre-foot of water is enough water to cover one acre of surface area (about the size of a football field) to a depth of one foot. This equals approximately 325,851 gallons of water.
[57] *Id.* at 424–25, 434.
[58] *Id.*; EPA Nov. 2017 Significant Degradation Letter at 11.
[59] FEIS Vol. 2 at 434.

into the downstream washes.[60] But there are still several areas (the mine pit itself and diversions to the west of the mine pit) that would never again discharge water downstream.[61] For example, all precipitation falling within and near the pit would be retained in the pit.[62] The FEIS thus modeled a 17.2% reduction in post-closure stormwater runoff under the Barrel Alternative, which equates to a loss in stormwater flows of 242 AFA.[63]

108. Rosemont would also actively dewater the pit during mine operations so that it can conduct work at or below the groundwater table.[64] The rate of dewatering of the regional aquifer during active mining is estimated to be as high as 650 gallons per minute, totaling between 13,000 to 18,500 acre-feet over the life of the mine.[65]

109. After closure of the mine, the pit would gradually fill with surface and groundwater, creating a toxic pit lake that would exceed standards for cadmium, lead, copper, mercury, selenium, and zinc, three of which are known to bioaccumulate in the environment (i.e., cadmium, mercury, and selenium).[66]

110. The pit lake would also create a permanent hydraulic sink, reversing groundwater flows away from and ultimately dewatering seeps, springs, and riparian areas in the region.[67] Water would be lost from the pit lake through evaporation at a rate

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[60] *Id.* at 425.
[61] *Id.*
[62] *Id.*
[63] *Id.* at 435.
[64] *Id.* at 353.
[65] *Id.*
[66] FEIS Vol. 3 at 664.
[67] FEIS Vol. 2 at 353; Letter from Jane Diamond, Water Div. Dir., U.S. Envtl. Prot. Agency, to Colonel Kim Colloton, Dist. Eng'r, L.A. Dist., U.S. Army Corps of Eng'rs at 4 (Nov. 7, 2013) [hereinafter "EPA 2013 Updated Compensatory Mitigation Letter"] (attached as Ex. 16).

of 170 to 370 AFA in perpetuity.[68] This water would be forever "unavailable to supply perennial flows, riparian vegetation, or groundwater outflow from the basin."[69]

111. The Forest Service issued a Record of Decision authorizing the Barrel Alternative, but stated that it would not approve the final MPO, nor allow Rosemont to disturb public land, until the Corps issued the 404 Permit.[70]

Rosemont Applies for a 404 Permit

112. At the beginning of the 404 permitting process, the Corps determined that "potentially jurisdictional WOTUS" are present within the mine site, thus requiring a 404 permit prior to any discharge into these waters.[71]

113. There are approximately 101.60 acres of potentially jurisdictional waters of the U.S. in and around the mine site, including 154 individual ephemeral washes and springs that encompass 18 stream miles, and 2 wetlands (Scholefield Spring No. 1 and Fig Tree Spring).[72]

114. Rosemont cannot develop the Rosemont Mine or meet the overall project purpose without a 404 Permit. "The distribution of WOTUS across the project site would preclude implementation of a mining operation of the size and scope of the applicant's proposed action."[73] As depicted below, the Rosemont Mine would straddle the jurisdictional washes.[74]

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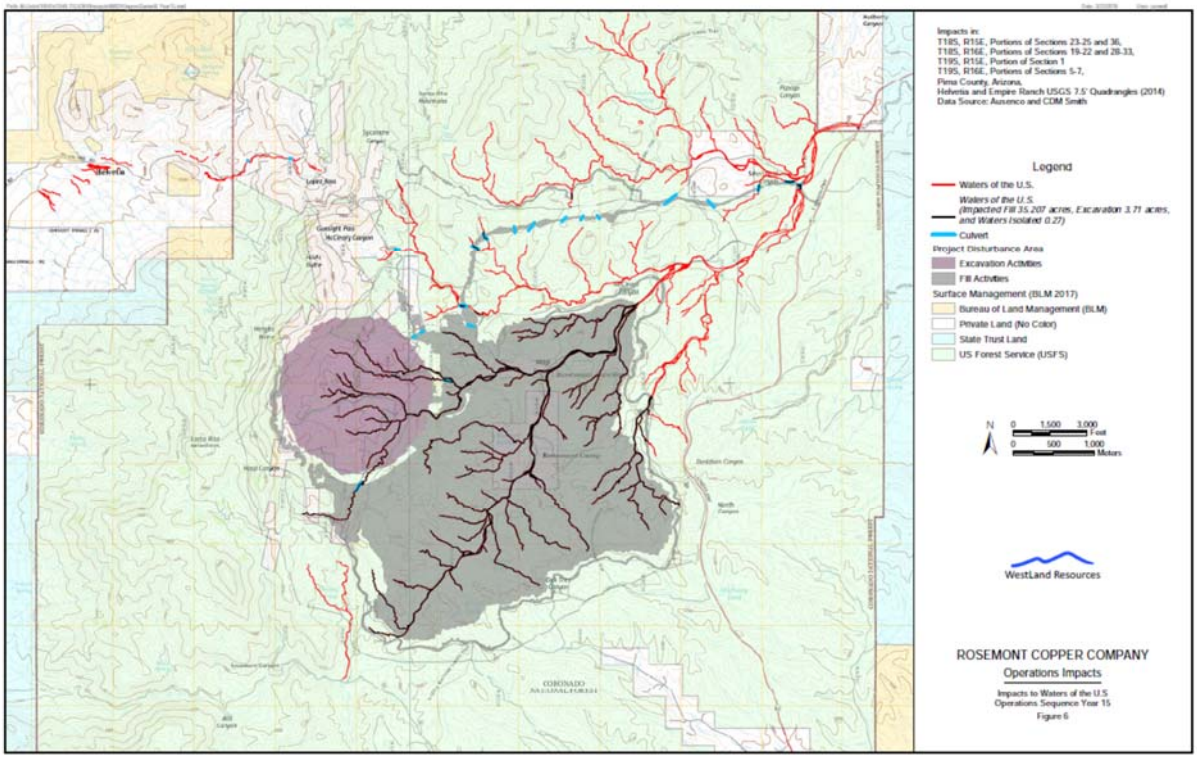
[68] FEIS Vol. 1 at xxx; FEIS Vol. 3 at 1138.
[69] FEIS Vol. 2 at 353; *see also* FEIS Vol. 3 at 1138.
[70] FEIS Vol. 1 at 60–61; Forest Serv. ROD at 96.
[71] FEIS Vol. 5 at 4–5.
[72] *Id.* at 4; Corps ROD at 6.
[73] Corps ROD at 17.
[74] Letter from Katherine Ann Arnold, Dir., Envir., Rosemont Copper Co., to William James, Nat'l Mining Expert, U.S. Army Corps of Eng'rs, and Deanna Cummings, Senior Regulatory Project Manager, U.S. Army Corps of Eng'rs at pdf. 9 fig.6 (March 23, 2018) [hereinafter "Rosemont Phasing Impact Figures Letter"] (attached as Ex. 18).



115. Rosemont submitted a permit application in 2011 identifying the fill activities required to develop the Rosemont Mine, as described in the Barrel Alternative.[75]

116. While the Corps' decision to grant 404 Permit is based only on the fill of native material into the drainages, the permit Rosemont actually sought—and which was the basis for review and comment by the L.A. District, the EPA, and the public—was for the discharge of waste rock directly into WOTUS. Rosemont requested a permit to discharge "oxide ore and excavated waste rock" into 9.0 acres of WOTUS for the waste rock storage area; discharge "[n]ative soil and rock [and] excavated waste rock" into 20.7 acres of WOTUS for the tailings facility; and "[b]last[] and excavate[] waste rock (consisting of limestone, skarn, arkose, andesite, and quartz monzonite porphyry)" in 4.4

[75] WestLand Resources, Inc., Section 404 Permit Application for the Rosemont Copper Project ACOE File No. SPL-2008-00816-MB at pdf. 5 (2011) [hereinafter "404 Permit Application"] (attached as Ex. 17).

acres of WOTUS to construct the mine pit.[76] Rosemont's permit request was not limited to prefilling all of the WOTUS on the site with native material.[77]

117. Rosemont proposed to fill the washes with excavated waste rock, concurrent with the construction and operation of the mine, as set forth in the table below.[78]

Table 1. Impact Acreages, acres are cumulative at each period

Period	Total New Impacts per Period	Cumulative Impacts per Period			
		Excavation	Fill	Isolated	Total
Construction					
Month 1	2.81	0.07	2.74		2.81
Month 2	0.54	0.14	3.21		3.35
Month 3	4.05	1.22	6.19		7.41
Month 6	0.00	1.22	6.19		7.41
Month 9	0.21	1.23	6.39		7.62
Month 12	2.07	1.69	7.99		9.68
Month 15	3.55	1.69	11.55		13.24
Month 18	1.95	1.72	13.48		15.20
Month 21	1.38	2.17	1441		16.58
Month 24	8.00	2.28	22.29		24.57
Operations					
Year 1	2.81	2.39	25.01		27.40
Year 2	1.31	2.92	25.79		28.71
Year 3	4.11	2.93	29.89		32.82
Year 4	1.86	3.37	31.31		34.68
Year 5	4.50	3.71	35.20	0.27	39.18
Year 10	0.00	3.71	35.20	0.27	39.18
Year 15	0.07	3.71	35.27	0.27	39.25

118. Rosemont also provided maps depicting the phased impacts of the mine on WOTUS.[79] Rosemont would construct the mine pit, waste rock and tailings facilities in or on the WOTUS that receive fill material, and sought the 404 Permit to cover those activities.[80]

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[76] 404 Permit Application at pdf. 10 tbl.1.
[77] *See generally id.*
[78] Rosemont Phasing Impact Figures Letter at pdf. 2 tbl.1
[79] *Id.* at pdf. 4–9, figs.1–6.
[80] *See id.* at pdf. 4 fig.6.

The L.A. District's Public Notice Identified Waste Rock as the Source of the Fill Material

119. The L.A. District issued a Public Notice for Rosemont's permit application in December 2011.[81] The Public Notice identified the activities for which a permit is required. According to the Public Notice, the Rosemont Mine would require the discharge of 19,941 cubic feet of waste rock into 8.24 acres of WOTUS for the waste rock piles; the discharge of 66,792 cubic feet of mine tailings into an additional 20.70 acres of WOTUS for the tailings facility; and, the blasting of waste rock in 4.4 acres of WOTUS for the mine pit.[82]

120. The Public Notice stated that the discharges for the project features of the waste rock and dry stack tailings would only include "Excavated Waste Rock," or "ROM [Run-of-Mine] Rock."[83]

> The waste rock storage area will receive pit-run, or run-of-mine (ROM), waste rock consisting largely of limestone and skarn rock types, with some andesite, quartz monzonite porphyry, and arkose . . . . Site preparation of the waste rock storage areas will involve clearing and grubbing the existing topsoil in preparation of construction of the perimeter buttress. Impacts to potential [WOTUS] within the waste rock storage area will result from the placement of ROM waste rock.[84]

121. Ultimately, however, the 404 Permit did not include any of these fill activities due to the Corps' last-minute modification of the scope of activities subject to the Permit. Instead, the South Pacific Division granted Rosemont a permit to prefill all of the WOTUS with "native material," even though these fill activities are not identified in the Public Notice and are not necessary to the development of the Rosemont Mine, as described in the Barrel Alternative and Rosemont's own permit application.[85]

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[81] *See* U.S. Army Corps of Eng'rs, Public Notice/Application No. SPL-2008-00816-MB (2011) [hereinafter "Corps Public Notice"] (attached as Ex. 19).
[82] *Id.* at 11 tbl.2.
[83] *Id.*
[84] *Id.* at 4.
[85] Corps ROD at 19 tbl.2.

Rosemont Proposes a Habitat Mitigation and Monitoring Plan

122. The Public Notice identified Rosemont's obligation to provide a Habitat Mitigation and Monitoring Plan ("HMMP") in conformance with the Corps' mitigation rule prior to a permit decision.[86] The notice explained that Rosemont had submitted a "preliminary mitigation concept" but "the location and nature of the sites is currently confidential."[87]

123. Three years later, in 2014, Rosemont provided the L.A. District with a HMMP for review. The 2014 HMMP proposed the construction of ephemeral channels adjacent to Sonoita Creek in order to generate mitigation credits.[88] Sonoita Creek is far removed from the Rosemont Mine and located outside of the Cienega Creek basin.[89]

EPA and Pima County Identify the Unacceptable Impacts of the Proposed Fill Activities

124. In response to the Public Notice, EPA and Pima County submitted multiple, technical memoranda to the L.A. District documenting the unacceptable adverse impacts of the 404 Permit on WOTUS, including significant degradation of WOTUS, *see* 40 C.F.R. § 230.10(c), violations of state water quality standards, *id.* § 230.10(b)(1), and an inadequate HMMP, *id.* § 230.10(d).

Significant Degradation of WOTUS - 40 C.F.R. § 230.10(c)

125. EPA sent a letter in 2012 to the L.A. District explaining that the proposed 404 Permit would cause significant degradation to WOTUS.

> In this setting, where virtually pristine ecological and recreational public resources—including state designated 'Outstanding Waters'—thrive in a desert environment, it is vital that CWA protections are rigorously applied. Based on the information currently available, the EPA finds this project will result in the significant degradation of waters of the U.S., including

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[86] Corps Public Notice at 12.
[87] *Id.* at 13.
[88] *See* Mathias Kondolf and James Ashby, Technical Memorandum: Conceptual Design for Sonoita Creek, AZ, Technical Review Support (Order Number EP-G149-00241) at 1 (2015) [hereinafter "Kondolf 2015 Technical Memorandum"] (attached as Ex. 20).
[89] EPA 2013 Updated Compensatory Mitigation Letter at 8.

> substantial and unacceptable impacts to [Aquatic Resource of National Importance].[90]

126. Pima County also emphasized the potential for the mine to cause significant degradation of aquatic ecosystems, including Empire Gulch, various springs, Davidson Canyon, and upper and lower Cienega Creek.[91] The County provided detailed studies and its own groundwater model to support these assertions.[92]

Violations of State Water Quality - 40 C.F.R. § 230.10(b)(1)

127. The ADEQ issued a CWA § 401 Water Quality Certification ("401 Certification") for the Rosemont Mine in 2015.[93]

128. In response, EPA advised the Corps of "other water quality aspects" outside of ADEQ's authority that had to be taken into consideration to determine whether the proposed project would comply with state water quality standards.[94]

129. EPA explained that "the [C]ertification alone is unlikely to provide sufficient measures to safeguard the water quality of the Cienega Creek watershed, including stream reaches meeting or exceeding existing water quality standards under CWA § 303 (these CWA 'Tier 3' waters in Arizona are designated . . . OAW[s])."[95] EPA also stated that the 401 Certification lacks enforceable measures to avoid potential water quality degradation, detect anticipated or unanticipated degradation, or mitigate for

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[90] Letter from Jared Blumenfeld, Regional Adm'r, Region 9, U.S. Envtl. Prot. Agency, to Colonel R. Mark Toy, Dist. Eng'r, L.A. Dist., U.S. Army Corps of Eng'rs at 1–2 (Feb. 13, 2012) [hereinafter "EPA Feb. 2012 Letter to Corps"] (attached as Ex. 21).
[91] Pima County Dec. 2013 Letter to the Corps at 4.
[92] *Id.*
[93] Ariz. Dep't of Envtl. Quality, Clean Water Act Section 410 Water Quality Certification: U.S. Army Corps of Eng'rs Public Notice/Application No.: SPL-2008-00816-MB (2015) [hereinafter "401 Certification"] (attached as Ex. 22).
[94] *See* Letter from Jared Blumenfeld, Regional Adm'r, Region 9, U.S. Envtl. Prot. Agency, to Colonel Kim Colloton, Dist. Eng'r, L.A. Dist., U.S. Army Corps of Eng'rs (Apr. 14, 2015) [hereinafter "EPA 2015 Other Water Quality Impacts Letter"] (attached as Ex. 23).
[95] *Id.* at 1.

those impacts.[96] EPA concluded that the certified discharges of fill material would thus contribute to violations of applicable water quality standards, in conflict with the Guidelines at 40 C.F.R. § 230.10(b).[97]

130. The L.A. District contacted ADEQ regarding EPA's concerns about the 401 Certification.[98] ADEQ stated that the other water quality aspects mentioned in EPA's letter were outside the scope of the regulatory authority of ADEQ.[99] Arizona Revised Statutes ("A.R.S.") § 49-202(C) limits ADEQ's review under § 401 to determine whether the effect of the discharge will comply with the state's surface water quality standards.[100] In addition, the ADEQ's review could extend only to activities conducted within the ordinary high water mark of navigable waters.[101] Therefore, ADEQ stated that it did not intend to modify the 401 Certification or further address EPA's concerns.[102] The Corps cannot therefore rely solely on the 401 Certification to ensure that the proposed project complies with state water quality standards.

Inadequate Mitigation Plan - 40 C.F.R. § 230.10(b

131. EPA also provided the L.A. District with a detailed technical analysis identifying serious shortcomings in the 2014 HMMP.

132. EPA commissioned Dr. Mathias Kondolf, a foremost expert in fluvial geomorphology, to review the Sonoita Creek mitigation proposal.[103] Ultimately, he concluded that the proposal would do more harm than good: "The overall result would be

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[96] *Id.* at 2.
[97] *Id.*
[98] Memorandum from Marjorie Blaine, Senior Project Manager, U.S. Army Corps of Eng'rs, to File (June 18, 2015) [hereinafter "Corps 2015 Memo to File"] (attached as Ex. 24).
[99] *Id.*
[100] Ariz. Dep't of Envtl. Quality, Basis for State 401 Certification Decision: Rosemont Copper Project ACOE Application No. SPL-2008-00816-MB at 1–2 (2015) [hereinafter "ADEQ Basis for 401 Certification"] (attached as Ex. 25).
[101] *Id.* at 12.
[102] *Id.*
[103] *See* Kondolf 2015 Technical Memorandum at 1.

a loss of habitat in the main channel of Sonoita Creek and a failure to create new habitat in the constructed channels, therefore failing to meet the stated goals of the proposed design . . . ."[104]

The L.A. District Denies the 404 Permit for the Rosemont Mine

133. The L.A. District made a final decision recommending denial of the 404 Permit on or around July 25, 2016.[105]

134. Colonel Kirk E. Gibbs, Commander of the L.A. District, signed a Record of Decision recommending denial of the Permit.

135. Colonel Gibbs referred the permit application to the South Pacific Division because his decision was contrary to the written position of Arizona Governor.[106] He provided the South Pacific Division with his Record of Decision recommending denial of the Permit, 404(b)(1) Analysis, and all pertinent comments, records, and studies.[107]

136. Despite multiple requests by the Tribes, the Corps refuses to release the L.A. District's decision recommending denial of the 404 Permit.[108]

137. The Corps provided Rosemont with a summary of the "key CWA 404(b)(1) factors identified by the District that support a permit denial," including "determinations that the proposed Rosemont Mine will cause or contribute to violations

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[104] *Id.* at 6.
[105] Memorandum from Colonel Kirk Gibbs, Commander, L.A. Dist., U.S. Army Corps of Eng'rs, to Commander, S. Pac. Div., U.S. Army Corps of Eng'rs (July 25, 2016) [hereinafter "L.A. Dist. Referral"] (attached as Ex. 26); *see also* Corps ROD at 3.
[106] L.A. Dist. Referral.
[107] *Id.*
[108] Letter from Stu Gillespie, Earthjustice and Heidi McIntosh, Earthjustice, to Brigadier Gen. Peter Helmlinger, Div. Commander, Nw. Div., U.S. Army Corps of Eng'rs at 7–10 (Sept. 13, 2018) [hereinafter "Tribes Sept. 2018 Letter to Corps" (attached as Ex. 27); Letter from Maryann Blouin, Assistant Div. Counsel, U.S. Army Corps of Eng'rs, to Stuart Gillespie, Earthjustice and Heidi McIntosh, Earthjustice at 3 (Mar. 8, 2019) [hereinafter "Corps Mar. 2019 Letter to Tribes"] (attached as Ex. 28).

of state water quality standards and significant degradation of waters of the United States, including shortfalls in the proposed compensatory mitigation."[109]

138. The L.A. District also concluded that implementation of the proposed project would be contrary to the public interest.[110] "Among the key public interest concerns are adverse effects to cultural resources and traditional cultural properties important to tribes."[111]

EPA and Pima County Provide the South Pacific Division with Additional Technical Analysis

139. After the L.A. District rejected the permit, Pima County submitted multiple letters to the South Pacific Division during the review process, reiterating its findings that the permit would violate the CWA and urging the South Pacific Division to affirm the L.A. District's decision recommending denial.[112]

140. The EPA also provided the South Pacific Division with a comprehensive-technical analysis, demonstrating that the 404 Permit would cause or contribute to significant degradation of WOTUS, violate state water quality standards, and fail to mitigate unacceptable adverse impacts to WOTUS, as discussed in detail below.[113]

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[109] Letter from Colonel D. Peter Helmlinger, Commander, S. Pac. Div., U.S. Army Corps of Eng'rs, to Patrick Merrin, Vice President Hudbay – Ariz. Business Unit, Rosemont Copper Co. at 1–2 (Dec. 28, 2016) [hereinafter "Corps Dec. 2016 Letter on District Permit Denial"] (attached as Ex. 29).

[110] *Id.* at 2.

[111] *Id.*

[112] *See* Letter from C.H. Huckelberry, Cty. Adm'r, Pima Cty., Ariz., to Colonel D. Peter Helmlinger, Commander, S. Pac. Div., U.S. Army Corps of Eng'rs (Oct. 21, 2016) [hereinafter "Pima Co. Oct. 2016 Letter to Corps"] (attached as Ex. 30); Letter from C.H. Huckelberry, Cty. Adm'r, Pima Cty., Ariz., to William James, Nat'l Mining Expert, U.S. Army Corps of Eng'rs (Dec. 4, 2017) [hereinafter "Pima Co. Dec. 2017 Letter to Corps"] (attached as Ex. 31).

[113] *See* EPA Nov. 17 Significant Degradation Letter; Letter from Nancy Woo, Assoc. Dir., Water Div., U.S. Envtl. Prot. Agency, to Edwin S. Townsley, Operations and Regulatory Div. Chief, S. Pac. Div., U.S. Army Corps of Eng'rs, Environmental Consequences of Groundwater Drawdown from the Proposed Rosemont Mine (Nov. 30, 2017) [hereinafter "EPA Nov. 2017 Groundwater Letter"] (attached as Ex. 32).

The Rosemont Mine Would Cause Significant Degradation of WOTUS

141. EPA demonstrated that granting a 404 Permit for the Rosemont Mine would cause significant degradation of WOTUS in violation of the CWA.[114] In support of this determination, EPA made a series of factual determinations regarding the direct, secondary, and cumulative effect of the proposed fill activities on physical substrate, water circulation/fluctuation, suspended particulates/turbidity, contamination, aquatic ecosystems and organisms, as required by the 404(b)(1) Guidelines. 40 C.F.R. § 230.11(a)–(h).

Secondary Effects

142. The 404(b)(1) Guidelines require determinations regarding the direct and secondary effects of a proposed fill activity. Secondary effects are "effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material." 40 C.F.R. § 230.11(h)(1). EPA determined that heavy metal runoff, loss of stormwater flows, and groundwater drawdown were secondary effects associated with the fill activities that had to be analyzed under the 404(b)(1) Guidelines.[115]

143. EPA determined that heavy-metal runoff was a secondary effect associated with the discharge of waste rock into WOTUS, reflecting the terms of Rosemont's permit application.[116] The waste rock contains elevated levels of toxic metals, which would drain off the mine site and impair downstream water quality.[117]

144. EPA also determined that the loss of stormwater flows was a secondary effect associated with the discharge of fill material into WOTUS.[118] The direct fill of

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[114] *See generally* EPA Nov. 2017 Significant Degradation Letter; EPA Nov. 2017 Groundwater Letter.
[115] EPA Nov. 2017 Significant Degradation Letter at 17–18.
[116] *Id.* at 14–16.
[117] *Id.*
[118] *Id.* at 11.

WOTUS, the loss of contributing watershed area, and the modification of natural flow from the construction of in-channel stormwater basins and diversions would decrease surface (stormwater) discharges from the mine site, adversely altering downstream WOTUS.[119]

145. Furthermore, EPA determined that groundwater drawdown from the mine pit was a secondary effect associated with the discharge of fill material.[120] The construction of the mine pit requires a 404 permit, and thus groundwater drawdown from the mine pit is a secondary effect under Section 404.[121] "These operational affects are strongly 'associated' with the discharge of dredged or fill materials, since they would not occur in the absence of a § 404 CWA permit."[122] Furthermore, "Congress did not intend to exclude consideration of adverse impacts simply because they were secondary."[123]

146. EPA provided a list of prior 404 permit decisions where the Corps considered the secondary effects to downstream WOTUS due to groundwater drawdown associated with a proposed action, including the Dos Pobres/San Juan Copper Mine in 2004.[124] EPA also cited a decision where the Corps denied a proposed permit for an underground parking structure because the subsurface drains would cause indirect adverse impacts on nearby WOTUS.[125]

147. Pima County provided additional support for EPA's determination that groundwater drawdown was a secondary effect associated with the fill operations.[126] Pima County explained that the proposed fill activities would impound surface flows,

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[119] *Id.*
[120] EPA Nov. 2017 Groundwater Letter at 9.
[121] *Id.*
[122] *Id.* at 10.
[123] *Id.*
[124] *Id.* at 11.
[125] *Id.*
[126] Pima County Sept. 2018 Letter to the Corps at 3.

redirecting them into the mine pit.[127] "The need to pump water from the mine pit results in part from this redirection and impoundment of the surface flows by the fill. Thus, the groundwater drawdown is undoubtedly an effect caused by the subsequent operation of the project."[128]

Water Circulation/Fluctuation

148. The 404(b)(1) Guidelines require factual determinations regarding "the nature and degree of effect that the proposed discharge will have individually and cumulatively on water, current patterns, circulation including downstream flows, and normal water fluctuation." *Id.* § 230.11(b).

149. EPA concluded that the 404 Permit would cause unacceptable adverse impacts to water circulation in Barrel Canyon and Lower Cienega Creek due to the direct fill of WOTUS, the loss of contributing watershed area, and the modification of natural flow through the construction of in-channel stormwater basins and diversions designed to retain, slow, or convey storm water around the mine areas.[129]

150. EPA explained that impacts to storm flow would be the most severe during the active 20–25 years of mining at the site, when runoff is retained on site and then recycled for process water.[130] During the active mining phase, the proposed project would reduce stormwater runoff from the project area by greater than 30–40%, which would be at least 562 AFA less than the baseline condition identified in the FEIS.[131] These stormwater losses would reduce surface flow at the Davidson Canyon/Cienega Creek confluence by a minimum of 7.6–10.2%, which is approximately 107 AFA to 143 AFA less than the baseline condition identified in the FEIS.[132]

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[127] *Id.*
[128] *Id.*
[129] EPA Nov. 2017 Significant Degradation Letter at 9–13.
[130] *Id.*; *see also* FEIS Vol. 2 at 424–25.
[131] EPA Nov. 2017 Significant Degradation Letter at 11; FEIS Vol. 2 at 434.
[132] EPA Nov. 2017 Significant Degradation Letter at 11.

151. EPA emphasized the fact that any decrease in surface flows of Barrel Canyon and Davidson Canyon resulting from the mine would significantly reduce the contribution of water that sustains low-water surface flows of Davidson Canyon and lower Cienega Creek, the two downstream OAWs.[133]

152. EPA further explained that even seemingly small statistical changes in low-water surface flows of a few percent would cause or contribute to significant degradation of the aquatic ecosystem through loss of aquatic habitat and declines in water quality in Davidson Canyon and lower Cienega Creek, especially during June when stream flows are at their lowest levels.[134]

153. EPA also found that groundwater drawdown associated with the 404 Permit would cause or contribute to unacceptable adverse impacts to water circulation throughout the Cienega Creek watershed, including at Upper Empire Gulch.[135] The seeps, springs, stream flows, wetlands and riparian areas throughout the watershed are extremely susceptible to changes in groundwater levels.[136] As acknowledged in the FEIS, "[t]he presence of the Upper Empire Gulch Springs, in an area where most drainages at similar elevations are ephemeral without spring flow, suggests that there is indeed a unique connection to the regional aquifer at this location . . . ."[137] Furthermore, "isotopic signatures suggest—like many other water sources in this area—that a mix of both regional and local water sources supports Upper Empire Gulch Springs."[138] The persistence of these stream systems suggests there is some hydraulic connection to a

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[133] *Id.*
[134] *Id.* at 11–12.
[135] EPA Nov. 2017 Groundwater Letter at 4.
[136] *Id.* at 3.
[137] U.S. Forest Serv., Supplemental Information Report: Rosemont Copper Project at 71 (2015) [hereinafter "Forest Serv. 2015 SIR"] (attached as Ex. 33).
[138] *Id.*

larger regional source of water, meaning that these stream systems are likely susceptible to groundwater drawdown at the mine site.[139]

154. EPA noted that small changes in groundwater levels would have a profound adverse effect on surface and shallow subsurface flows.[140] The wetted surface area of many aquatic habitats in the arid Southwest during the driest portions of the year (April-early July), including the Cienega Creek watershed, is characterized by shallow surface water depths (less than a few inches).[141] As such, they are extremely susceptible to drying from small changes in surface depths linked to decreasing groundwater levels.[142]

155. The FEIS shows that "as a result of mine drawdown . . . upper Empire Gulch (EG1) would potentially lose all or most of its pools and riparian vegetation."[143] Upper Empire Gulch (EG1) may suffer the most appreciable effects, with the potential to be subject to over 300 days of zero flow by 50 years post-mining.[144] The number, depth, volume, and surface area of Upper Empire Gulch's pools may all be appreciably reduced, primarily due to mine effects, thus significantly degrading the aquatic habitat available in the reach.[145]

156. Most scenarios indicate that effects to Upper Empire Gulch will be seen within 50 years of the closure of the mine with one model estimating the time to first impacts to Upper Empire Gulch at 19 years.[146] Major shifts in vegetation in reaches of Empire Gulch would be expected to be well under way, with complete loss of the hydroriparian corridor and transition to xeroriparian vegetation regardless of climate

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[139] *Id.* at 68.
[140] EPA Nov. 2017 Groundwater Letter at 3.
[141] *Id.*
[142] *Id.*
[143] Forest Serv. 2015 SIR at 178.
[144] Steven Spangle, Field Supervisor, Amended Final Reinitated Biological and Conference Opinion for the Rosemont Copper Mine, Pima County, Arizona at 60 (2016) [hereinafter "2016 Amended BiOp"] (attached as Ex. 34).
[145] *Id.*
[146] EPA Nov. 2017 Groundwater Letter at 5.

change stresses.[147] EPA estimated that 407 acres of hydroriparian habitat may be affected by changes in stormwater or changes in groundwater levels in Empire Gulch.[148]

157. This pumping/dewatering and related activities would significantly and adversely affect multiple species, which depend on the flows in the springs and waters of Empire Gulch, Cienega Creek, and other affected waters. For example, as noted in the April 2016 amended Biological Opinion issued by the U.S. Fish and Wildlife Service:

> The proposed action contributes incremental effects that will, at varying levels, further diminish surface flows, the dimensions of pool habitat, and reduce water quality, resulting in significant degradation of the aquatic ecosystem on which the Gila chub, Gila topminnow, desert pupfish, Huachuca water umbel, Chiricahua leopard frog, and northern Mexican gartersnake depend.[149]

158. Davidson Canyon and Cienega Creek would also be impacted by groundwater drawdown.[150] The drawdown-related effects (and mine effects plus the relatively greater climate change effects) in the main stem of Cienega Creek still represent significant degradation of the aquatic ecosystem.[151]

Contamination

159. The 404(b)(1) Guidelines require factual determinations regarding "the degree to which the material proposed for discharge will introduce, relocate, or increase contaminants." *Id.* § 230.11(d).

160. EPA concluded that the discharge of contaminants would cause unacceptable adverse impacts to waters in Barrel and Davidson Canyon, and lower Cienega Creek.[152] Granting a 404 Permit would convert headwater streams, which

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[147] *Id.*
[148] *Id.* at 6.
[149] 2016 Amended BiOp at 60.
[150] EPA Nov. 2017 Groundwater Letter at 7.
[151] 2016 Amended BiOp at 60.
[152] EPA Nov. 2017 Significant Degradation Letter at 14–17.

currently serve as sources of freshwater dilution, into sources of pollution.[153] This pollution, in the form of heavy metals and other constituents, would run off the mine site and cause unacceptable degradation of downstream water quality.[154]

161. EPA identified the potential for acid rock drainage (from the waste rock) to degrade downstream surface water quality.[155] Where Rosemont would use native soil to cover the waste rock storage facility upon mine closure, there is still the potential that runoff would degrade surface water quality.[156] Threats to water quality also arise from the potential for seepage from the tailings facility to enter the aquifer and return to subsurface or surface flow in Barrel Canyon downstream of the mine.[157]

162. Stormwater runoff from the waste rock piles and soil cover would be contaminated with lead, mercury, molybdenum, selenium, silver, sodium and sulfate at levels exceeding the water quality of Barrel Canyon, Davidson Canyon and Cienega Creek.[158] For example, the predicted runoff from waste rock would contain 0.0405 mg/L of Molybdenum, while the predicted runoff from soil cover would contain 0.0117 mg/L of Molybdenum.[159] Both of these values exceed the stormwater quality data for Davidson Canyon (<0.01 mg/L Molybdenum) and Barrel Canyon (No Detect—0.024 mg/L Molybdenum).[160]

163. The EPA explained that contamination coming off the mine would not attenuate (i.e. dilute) as it travels downstream to Davidson Canyon.[161] Rather, contaminated runoff would be additive.[162] EPA provided studies showing that sediment

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[153] *Id.* at 14.
[154] *Id.*
[155] *Id.* at 14, 16–17.
[156] *Id.* at 14.
[157] *Id.* at 16–17; FEIS Vol. 2 at 473.
[158] EPA Nov. 2017 Significant Degradation Letter at 14.
[159] *Id.* at 20 tbl.2.
[160] *Id.*
[161] *Id.* at 14.
[162] *Id.*

associated metals accumulate during periods of low discharge and are transported during flood events especially during higher-magnitude floods where the risks of metal mobilization increases.[163]

164. EPA further explained how the two compliance point dams would exacerbate downstream contamination.[164] These dams would allow for the settling of heavy metals in the stormwater from the waste rock and soil cover.[165] Localized storm events would blow out these dams with some frequency, resulting in discharges of concentrated sediment and water-soluble metals into downstream waters.[166]

165. EPA documented the fact that heavy metals can cause significant harm to human health and the environment.[167] Heavy metal contamination from the mine is persistent, impairs aquatic life use, and cannot be easily mitigated or removed from stream channels.[168]

166. As Pima County noted, the risks of waterborne pollutants conveyed from the mine are not solely ecological; pollutants from mine seepage or downstream discharge would flow by gravity toward potable water supplies for Vail and Tucson.[169]

167. EPA also demonstrated that the post-closure mine pit lake would cause unacceptable wildlife impacts.[170] The pit lake would have a volume of 96,000 acre-feet, making it one of the largest water bodies in southern Arizona.[171] It would likely exceed wildlife standards for three contaminants that are known to bioaccumulate, including cadmium, mercury, selenium and other contaminants (copper, lead, zinc, and

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[163] *Id.* at 15.
[164] *Id.* at 14–15.
[165] *Id.*
[166] *Id.* at 15.
[167] *Id.*
[168] *Id.*
[169] Pima County Sept. 2017 Letter to the Corps and Forest Service at 2–3.
[170] EPA Nov. 2017 Significant Degradation Letter at 17–18.
[171] *Id.* at 17.

ammonia).[172] As such, the mine pit lake would serve as a permanent, chronic source of toxic heavy metals to wildlife species through consumption of contaminated water or food chains.[173]

Suspended Particulates/Turbidity

168. The 404(b)(1) Guidelines require factual determinations regarding "the nature and degree of effect that the proposed discharge will have, individually and cumulatively, in terms of potential changes in the kinds and concentrations of suspended particulate/turbidity in the vicinity of the disposal site." *Id.* § 230.11(c).

169. EPA concluded that reductions in sediment delivery to downstream waters would result in unacceptable adverse impacts to downstream waters.[174] EPA explained that the Rosemont Mine would reduce sediment delivery by 32.4% from the project site, and by approximately 4% at the Davidson Canyon outlet.[175] Reduction in sediment delivery to downstream waters would degrade water quality by altering the streambed, creating soil scour in some downstream areas and aggradation in others.[176]

Aquatic Ecosystems and Organisms

170. The 404(b)(1) Guidelines require determinations regarding "the nature and degree of effect that the proposed discharge will have, both individually and cumulatively, on the structure and function of the aquatic ecosystem and organisms." *Id.* § 230.11(e).

171. EPA concluded that granting a 404 Permit would cause unacceptable adverse impacts to wildlife and wildlife habitat.[177] The Rosemont Mine would directly impact at least 700–750 plant and animal species by killing and displacing individuals, or

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[172] *Id.*
[173] *Id.*
[174] *Id.* at 13–14.
[175] *Id.* at 13.
[176] *Id.*
[177] *Id.* at 4–9.

altering or destroying their habitat.[178] A large majority of these species preferentially use stream, seep, spring, and riparian habitat at the mine site for all or a portion of their life cycles.[179] The great diversity of species within several plant and animal groups that will be directly impacted by the mine is highly significant.[180]

172. EPA also explained that the Rosemont Mine site constitutes a "key wintering area" for many species of birds.[181] Riparian woodlands in the Southwest Avifaunal Biome (which encompasses the project site), including those adjacent to non-perennial waters, support the highest diversity of land bird species and the highest vulnerability to population declines in the United States.[182] The discharge of fill material will lower overwintering bird abundance and diversity and disrupt normal functions of the aquatic ecosystem, leading to significant reductions in overall biological diversity.[183]

173. The Santa Rita Mountains provide several critical regional animal movement corridors or wildlife linkages.[184] The natural topography of the mine site would be irreversibly changed by the filling of the extensive stream network, fragmenting animal movement corridors and disrupting migration patterns.[185]

Physical Substrate Determinations

174. The 404(b)(1) Guidelines require a factual determination regarding the "effect that the proposed discharge will have, individually and cumulatively, on the characteristics of the substrate at the proposed disposal site." *Id.* § 230.11(a).

175. EPA concluded that granting a 404 Permit would result in the permanent and irrevocable significant adverse effect to the aquatic ecosystem by altering the

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[178] *Id.* at 5.
[179] *Id.*
[180] *Id.*
[181] *Id.* at 8.
[182] *Id.*
[183] *Id.* at 9.
[184] *Id.*
[185] *Id.*

substrate elevations and bottom contours of waters; jurisdictional waters will be permanently filled and all ecological functions associated with the jurisdictional substrate will be lost.[186]

176. In making these determinations, EPA considered the landscape setting of the proposed Rosemont Mine, including the quality and rarity of the aquatic resources, and the severity, permanence, and persistence of the project's impacts.[187]

177. Construction of the Rosemont Mine would result in the permanent loss of 40.4 acres of jurisdictional substrate of streams covering 18 linear miles, as well as an additional 8.9 acres of WOTUS at Sonoita Creek Ranch.[188]

The Rosemont Mine Will Violate State Water Quality Standards

178. EPA also provided the South Pacific Division with an analysis demontrating that the fill activities for the Rosemont Mine would cause degradation of Davidson Canyon and Cienega Creek OAWs due to increased pollution, loss of assimilative capacity, and the cumulative effects of climate change, among other things.[189]

179. EPA recognized that these water quality impacts were "outside the scope of the state's § 401 review" but emphasized that its concerns "must be considered in determining compliance with the Guidelines."[190] The EPA thus reiterated its position that the Corps could not rely solely on the State's 401 Certification.[191]

180. Cienega Creek was one of the original OAWs designated by ADEQ in 1992.[192] The OAW stretch of Cienega Creek is designated for the following uses:

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[186] *Id.* at 1.
[187] *Id.* at 33.
[188] *Id.* at 1.
[189] *Id.* at 19, 29–30.
[190] *Id.* at 19.
[191] *Id.* 18-19.
[192] ADEQ Basis for 401 Certification at 2.

Aquatic and Wildlife - (warm water); Full Body Contact; Fish Consumption; and Agricultural Livestock Watering designated uses.[193]

181. ADEQ designated the lower portion of Davidson Canyon Wash as an OAW in January, 2009.[194] The Davidson Canyon OAW is divided into three segments.[195] The first and third segments are spring fed and designated for Aquatic & Wildlife - (warm water); Full Body Contact, Fish Consumption and Agricultural Livestock Watering uses.[196] The middle segment is designated for Aquatic and Wildlife - (ephemeral); Partial Body Contact, and Agricultural Livestock uses.[197]

182. According to EPA, the Rosemont Mine would increase pollution in downstream OAWs. Mine runoff consisting of heavy metals would be released in concentrations exceeding the stormwater quality for Davidson Canyon OAWs.[198] These heavy metals and other constituents would be transported downstream through stormwater and degrade the water quality of Davidson Canyon and Cienega Creek.[199] Changes in stream hydrogeomorphology would also result in increases in total dissolved solids, suspended sediments, lowering of dissolved oxygen and increases in temperature from declining pool levels, resulting in lower water quality in Cienega Creek.[200]

183. EPA also explained how the Rosemont Mine would reduce stormwater flows by at least 40%, thereby reducing the waterways' capacity to dilute and assimilate pollution in downstream OAWs.[201] This would, in turn, threaten the existing water quality and/or riparian areas.[202]

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[193] *Id.* at 3.
[194] *Id.* at 2.
[195] *Id.* at 3.
[196] *Id.*
[197] *Id.*
[198] EPA Nov. 2017 Significant Degradation Letter at 19.
[199] *Id.*
[200] *Id.*
[201] EPA 2015 Other Water Quality Impacts Letter at pdf. 9.
[202] *Id.*

184. EPA also showed how decreases in surface flows would limit and fragment pools in Davidson Canyon and lower Cienega Creek, causing degradation of the aquatic ecosystem.[203] Smaller, shallower and more fragmented pools would significantly reduce the extent of surface water and habitat critical for the survival of aquatic organisms, including Gila Chub.[204] Decreases in low-water flow in lower Cienega Creek would also result in increased water temperatures.[205] Relatively small increases in water temperature in remaining pools in lower Cienega Creek would cause or contribute to significant reductions in the amount and quality of suitable habitat for fish and other aquatic organisms, including riparian wetlands.[206]

185. EPA emphasized the fact that these adverse impacts would occur in addition to the existing trend of declining water availability due to climate change, drought, and other factors.[207]

186. The Rosemont Mine would also violate Arizona's wadeable/perennial narrative water quality standard, which applies to the perennial reaches of Empire Gulch, Cienega Creek, and Davidson Canyon. The change from being a perennial stream to an ephemeral or intermittent stream caused by the dewatering (alone and in combination with modeled impacts from climate change), such as is predicted to occur for Upper Empire Gulch and other waters, would violate the Arizona wadeable/perennial water quality standard under Arizona Administrative Code §§ R18-11-108(E) and R-18-11-108.01.[208]

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[203] EPA Nov. 2017 Significant Degradation Letter at 12.
[204] *Id.*
[205] *Id.*
[206] *Id.*
[207] EPA 2015 Other Water Quality Impacts Letter at pdf. 11.
[208] EPA Nov. 2017 Groundwater Letter at 4.

187. EPA concluded that Arizona's CWA 401 Certification was inadequate for a multitude of reasons.[209] As an initial matter, the 401 Certification was premised on the 17.2% reduction in stormwater flows after mine closure, not the much more significant 40% reduction during active mining operations.[210]

188. EPA also concluded that the Surface Water Mitigation Plan ("SWMP") would not prevent water quality degradation of OAWs.[211] The SWMP relies on voluntary monitoring which will not prevent the contamination of downstream waters.[212] Furthermore, Rosemont has not demonstrated that the proposed stormwater mitigation measures in the SWMP would provide any, let alone enough, 'wet' water to offset the loss of stormwater flows during active mining operations and thereby prevent degradation of Davidson Canyon and Lower Cienega Creek.[213] In fact, the Corps has not granted Rosemont any compensatory mitigation credit under the 404(b)(1) Guidelines for the projects identified in the SWMP.[214] To the contrary, the L.A. District identified multiple flaws with the same or similar project discussed in the SWMP.[215]

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[209] EPA 2015 Other Water Quality Impacts Letter at pdf. 7–12; *see also* EPA Nov. 2017 Significant Degradation Letter at 21.
[210] EPA 2015 Other Water Quality Impacts Letter at pdf. 10; ADEQ Basis for 401 Certification at 9.
[211] EPA Nov. 2017 Significant Degradation Letter at 21.
[212] *Id.*; *see also* Rosemont Copper Co., Surface Water Mitigation Plan at 5–15 (2014) [hereinafter "SWMP"] (attached as Ex. 35).
[213] EPA 2015 Other Water Quality Impacts Letter at pdf. 10.
[214] *See generally* Corps ROD; U.S. Army Corps of Eng'rs, Department of the Army Supplemental Environmental Assessment and Statement of Findings, Proposed Sonoita Creek and Rail X Ranches, Stock Tank Removals as Compensatory Mitigation (SPL-2008-00816-MB) (2019) [hereinafter "Supplemental EA"] (attached as Ex. 36).
[215] *See, e.g.*, Memorandum from Marjorie Blaine, Senior Regulatory Project Manager, U.S. Army Corps of Eng'rs, to the Record (Mar. 6, 2014) [hereinafter "Corps March 2014 Memo to the Record"] (attached as Ex. 37); Memorandum from Marjorie Blaine, Senior Regulatory Project Manager, U.S. Army Corps of Eng'rs, to File (Feb. 12, 2014) [hereinafter "Corps Feb. 12, 2014, Memo to File"] (attached as Ex. 38).

189. The SWMP proposes to sever and transfer the youngest water rights at Pantano Dam to the Arizona Game and Fish Department.[216] Rosemont has not acquired these rights or completed the administrative process to sever and transfer them. Rosemont has acknowledged that the state's sever-and-transfer process could take years to occur, and would not create any real, flowing water at the new locations.[217] The Corps did not provide any mitigation credits for a prior proposal at Pantano Wash that would have involved Rosemont's purchase of approximately 1,122 AFA of surface water rights in Cienega Creek watershed.[218] The L.A. District explained, "the Corps is not able to accept as mitigation water rights without a proposed project that includes establishment, restoration, enhancement, etc. where measurable performance standards showing a functional lift are established."[219]

190. The SWMP also proposes cessation of stock watering at Questa Springs, with the hope of allowing the water to feed the Davidson Canyon system.[220] It is, however, "highly likely" that groundwater drawdown from the Rosemont Mine would impact Questa Spring as it is "[i]nside the 5-foot groundwater drawdown contour."[221] Rosemont has not determined how much water Questa Springs would provide in light of the impacts of the mine. Nor has the Corps approved any mitigation credit for this spring under the 404 Guidelines.[222]

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[216] SWMP at 22–23.
[217] Memorandum from Julia Fonesca, Envtl. Planning Manager, Pima Cty., to C.H. Huckelberry, Cty. Adm'r, Pima Cty. at 13 (April 21, 2014) [hereinafter "Pima Co. April 2014 Memo"] (attached as Ex. 39).
[218] Memorandum from Marjorie Blaine, Senior Regulatory Project Manager, U.S. Army Corps of Eng'rs, to File at 1 (Feb. 26, 2014) [hereinafter "Corps Feb. 26, 2014, Memo to File"] (attached as Ex. 40); Corps ROD at 34.
[219] Corps Feb. 12, 2014, Memo to File at 1.
[220] SWMP at 23.
[221] FEIS Vol. 2 at 559 tbl.114.
[222] *See* Supplemental EA at 2–3.

191. The SWMP proposes closure of a shallow, hand-dug well that is located on the northwest bank of Davidson Canyon Wash half-a-mile up from Barrel Canyon.[223] The well falls inside the 5-foot groundwater drawdown contour 20-years after active mining.[224] The Corps did not provide any mitigation credit for springs, like this one, that fall "within the impact area" and thus are "not acceptable for mitigation" under the 404(b)(1) Guidelines.[225]

192. The SWMP proposes closing a number of stock ponds/tanks within or downstream from the project area along Davidson Canyon.[226] There is either no specific description of the actual capacity of the tanks, or the actual volume cannot be calculated.[227] Furthermore, the Rosemont Mine would indirectly impact all four of the stock tanks along Davidson Canyon by capturing stormwater runoff.[228] The Corps previously rejected mitigation for parcels in this area, explaining that they were "within the impact area and [were] not acceptable for mitigation" under the 404(b)(1) Guidelines.[229]

193. In short, the Corps has not approved any measures in the SWMP as enforceable mitigation measures under the 404(b)(1) Guidelines.[230] The L.A. District told Rosemont that it "would not do voluntary measures or enforce mitigation which was not Section 404 [WOTUS] mitigation."[231]

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[223] SWMP at 23.
[224] FEIS Vol. 2 at 342 fig.55.
[225] Corps March 2014 Memo to the Record.
[226] SWMP at 23–25.
[227] *Id.*
[228] FEIS Vol. 2 at 431 tbl.91.
[229] Corps March 2014 Memo to the Record at 2; *see also* SWMP at 23 (explaining that "a number" of the stock tanks and ponds relied upon will be directly impacted mine operations).
[230] *See generally* Supplemental EA.
[231] Corps March 2014 Memo to the Record at 2.

The Proposed Mitigation Plan Will Not Avoid Significant Degradation

194. After the L.A. District's recommended denial of the permit, Rosemont submitted a revised HMMP to the South Pacific Division, which includes two, entirely new mitigation components: the destruction of 8.9 acres of WOTUS at Sonoita Creek and the removal of four stock tanks.[232] Both EPA and Pima County submitted technical memos to the South Pacific Division identifying serious shortcomings in the HMMP.

Sonoita Creek Ranch Project

195. For the first time, Rosemont proposed to destroy 8.9 acres of WOTUS at Sonoita Creek in order to offset the direct impacts of the Rosemont Mine and the Sonoita Creek project.[233] The proposal represents a significant change from the prior HMMP where Rosemont proposed to preserve the existing Sonoita Creek Channel.[234]

196. EPA objected to Rosemont's plan to fill and then realign the Sonoita Creek Channel because it would cause a new loss of WOTUS.[235] The proposed realignment of the channel would not even offset the loss of the existing channel.[236]

197. Dr. Matthias Kondolf, an expert fluvial geomorphologist, submitted multiple reports critiquing the proposed mitigation for Sonoita Creek.[237] He provided

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[232] WestLand Res., Water & Earth Techs., Final Habitat Mitigation and Monitoring Plan: Permit No. SPL-2008-00816-MB Rosemont Copper Company at ES-3 to ES-5 (2017) [hereinafter "Final 2017 HMMP"] (attached as Ex. 41).
[233] *Id.* at 44, 59 tbl.3; Pima Co. Dec. 2017 Letter to Corps at 2.
[234] *Compare* WestLand Res., Inc., Rosemont Copper Project: Habitat Mitigation and Monitoring Plan Permit No. SPL-2008-00816-MB at 6, 33–35 (2014) [hereinafter "April 2014 HMMP"] (attached as Ex. 42), *with* Final 2017 HMMP at 7–8, 29–36.
[235] Letter from Nancy Woo, Assoc. Dir., Water Div., U.S. Envtl. Prot. Agency, to Edwin S. Townsley, Operations and Regulatory Div. Chief, S. Pac. Div., U.S. Army Corps of Eng'rs, Analysis of the Final Habitat Mitigation and Monitoring Plan Permit No. SPL-2008-00816-MB Rosemont Copper Project Dated September 12, 2017 at 10 (Nov. 30, 2017) [hereinafter "EPA Nov. 2017 Final HMMP Letter"] (attached as Ex. 43).
[236] *Id.*
[237] *See* Kondolf 2015 Technical Memorandum; G. Mathias Kondolf, Reivew of the Sonoita Creek Mitigation Project Proposal for the Proposed Rosemont Copper Mine (2017) [hereinafter "Kondolf Report on 2017 HMMP"] (attached as Ex. 44).

evidence demonstrating that reconstructed meandering channels, like the one proposed for Sonoita Creek, commonly fail.[238] Geomorphic principles and experience with prior channel reconstruction projects indicate that the first high flows (with return periods of 5 years or greater) are likely to cause Sonoita Creek to cut across the artificially constructed meander bends.[239] The result would be a shorter, straighter channel; lost would be the large meander bends upon which much of the proposed project's mitigation credits are based.[240]

198. Dr. Kondolf also identified the existing ecological functions at Sonoita Creek, including portions of the Creek that are highly dynamic and complex, and support valuable riparian habitat.[241] The best "restoration" approach for such a healthy stream reach is to preserve it.[242]

199. Pima County also objected to the revised HMMP and proposal to fill 8.9 acres of WOTUS.[243] The County requested a new public notice because the only public notice the Corps provided failed to mention any discharge of dredged or fill material at Sonoita Creek.[244] Thus, stakeholders with an interest in the conservation of Sonoita Creek had no notice of an opportunity to comment on the mitigation proposal or reason to believe that Sonoita Creek was at risk from mine-related "mitigation" activities.[245]

200. The Corps did not analyze or propose any mitigation to prevent the flow losses in Empire Gulch or Cienega Creek due to the project's dewatering, to prevent the perennial reaches of Empire Gulch from becoming intermittent or ephemeral due to the

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[238] Kondolf Report on 2017 HMMP at 5–6.
[239] *Id.* at 6.
[240] *Id.*
[241] Kondolf 2015 Technical Memorandum at 9.
[242] *Id.*
[243] Pima Co. Dec. 2017 Letter to Corps at 2–3.
[244] *Id.*
[245] *Id.* at 3.

dewatering, or to prevent the violation of the wadeable/perennial water quality standard in Empire Gulch caused by the dewatering.[246]

201. Rosemont has proposed no mitigation measures to offset the direct and indirect effects from the pit lake to wildlife, especially birds, bats, insects, and the related food chain.[247] Mitigation discussed in the FEIS "does not apply to the pit lake that could develop during the postclosure period."[248] The Corps' ROD, Permit, and EA do not contain any discussion of mitigation for the harmful effects from the construction of the pit and resulting pit lake.[249]

Onsite Stock Tank Removal

202. The HMMP proposes to remove Gunsight Pass Tank, McCleary Canyon Stock Tank, Rosemont Crest Tank, and Barrel Canyon East Dam Tank to mitigate the lost stormwater runoff in Barrel Canyon.[250] The Corps claims that removal of the stock tanks would provide 7.35 AFA, enough to offset the loss of 2 AFA after mine closure.[251]

203. The HMMP arrives at the 2 AFA figure by taking the post-mine loss of stormwater flows modeled in the FEIS (242 AFA or 17.2% of baseline runoff)[252] and assuming that all of the onsite stock ponds (located within the mine footprint) capture 240 AFA. Because the original hydrologic modelling in the FEIS did not incorporate the existing stock ponds into its estimate of potential average-annual runoff, the HMMP subtracts 240 AFA from the FEIS's estimate of 242 AFA to arrive at a projected loss of 2 AFA of stormwater flows post-mining.[253]

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[246] *See generally* Supplemental EA.
[247] *See generally id.*
[248] FEIS Vol. 3 at 665.
[249] *See generally* Corps ROD; Supplemental EA; S. Pac. Div., U.S. Army Corps of Eng'rs, Department of the Army Permit: SPL-2008-00816-MB (2019) [hereinafter "Rosemont 404 Permit"] (attached as Ex. 45).
[250] Final 2017 HMMP at 9; Supplemental EA at 2.
[251] Supplemental EA at 12.
[252] FEIS Vol. 2 at 435.
[253] Supplemental EA at 12.

204. The HMMP does not, however, discuss, let alone offset, the significant loss of stormwater flows that would occur *during* active mining operations. As EPA noted, there would be at least a 30–40% reduction in stormwater flows during active mining, which equates to a shortfall of least 562 AFA, which is over 322 AFA more than during post-mining operations.[254] EPA concluded that the proposal to remove the stock tank impoundments would not replace the loss of water in downstream OAWs during mine operations or prevent their degradation.[255]

205. EPA also criticized the HMMP for unrealistically assuming that the onsite stock ponds can store all the runoff from the watersheds, the purported basis for arriving at the 2 AFA figure for stormwater loss after mine closure.[256] First, ponds are typically designed with spillways which are overtopped, so the assertion that all the runoff originating upstream of the stock ponds is captured by them is false.[257] Second, ponds are notoriously leaky, so water seeps under the embankment and may flow downstream as subsurface return flow.[258]

206. Rosemont did not verify the actual field capacity of any of the stock tanks.[259] Rosemont concedes that the stock ponds will not have sufficient capacity to retain runoff volumes estimated in the FEIS.[260]

207. Even assuming the onsite stock ponds could capture 240 AFA, the loss of stormwater flows during the active mining stage would still be at least 322 AFA less than the baseline conditions modeled in the FEIS (562 AFA – 240 AFA = 322 AFA). The

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[254] EPA Nov. 2017 Final HMMP Letter at 22; FEIS Vol. 2 at 434.
[255] EPA Nov. 2017 Final HMMP Letter at 21–22.
[256] *Id.* at 21.
[257] Pima Co. Dec. 2017 Letter to Corps at 7.
[258] *Id.*
[259] *Id.*
[260] WestLand Res. and Water & Earth Technologies, Response to Environmental Protection Agency (2017) at 40 (2018) [hereinafter "Rosemont Response to EPA 2017 HMMP Comments"] (attached as Ex. 46).

HMMP does not include measures to offset a 322 AFA loss in stormwater flows during active mining.[261]

208. Indeed, Rosemont acknowledges that downstream flows may still be affected during the active mine period, even with the stock tank removals.[262] Yet, the HMMP did not include mitigation measures to offset the loss of stormwater flows during active mining operations.[263]

The Rosemont Mine Would Be Contrary to the Public Interest

209. The Corps received thousands of public comments objecting to the issuance of a Section 404 Permit for the Rosemont Mine.[264] The primary issues of concern included the severe, irreversible, and irreparable harm to Tribal cultural resources; impacts to downstream WOTUS due to the drawdown of the regional aquifer; degradation of surface water quality and reduction in surface water quantity, including impacts to OAWs (Davidson Canyon and Cienega Creek); adverse effects to endangered species and critical habitat; loss of nature-based recreation and reduced property values due to development of the mine; and, the visual blight of a massive open-pit copper mine on the landscape.[265]

210. These concerns relate directly to the public interest factors regarding historical properties, conservation, water supply and conservation, water quality, fish and wildlife values, economics, and aesthetics. These concerns demonstrate that a 404 Permit would be contrary to the public interest, and that the Tribes would pay an unacceptable price if the proposed project proceeds forward.

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[261] *See generally* Final 2017 HMMP; Supplemental EA.
[262] Rosemont Response to EPA 2017 HMMP Comments at 47.
[263] *See generally* Final 2017 HMMP; Supplemental EA.
[264] U.S. Army Corps of Eng'rs, Response to Comments on the December 6, 2011, Public Notice at 1 (2019) [hereinafter "Corps Response to Comments"] (attached as Ex. 47).
[265] *Id.* at 4 tbl.1.

Historical Properties

211. The proposed mine would permanently scar the cultural landscape and destroy numerous cultural resources belonging to the Tohono O'odham and their ancestors.[266]

212. The Barrel Alternative would damage a total of 82 historic properties, including 39 prehistoric sites and 4 historic sites that either contain or likely contain human remains.[267]

213. There is also the potential for disturbance of unmarked and unrecognized graves outside known site and cemetery areas.[268]

214. As acknowledged by the Forest Service, the proposed mine would cause "severe, irreversible, and irretrievable" impacts to the cultural, religious and historical importance of the affected area.[269] Archaeological sites cannot be reconstructed once disturbed, nor can they be fully mitigated.[270]

215. For the Tribes, this outcome is simply unacceptable.[271] Their ancestor's resting places, the entire cultural landscape of this portion of the Santa Rita Mountains, will be no more.[272] This Project will affect the cultural integrity of the Tribes, making it ever more difficult to teach future generations the Nation's the customs and traditions.[273]

Conservation

216. The Rosemont Mine would likely impact lands with Las Cienegas NCA, as documented by the Bureau of Land Management ("BLM").

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[266] Nation's Protest at 2.
[267] FEIS Vol. 3 at 1037 tbl. 201, 1040 tbl.203.
[268] *Id.* at 1039.
[269] *Id.* at 1036.
[270] *Id.* at 1036, 1142.
[271] Nation's Protest at 2.
[272] *Id.*
[273] *Id.*

217. BLM owns 21 offsite surface water rights in Las Cienegas NCA that fall within the area of groundwater drawdown.[274] Of the 21 surface water rights identified for BLM, those associated with Helvetia, Chavez, and Zackendorf Springs will likely suffer indirect harm from the mine pit groundwater drawdown.[275] The BLM concluded that "[t]he proposed pit presents a clear and present threat to ground water that supports all perennial surface water on the Las Cienegas [NCA] located to the south and east of the proposed mine site."[276]

218. BLM also owns other water rights in Las Cienegas NCA, obtained from private sources, including a right for 1,000 gallons/minute at Empire Spring, which is the source of the perennial portion of Upper Empire Gulch.[277] The drawdown of the regional aquifer would deplete upper Empire Gulch, resulting in the loss of hundreds of acres of high quality riparian and palustrine emergent wetlands, many of which likely qualify as WOTUS.[278]

219. As explained by EPA, the Rosemont Mine would also adversely affect multiple special aquatic sites entitled to special protection, including wetlands, sanctuaries and refuges, and riffle and pool complexes, as well as the OAWs in Cienega Creek and Davidson Canyon.[279]

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[274] FEIS Vol. 2 at 421 tbl.87.
[275] *Id.* at 431, 341–45 figs.54–58.
[276] Email from Jeffry R. Simms, Bureau of Land Mgmt., to Jason Douglas, Fish and Wildlife Serv. (Feb. 3, 2012) [hereinafter "BLM Feb. 2012 Email to FWS"] (attached as Ex. 48).
[277] Superior Court of Maricopa Cty., Statement of Claimant Form for Other Uses Amendment at 1–2, 6 (1996) [hereinafter "BLM Statement of Claimant for Empire Gulch"] (providing that BLM acquired a water right in Empire Gulch for 1,000 gallons per minute from the ANAMAX Mining Company) (attached as Ex. 49).
[278] EPA Nov. 2017 Groundwater Letter at 5–6 & n.37.
[279] EPA Nov. 2017 Significant Degradation Letter at 2–3.

Water Supply and Conservation

220. According to the Forest Service, the predicted drawdown of the regional aquifer could impact approximately 500–550 domestic wells or other production wells registered with the Arizona Department of Water Resources ("ADWR") that fall within the 10-foot drawdown contour.[280]

221. A total of 16 springs and seeps of cultural and religious importance to the Tribes are highly likely to be impacted, either directly by surface disturbance (5 of 16 springs) or indirectly by the predicted drawdown in the regional aquifer.[281] An additional 59 springs would be indirectly impacted by groundwater drawdown.[282] The sanctity and power of each spring is unique and cannot be replaced once the spring is destroyed.[283]

222. The 30–40% reduction in stormwater flow during the life of the mine could result in significant impacts to downstream WOTUS, as detailed above, including impacts to OAWs in Davidson Canyon and Cienega Creek.[284]

Water Quality

223. EPA identified the potential for acid-rock runoff to occur and pollute downstream waters.[285]

224. Pima County raised concerns that polluted runoff could harm municipal water supplies in Tucson and Vail.[286] The risks of waterborne pollutants conveyed from the mine are not solely ecological; pollutants from mine seepage or downstream recharge would flow by gravity to potable water supplies for Vail and Tucson.[287]

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[280] FEIS Vol. 2 at 337.
[281] Forest Serv. ROD at 23.
[282] FEIS Vol. 2 at 562.
[283] FEIS Vol. 1 at xxxvii.
[284] *See supra* ¶¶ 150–51 & nn.126–29.
[285] EPA Nov. 2017 Significant Degradation Letter at 14, 16–17.
[286] Pima County Sept. 2017 Letter to the Corps and Forest Service at 2–3.
[287] *Id.*

225. As explained above, the mine pit lake would serve as a permanent, chronic source of toxic heavy metals to wildlife species through consumption of contaminated water or food chains.[288]

Fish and Wildlife Values

226. The discharge of fill material would cause direct, indirect, and secondary effects to a broad array of fish and wildlife species, including threatened and endangered species dependent on aquatic ecosystems.

227. The direct impacts at the mine site, as well as the depletion of ground and surface waters, would severely and adversely affect threatened and endangered species, including the Gila chub, Gila topminnow, desert pupfish, Chiricahua leopard frog, northern Mexican gartersnake, Huachuca water umbel, and other listed species such as the western yellow-billed cuckoo and southwestern willow flycatcher.[289] Several of these species, including the Gila chub, Chiricahua leopard frog, and jaguar, also have critical habitat in the action area that would be adversely impacted by the proposed mine.[290]

228. As explained by BLM, the aquatic and riparian ecosystems at Las Cienegas NCA would be at risk of collapse from mine-related groundwater depletion.[291] Areas where the state and federal agencies have worked to recover federally listed species would be degraded or lost.[292] Population expansion (recovery) and viability would be drastically altered for Huachuca water umbel, giant sedge, Giant spotted whiptail lizard, Gila chub, Gila topminnow, longfin dace, Sonora mud turtle (Kinosternon sonoriense),

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[288] *See supra* ¶ 167 & nn.165–68.
[289] 2016 Amended BiOp at 1, 60, 94–95, 115, 134, 155–56, 181–89, 211–12, 240–56, 270–81, 298–301.
[290] *Id.* at 74, 94–95, 142, 148, 155–56, 292–94, 301–05.
[291] *See* Bureau of Land Mgmt., Comments on the Rosemont Copper Project – Environmental Impact Statement – Cooperating/Consulting Agency Review Draft, June 2011 at 14 (2011) [hereinafter "BLM 2011 Comments"] (attached as Ex. 50).
[292] *Id.*

Mexican garter snake, Southwestern willow flycatcher, yellow-billed cuckoo, grey hawk (Buteo nitidus) and a host of other neotropical migratory birds.[293]

Economics

229. The discharge of fill material into WOTUS would directly affect the availability of aquatic resources and public lands to provide recreation in terms of hiking, camping, and birding, among other activities.[294]

230. The Sonoran Institute prepared a report focusing on the direct economic impacts associated with the Rosemont Mine.[295] The total direct economic impacts from the tourism and outdoor recreation in Pima and Santa Cruz Counties totaled $2.95 billion in 2006.[296] As a general comparison, if the proposed project displaced 1 percent of the tourism and outdoor recreation, the economic losses may be greater than the annual payroll of the proposed project during operations (Marlow 2007).[297] Loss of jobs in the local tourism and outdoor recreation industries cannot be avoided or fully mitigated.[298]

Aesthetics

231. The Santa Rita Mountains are part of a series of mountain ranges, separated by deserts, that rise above the arid lands and are known as "sky islands."[299] The Santa Rita Mountains reach an elevation of 9,453 feet, and the project area is located on the northeast flank of the mountains at approximately 4,800 feet.[300] The project area includes rolling hills near State Road 83, a series of canyons and incised arroyos, and rocky,

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[293] *Id.*
[294] FEIS Vol. 3 at 862–63.
[295] *Id.* at 1056 (citing Marlow 2007).
[296] *Id.* at 1109.
[297] *Id.*
[298] *Id.* at 1137.
[299] *Id.* at 786.
[300] *Id.* at 787.

sharply undulating ridgelines.[301] This landscape has high scenic integrity and was designated as a Traditional Cultural Property ("TCP").[302]

Panorama of the Future Site of the Rosemont Copper Mine (Aug. 2008)

232. The overall importance of the Santa Rita Mountains and its physical integrity as a place of traditional and cultural importance are little changed from pre-European times.[303]

233. The discharge of fill material for the proposed mine pit, tailings facility, and waste rock storage area would result in permanent, adverse impacts to the aesthetics of the WOTUS and the entire proposed project site.[304] Long-term impacts associated with the mine include, but are not limited to, the towering piles of waste rock, tailings, and heap leach facilities, along with the expanding, visible portions of the open pit and pit face.[305]

The Corps' South Pacific Division Modifies the Proposed Action and Reverses the L.A. District's Decision Recommending Denial

234. On March 8, 2019, the South Pacific Division issued a ROD reversing the L.A. District's decision recommending denial of the 404 Permit.[306] But instead of issuing

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[301] *Id.*
[302] *Id.* at 790; FEIS Vol. 1 at xxxvii.
[303] Ce:wi Duag NRHP Registration Form at 5.
[304] FEIS Vol. 3 at 799–800.
[305] *Id.* at 799.
[306] *See* Corps ROD

a permit for the proposal that had been under consideration for the previous 8 years, the South Pacific Division issued a permit for a dramatically different proposal to prefill all of the WOTUS with native material.[307] This novel approach unlawfully constrained the Corps' authority, artificially narrowed the scope of its analysis, and failed to address the significant adverse secondary impacts of the mine that had been the subject of the L.A. District's analysis, EPA's technical comments, and the public review to date.

A Modified Permit to Prefill Every Wash with Native Material

235. Without notice, the South Pacific Division modified the proposed permit to authorize the "clearing, grubbing, and grading" of 48.48 acres of WOTUS prior to any construction of the mine pit or waste rock piles.[308] The permit includes a special condition instructing Rosemont to prefill every wash with native material to "ensure no excavated material from the mine pit, including waste rock or tailings, is discharged into waters of the U.S. until all discharges into waters of the U.S. authorized by this permit are completed."[309]

236. In other words, the South Pacific Division required Rosemont to fill all of the washes and creeks with native material, which in the Corps' view, eliminated their status as WOTUS[310] and opened the door to the subsequent dumping of waste rock and tailings without further analysis that the CWA normally requires. This was a complete reversal of the permit review process to date, in which analysis of the impacts of dumping waste rock and tailings in the WOTUS had been a central aspect of the analysis.[311]

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[307] *Compare* 404 Permit Application at 6 tbl.1 *and* Corps Public Notice at 11 tbl.2, with Corps ROD at 12–13 *and* Rosemont 404 Permit at 1.
[308] Rosemont 404 Permit at 1.
[309] *Id.* at 10.
[310] *Id.* at 12.
[311] *Compare* 404 Permit Application at 6 tbl.1 *and* Corps Public Notice at 11 tbl.2, with Corps ROD at 12–13 *and* Rosemont 404 Permit at 1.

237. The South Pacific Division did not provide the public with any notice regarding the newly-configured proposal to prefill all of the WOTUS on the mine site with native material.[312]

238. The South Pacific Division did not acknowledge that the Barrel Alternative does not contemplate prefilling all of the WOTUS with native material.[313]

239. The South Pacific Division did not explain why Rosemont needs a permit to prefill all of the WOTUS with native material in order to meet the overall project purpose.[314]

240. The South Pacific Division did not explain whether prefilling all of the washes with native material and abandoning the analysis of secondary impacts associated with the deposit of 1.9 million tons of waste rock and mine tailings was in the public interest.[315]

241. The South Pacific Division did not explain how clearing, grubbing, and grading all of the WOTUS complies with the 401 Certification,[316] which specifically conditions the Certification on the *minimization* of clearing, grubbing, scrapping or otherwise exposing erodible surfaces.[317]

242. The South Pacific Division did not explain how prefilling all of the washes complies with the MPO authorized by the Forest Service,[318] which requires Rosemont to

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[312] Corps ROD at 23 (stating that the only public notice on the activity was issued in December 2011); Corps Public Notice at 12 tbl.2 (stating that the proposed discharge included blasting and excavation in the mine pit and excavated waste rock and run-of-mine rock).
[313] Corps ROD at 17–18, 22.
[314] *Id.* at 11.
[315] *Id.* at 12–13, 56–57.
[316] *Id.* at 23 –24, 37–44.
[317] 401 Certification at 7.
[318] *See generally* Corps ROD.

stockpile native material from the site and *prohibits* Rosemont from burying this material under the waste rock piles, as discussed below.[319]

A Limited Scope of Analysis

243. The South Pacific Division also redefined its scope of analysis under the 404(b)(1) Guidelines so that it only included the proposed clearing, grubbing, and grading of WOTUS with native material.[320]

244. The South Pacific Division reasoned that Rosemont would clear, grub, and grade all of the WOTUS before the construction or operation of the Rosemont Mine.[321] "Once the discharge is complete"—here the grubbing, grading, and clearing of all the WOTUS— the South Pacific Division claimed that "there will be no waters of the U.S. to impact on the mine site."[322]

245. Based on its position that the filling of native material in the WOTUS removed the waterways from the CWA's purview, the South Pacific Division concluded that the construction and operation of the mine were outside of its jurisdiction, and thus outside of its scope of analysis:

> Construction, including excavation[] of the mine pit, would not result in the discharge of fill material into waters of the U.S. Similarly, the proposed discharge of dredged and/or fill material into 32.80 acres of waters of the U.S. within the waste rock disposal area, dry stack tailings area, and plant site[] would occur through clearing, grubbing, and grading, and not from the discharge of waste rock or tailings. Therefore, the effects of the proposed operations of the mine, including full excavation of the mine pit, are not within the Corps' purview under the Section 404(b)(1) Guidelines. Any effects related to the excavation of the mine pit, including those related to

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[319] Rosemont Copper Co., Revegetation and Growth Media Monitoring Plan at 14–16 (2018) [hereinafter "Revegetation and Growth Media Plan"] (attached as Ex. 51); *see also* FEIS Vol. 5 at B-10 ("Growth media would be salvaged, stockpiled and placed in accordance with the final MPO in areas protected from mining operations that are stable, isolated from surface water, and gently sloping and well drained . . . .").
[320] Corps ROD at 12–13.
[321] *Id.*
[322] *Id.* at 43.

> groundwater quantity or quality, are outside of the Corps' scope under the Section 404(b)(1) Guidelines.[323]

246. The South Pacific Division refused to consider the "secondary effects" from construction and operation of the mine despite EPA's conclusion that, under the 404(b)(1) Guidelines, the impacts from operations on fast land are considered secondary effects.[324]

247. As a result, the South Pacific Division refused to provide any analysis of the secondary impacts associated with the mine pit, including the impacts of groundwater drawdown on downstream WOTUS or the formation of a toxic pit lake.[325]

248. The South Pacific Division did not address EPA's concern that the predicted runoff into Barrel Canyon from the waste rock and soil cover would violate state water quality standards in the Davidson Canyon OAW.[326]

249. The South Pacific Division did not address EPA's concern that there would be reductions in stormwater runoff during the 25–30 year active mining phase.[327] The South Pacific Division acknowledged that "the proposed removal of the four stock tanks would not solely offset reduction of flow and there would likely be a temporary reduction in surface flows during the maximum mining phase, prior to phased reclamation of the waste rock and tailings facilities."[328]

Limited Factual Determinations

250. Due to its constrained scope of analysis, the South Pacific Division limited its factual determinations under the 404(b)(1) Guidelines to the proposed fill activity of grading, grubbing, and clearing all of the WOTUS with native material.[329] This led the

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[323] *Id.* at 14.
[324] *Id.* at 43.
[325] *Id.* at 14.
[326] *Id.* at 39.
[327] *Id.* at 41–43.
[328] Supplemental EA at 13.
[329] Corps ROD at 12–15.

South Pacific Division to disregard EPA's concerns about the secondary impacts of the waste rock and tailings piles on the drainages.

251. As a result, where EPA had raised significant concerns about *reductions* in sediment levels due to the discharge of waste rock to construct the mine,[330] the South Pacific Division asserted that grading, grubbing, and clearing the site "could result in *increases* in suspended particulates and turbidity in waters of the US on the mine site, compensatory mitigation site, and downstream areas."[331]

252. Where EPA raised significant concerns about the toxic composition of the waste rock,[332] the South Pacific Division only considered the naturally occurring substances "in the soil," not the waste rock.[333]

253. Where EPA raised significant concerns about the secondary impacts of the construction and operation of the proposed mine,[334] the South Pacific Division only considered secondary effects "as a result of the clearing, grubbing, and grading activities."[335]

Supplemental EA

254. The 404 Permit also authorizes Rosemont to undertake additional discharges of fill material, including the discharge of 8.9 acres of WOTUS at Sonoita Creek.[336] These discharges were not included in any public notice issued pursuant to the Corps' regulations.[337]

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[330] EPA Nov. 2017 Significant Degradation Letter at 13–14.
[331] Corps ROD at 53 (emphasis added).
[332] EPA Nov. 2017 Significant Degradation Letter at 14–15.
[333] Corps ROD at 54.
[334] *See generally* EPA Nov. 2017 Significant Degradation Letter; EPA Nov. 2017 Groundwater Letter.
[335] Corps ROD at 55–56.
[336] Rosemont 404 Permit at 2.
[337] *See generally* Corps Public Notice; Corps ROD at 23 (stating that the only public notice on the activity was issued in December 2011).

255. The South Pacific Division did not prepare a Supplemental EIS to analyze the new fill activities or the final HMMP. Instead, the Corps released a Supplemental EA, which was never subjected to public review under NEPA.[338]

256. While the HMMP relies on the mitigating effects of removing four stock tanks and the resulting increase in natural flow, the Corps did not verify the actual field capacity of any of the stock tanks[339] or the volume the stock tanks could actually supply.[340] Thus, the Corps' calculation of the increased flow lacks a factual basis.

257. During its review process, the South Pacific Division accepted multiple letters from Rosemont regarding the revised HMMP and modified 404 Permit. The South Pacific Division did not provide these letters to the EPA on a timely basis because the South Pacific Division's staff "didn't think the EPA would be interested in the letters."[341] The South Pacific Division's failure to provide EPA with Rosemont's submissions in defense of the HMMP, deprived EPA of its opportunity to fully review and critique those submissions, undercutting its fact-checking role under the Guidelines.

The Public-Interest Review

258. The South Pacific Division also redefined its scope of analysis for its public interest review.[342] The South Pacific Division limited its scope to just the discharge of fill material associated with the clearing, grubbing, grading, and construction of facilities.[343] Because Rosemont would preemptively fill all of the WOTUS, the South Pacific Division asserted that the operation of the mine itself, and the deposit of waste

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[338] Supplemental EA; Corps ROD at 23.
[339] Pima Co. Dec. 2017 Letter to Corps at 7.
[340] *Id.*
[341] Email from Elizabeth Goldmann, Physical Scientist, Wetlands Sec., U.S. Envtl. Prot. Agency Region IX, to Jason Brush, U.S. Envtl. Prot. Agency, Sam Ziegler, U.S. Envtl. Prot. Agency, and Kathleen Goforth, U.S. Envtl. Prot. Agency (May 25, 2018) [hereinafter "EPA May 2018 Email"] (attached as Ex. 52).
[342] Corps ROD at 12–13.
[343] *Id.*

rock and mine tailings into the drainage, was not within the Corps' jurisdiction, and thus would not be considered in the public interest review.[344]

259. The South Pacific Division then proceeded to review and consider the economic benefits associated with the operation of the mine.[345] The South Pacific Division stated, "[t]he proposed action, which would produce resources such as copper, molybdenum, and silver, would further the objective of the applicant as well as stated interests of both Arizona and the United States in the development of mineral resources."[346] The ROD further highlighted "the public need for these minerals . . . [and] the economic benefits associated with the development of the proposed action."[347] The South Pacific Division found that "[b]eneficial effects would occur as a result of increases in employment and local, state, and federal tax revenue as a result of the proposed construction and operations of the mine."[348]

260. While the South Pacific Division touted the purported economic benefits from operation of the mine to find that the "proposed action" is in the public interest, the South Pacific Division failed to consider the other side of the balance sheet.[349] As a result, the ROD is silent on the negative effects of the mine, including negative economic impacts and the permanent loss of important public values, such as conservation, secure and clean water supplies, fish and wildlife habitat, cultural resources, and aesthetics, leading to a permit decision that is contrary to the public interest and will cause great harm to the Tribes' interests.[350]

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[344] *Id.* at 13.
[345] *Id.* at 56.
[346] *Id.*
[347] *Id.*
[348] *Id.* at 60.
[349] *See id.* at 56–69 (limiting the discussion of adverse impacts to clearing, grubbing, and grading washes with native material and generally repeating that effects of such activities "would be less than those identified in the Final EIS").
[350] *See id.*

261. In its economics analysis, the South Pacific Division failed to consider the loss of outdoor-based recreation or reductions in property values due to the Rosemont Mine.[351] In its conservation analysis, the South Pacific Division failed to consider the loss of surface water rights or surface flows at Las Cienegas NCA, including Helvetia, Chavez, and Zackendorf Springs, as well as upper Empire Gulch.[352] In its water supply analysis, the South Pacific Division failed to consider the loss of 500–550 domestic wells, 59 seeps and springs, or stormwater runoff in Davidson Canyon during active mining.[353] In its analysis of water quality, the South Pacific Division failed to consider the impacts of acid-rock runoff or the toxic pit lake.[354] The South Pacific Division even turned a blind eye on the visual impacts of the mine pit, waste rock pile, and tailings in its analysis of aesthetics.[355]

262. The South Pacific Division failed to explain why its new approach—covering the WOTUS areas first with "native material" and abandoning an analysis of the secondary impacts—was in the public interest. In fact, the South Pacific Division's own analysis demonstrates that the grading, grubbing, and clearing activities would result in significant adverse effects to cultural resources, including tribal cultural resources and a TCP.[356] The L.A. District found that these adverse effects to tribal cultural resources and traditional cultural properties was a key factor warranting denial of a permit as contrary to the public interest.[357]

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[351] *Id.* at 60–61.
[352] *Id.* at 57–60.
[353] *Id.* at 66.
[354] *Id.* at 66–67.
[355] *Id.* at 61.
[356] Corps Dec. 2016 Letter on District Permit Denial at 3.
[357] *Id.*

The Forest Service Promptly Approves a Revised Mining Plan of Operations

263. Twelve days after the South Pacific Division issued the 404 Permit, the Forest Service approved a Revised Mining Plan of Operations ("MPO") on March 20, 2019, authorizing Rosemont to commence construction and operation of the mine.[358]

264. The MPO does not allow Rosemont to prefill all of the WOTUS under the waste rock piles with native material. Rather, it contains a Revegetation and Growth Media Monitoring Plan that *prohibits* the use of any cleared and grubbed material under the waste rock piles.[359] The plan requires Rosemont to stockpile this material for future revegetation and reclamation *on top of* the waste rock piles.[360]

265. The mitigation measures in the FEIS also prohibit Rosemont from filling all of the WOTUS under the waste rock piles with native material cleared from the site. Mitigation Measure B-10 required Rosemont to save the cleared and grubbed material for reclamation activities: "Growth media would be salvaged, stockpiled and placed in accordance with the final MPO in areas protected from mining operations that are stable, isolated from surface water, and gently sloping and well drained."[361] The FEIS imposes this requirement so that the native material can be used to reclaim the site after mining operations and "provide stability, organic matter, and microhabitats for seed germination, invertebrates, and small vertebrate species."[362]

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[358] Rosemont Copper Co., Mine Plan of Operations – Volume 1 (2018) [hereinafter "Final Revised MPO"] (attached as Ex. 53).
[359] *See* Revegetation and Growth Media Plan at 14 ("Cleared and grubbed material will not be buried in the Landform.").
[360] *Id.* at 14–16.
[361] FEIS Vol. 5 at B-10.
[362] *Id.*

Rosemont Proposes to Excavate All of the Burial Sites Within 135 Days

266. The Forest Service prepared a "Data Recovery Plan" to survey and/or excavate 60 of the 82 archaeological sites within the mine footprint.[363] The plan divides the activities into two phases that would proceed simultaneously.[364] Phase 1 would require mapping each site, removing artifacts on the site surface, and conducting additional exploratory investigations.[365] Phase II would involve the excavation and removal of cultural artifacts, including human remains, funerary objects, sacred items, and objects of cultural patrimony.[366]

267. Phase II excavations include the use of backhoe trenches, mechanical stripping, and shovel stripping.[367] Backhoe trenches are mechanically excavated trenches that are 20 meters long by .75 meters wide by 1.5 meters deep.[368] Once the trenches are excavated, the trench walls will be scraped with a shovel to allow greater visibility of subsurface features, including burials and other sacred objects.[369] Mechanical stripping involves the use of a specially designed 1.8 meter-wide toothless backhoe bucket to peel away accumulated overburden until the outlines of features are exposed.[370] Shovel stripping involves the use of a flathead shovel strip off the top layers of soil to expose buried features.[371]

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[363] SWCA Envtl. Consultants, Historic Properties Treatment Plan for the Proposed Rosemont Copper Project, Pima County, Arizona at 4 (2014) [hereinafter "HPTP"] (attached as Ex. 54).
[364] *Id.* at 89; WestLand Res., Inc., Rosemont Data Recovery Schedule at 3–4 (2018) [hereinafter "Data Recovery Schedule"] (attached as Ex. 55).
[365] HPTP at 89.
[366] *Id.* at 89, 281.
[367] *Id.* at 90–92.
[368] *Id.* at 90.
[369] *Id.* at 91.
[370] *Id.*
[371] *Id.* at 92.

268. Rosemont identified 30 sites that would undergo Phase I recovery (with the potential to undergo later Phase II excavations); one site that would undergo both Phase I and Phase II operations; and, 23 sites that would undergo Phase II excavations[372]

269. Among the sites that would undergo Phase II excavations are multiple Hohokam habitation sites, many of which likely contain additional burial sites and ancestral remains, including the Gaylor Ranch Prehistoric Site (AZ EE:2:52/76).[373] Previous investigations of the Gaylor Ranch site associated with the ANAMAX mine revealed extensive artifact collections and concentrations of human remains.[374] Twenty-five sets of human remains were excavated from the Gaylor Ranch site during the ANAMAX project.[375] "There is a high likelihood that additional Native American human remains would be discovered at" this site.[376]

270. Rosemont developed a schedule to complete all Phase I and Phase II operations within 135 days.[377]

271. Rosemont would immediately start Phase II excavations at the Gaylor Ranch Prehistoric Site.[378] Rosemont plans to excavate any and all human remains from the Gaylor Ranch Site within two months.[379] Areas will be mechanically stripped to expose any unexcavated features.[380] Fourteen backhoe trenches will be dug.[381] All artifacts found at the sites will be collected, and any human remains and associated artifacts would be removed.[382]

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[372] Data Recovery Schedule at 1.
[373] *Compare id.* at 2 tbl.1, *with* HPTP at 251 tbl.6.14.
[374] HPTP at 139–44.
[375] *Id.* at 141.
[376] *Id.* at 144.
[377] Data Recovery Schedule at pdf. 11.
[378] *Id.* at 4, pdf.9 fig.2; HPTP at 252 tbl.6.14.
[379] Data Recovery Schedule at 4.
[380] HPTP at 132.
[381] *Id.*
[382] *Id.* at 143–44.

272. Rosemont anticipates commencing certain ground-disturbing activities at the Rosemont mine site in the near future.[383] Rosemont has agreed to provide notice to the Parties at least 30 days prior to the commencement of such activities.[384]

FIRST CAUSE OF ACTION

(Violation of CWA and APA—Unjustified Destruction of WOTUS)

273. Plaintiffs reallege and incorporate by reference the preceding paragraphs.

274. The CWA prohibits the unpermitted discharge of any pollutant, including fill material, into WOTUS. 33 U.S.C. § 1311(a). While the CWA generally prohibits the discharge of fill material into WOTUS, the Corps may grant a permit to discharge fill material, but only so long as the Corps has taken "all appropriate and practicable steps to avoid and minimize adverse impacts to waters of the United States." 40 C.F.R. § 230.91(c)(2). Accordingly, in every permit application, the applicant must establish a legitimate overall project purpose. The Corps must then ensure that the proposed fill activity is essential to that overall purpose (*i.e.*, there are no "practicable" alternatives that do not involve filling WOTUS). *See id.* § 230.10(a); *id.* § 230.10(a)(1)(i) (defining "practicable alternatives" to encompass "[a]ctivities which do not involve a discharge of dredged or fill material"). Courts have strictly construed this requirement, prohibiting the Corps from granting permits for "merely incidental" fill activities that do not serve the project purpose and needlessly destroy WOTUS.

275. Rosemont submitted a 404 permit application to the Corps in 2011 setting forth its overall project purpose of developing an open pit copper mine. Rosemont identified the fill activities required to develop the Rosemont Mine—namely,

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[383] Rosemont Copper Company's Notice of Permit Issuance, ECF No. 177, *Ctr. for Biological Diversity, et al. v U.S. Fish and Wildlife Serv., et al.*, Case No. 4:17-cv-00475-TUC-JAS; 4:17-cv-00576-TUC-JAS; 4:18-cv-00189-TUC-JAS (D. Ariz.) [hereinafter "Rosemont Notice of Permit Issuance"] (attached as Ex. 56).
[384] *Id.*

constructing the mine pit and discharging waste rock and tailings into WOTUS on the mine site.

276. The L.A. District analyzed the permit application and identified the fill activities needed to develop the Rosemont Mine, as described in the Barrel Alternative. The L.A. District determined that Rosemont needed to discharge "Excavated Waste Rock" or "ROM [Run-of-Mine] Rock" in order to construct the waste rock and dry stack tailings facilities. The L.A. District also determined that Rosemont needed a fill permit to construct the mine pit in WOTUS. Accordingly, the L.A. District requested comments from the public and expert agencies regarding the impacts of these fill activities on WOTUS.

277. For almost eight years, EPA, Pima County, the Tribes, and the vast majority of the public vigorously opposed Rosemont's request for a 404 Permit to construct the mine pit and discharge toxic waste rock into WOTUS, identifying the unacceptable direct, secondary, and cumulative effects of constructing the mine pit and discharging waste rock and tailings into WOTUS, as described in the public notice.

278. The L.A. District refused to grant the 404 Permit because the construction of the mine pit and discharge of waste rock would cause significant degradation to WOTUS, violate state water quality standards, and be contrary to the public interest. The L.A. District referred its final decision to the Corps' South Pacific Division for review after Arizona's governor expressed his support for the mine despite its harmful impacts.

279. After receiving the referral, the South Pacific Division abruptly reversed course, and issued a permit that—for the first time—instructed Rosemont to prefill all of the WOTUS on the site with "native material" prior to any mining operations. The South Pacific Division reasoned that these prefilling activities (clearing, grubbing, and grading the site) would eliminate not only all of the WOTUS, but with them, the Corps' very jurisdiction under the CWA. By simply issuing a prefilling permit, the South Pacific Division reasoned that the construction of the mine pit and dumping of waste rock could

occur *in the same exact area and as described in the Barrel Alternative*, but without any analysis of the environmental impacts of discharging those materials.

280. The South Pacific Division's last-minute reversal of its position with respect to the regulated fill activities, the scope of its review, and its determination to approve the permit, violated the CWA and basic principles of administrative law.

281. Contrary to the Guidelines, the South Pacific Division never explained, let alone demonstrated, why prefilling all of the washes with native material was essential, as opposed to merely incidental or unnecessary, to the overall project purpose of developing the Rosemont Mine, as described in the Barrel Alternative. *See id.* § 230.10(a). Instead, the South Pacific Division simply assumed, without analysis, that the Barrel Alternative involved prefilling all of the washes with native material. But the record contradicts this assumption for at least five reasons. First, Rosemont never requested a permit to prefill all of the washes with native material to construct the Rosemont Mine as described in the Barrel Alternative. Second, the L.A. District never identified any need to prefill all of the washes with native material to meet the Barrel Alternative. Third, filling all of the washes with native material would be inconsistent with the Barrel Alternative and violate the MPO, which *prohibit* Rosemont from burying the topsoil and vegetation under the waste rock piles. Indeed, the Forest Service's approval of the Barrel Alternative is premised on the retention (i.e., stockpiling) of native material for use in later reclamation. Fourth, the 401 Certification directs Rosemont to *minimize* grubbing, grading, and clearing in WOTUS during development of the Rosemont Mine. The prefilling permit proposes to *maximize* grubbing, grading, and clearing in WOTUS. Fifth, prefilling the washes would be pointless, as Rosemont plans to either detonate these same exact areas with explosives (for the mine pit) or bury them under 1.9 billion tons of waste rock (for the waste rock and tailings facility).

282. The South Pacific Division did not grapple with any of these facts, and thus failed to provide a "reasoned analysis" for its last-minute decision to modify the permit

and instruct Rosemont to prefill all of the washes with native material. *See State Farm*, 463 U.S. at 42.

283. Indeed, the South Pacific Division only discussed the prefilling of the washes as the basis for circumscribing its scope of analysis and excluding the secondary effects associated with the constructing and operating the Rosemont Mine. But the South Pacific Division cannot authorize the destruction of WOTUS for the sole purpose of destroying its regulatory jurisdiction, constraining its analysis and evading the requirements of the CWA. Such an approach conflicts with the very purpose of the CWA—the protection of waters of the United States—and would eviscerate the protections afforded by the Guidelines.

284. The South Pacific Division's decision to grant a permit to prefill all of the washes was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the CWA and implementing Guidelines. The decision therefore should be set aside under the APA. 5 U.S.C. § 706(2)(A).

SECOND CAUSE OF ACTION

(Violation of CWA and APA – Failure to Consider Secondary Impacts)

285. Plaintiffs reallege and incorporate by reference the preceding paragraphs.

286. Even if the Corps could grant Rosemont a permit to prefill every wash on the site with native material, it still had an obligation to analyze the secondary effects of activities occurring on top of the filled washes, such as the construction of the waste rock piles and operation of the mine.

287. The Guidelines require the Corps to make factual findings regarding the impacts of a proposed discharge, "with special emphasis on the persistence and permanence of the effects." 40 C.F.R. § 230.10(c). This analysis must include the secondary effects "associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material." *Id.* § 230.11(h)(1).

288. Secondary effects include, for example, the downstream impacts "associated with the operation of a dam, septic tank leaching and surface runoff from

residential or commercial developments on fill, and leachate and runoff from a sanitary landfill located in waters of the U.S." *Id.* § 230.11(h)(2). They also encompass the effects of activities on "fast land" created by the discharge of fill material, which would occur in this case due to the discharge of native material. *Id.*

289. The South Pacific Division constrained its scope of analysis under the CWA to the initial discharge of "native material" into WOTUS associated with clearing, grubbing, and grading of the mine site. As a result, the South Pacific Division disregarded the secondary effects of activities occurring on top of the filled washes, such as the construction of the waste rock piles and operation of the mine, including the drawdown of groundwater and formation of a permanent, toxic pit lake.

290. The South Pacific Division's limited scope of analysis was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the CWA and implementing Guidelines. The decision therefore should be set aside under the APA. 5 U.S.C. § 706(2)(A).

THIRD CAUSE OF ACTION

(Violation of CWA and APA –
Significant Degradation of Waters of the U.S.)

291. Plaintiffs reallege and incorporate by reference the preceding paragraphs.

292. The Corps is prohibited from issuing a 404 permit if the proposed discharge of dredged or fill material "will cause or contribute to significant degradation of the waters of the United States." 40 C.F.R. § 230.10(c). Effects contributing to significant degradation include adverse effects on human health or welfare; life stages of aquatic life and other water dependent wildlife; aquatic ecosystem diversity, productivity, and stability; and recreational, aesthetic, and economic values. *Id.*

293. To determine whether a proposed fill activity "will cause or contribute to significant degradation of the waters of the United States," the Corps must consider the direct, indirect, secondary and cumulative impacts resulting from the issuance of the 404 Permit. *Id.* § 230.11. The Corps must deny a permit where "[t]he proposed discharge

will result in significant degradation of the aquatic ecosystem" or where "[t]here does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the[] Guidelines." *Id.* § 230.12(a)(3)(ii), (iv).

294. Due to its constrained scope of analysis, the South Pacific Division improperly disregarded EPA's determination that the 404 Permit would cause significant degradation to the aquatic ecosystem. The South Pacific Division did not examine EPA's factual determinations regarding the direct and secondary effects of the 404 Permit on physical substrate, water circulation/fluctuation, suspended particulates/turbidity, contamination, or aquatic ecosystems and organisms. As a result, the South Pacific Division's issuance of the 404 Permit was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the CWA and implementing Guidelines. The decision therefore should be set aside under the APA. 5 U.S.C. § 706(2)(A).

FOURTH CAUSE OF ACTION

(Violation of CWA and APA –
Violation of State Water Quality Standards)

295. Plaintiffs reallege and incorporate by reference the preceding paragraphs.

296. The Corps may not permit the discharge of fill material if it causes or contributes to violations of any applicable State water quality standard. 40 C.F.R. § 230.10(b)(1).

297. Arizona's "antidegradation" provisions prohibit any discharges, unless they "will not degrade existing water quality in the downstream OAW." Ariz. Admin. Code § R18-11-107.01(C)(3). The antidegradation rules categorically state that "existing water quality shall be maintained and protected in a surface water that is classified as an OAW under R18-11-112. Degradation of an OAW is prohibited." *Id.* § R18-11-107(D). ADEQ must impose whatever controls are necessary on indirect discharges that occur upstream of or to tributaries of an OAW to maintain and protect existing water quality in a downstream OAW.

298. ADEQ granted a CWA 401 Certification for the proposed Rosemont Mine. But the EPA Regional Administrator identified multiple flaws in the 401 Certification, including impacts to water quality that were outside the scope of ADEQ's regulatory authority.

299. EPA demonstrated that the Rosemont Mine would cause degradation of Davidson Canyon and Cienega Creek OAWs, including the aquatic ecosystem, due to increased pollutant loadings, loss of assimilative capacity, and the cumulative effects of climate change, among other things. EPA also demonstrated that reductions in sediment transport and stormwater runoff would further degrade these OAWs. EPA concluded that the 401 Certification lacked enforceable measures to prevent degradation of these OAWs.

300. EPA's concerns regarding "other water quality aspects" under 33 C.F.R. § 320.4(d) rendered the 401 Certification "not conclusive" regarding water quality considerations, thereby requiring the Corps to independently evaluate the impacts of the 404 Permit on water quality. *See* 33 C.F.R. § 320.4(d).

301. Due to its constrained scope of analysis, however, the South Pacific Division improperly disregarded EPA's determination that the 404 Permit would violate state water quality standards.

302. The South Pacific Division also failed to examine the data showing that the Rosemont Mine would violate Arizona's wadeable/perennial narrative water quality standard, which applies to the perennial reaches of Empire Gulch, Cienega Creek, and Davidson Canyon. The change from being a perennial stream to an ephemeral or intermittent stream caused by the dewatering (alone and in combination with modeled impacts from climate change), such as is predicted to occur for Upper Empire Gulch and other waters, would violate the Arizona wadeable/perennial water quality standard. Ariz. Admin. Code §§ R18-11-108(E), R-18-11-108.01(A).

303. Due to its failure to examine the data establishing violations of state water quality standards, the South Pacific Division's issuance of a 404 Permit was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the CWA and

implementing Guidelines. The decision therefore should be set aside under the APA. 5 U.S.C. § 706(2)(A).

FIFTH CAUSE OF ACTION

(Violation of CWA and APA – Flawed Public Interest Determination)

304. Plaintiffs reallege and incorporate by reference the preceding paragraphs.

305. The Corps cannot issue a 404 permit if it "would be contrary to the public interest." 33 C.F.R. § 320.4(a)(1). This far-reaching inquiry requires "a careful weighing" of "the probable impacts" of a proposed project on "[a]ll factors which may be relevant to the proposal," including conservation, water supply, water quality, fish and wildlife values, aesthetics, and historical properties, among other things. *Id.* The decision should "reflect the national concern for both protection and utilization of important resources." *Id*.

306. To ensure an objective analysis, the Corps must use the same scope of analysis for the benefits and impacts of a proposal. *See id.* pt. 325, App. B § 7(b)(3).

307. The South Pacific Division impermissibly limited its scope of analysis to exclude the impacts of mine operations.

308. The South Pacific Division also undertook a skewed analysis of the Rosemont Mine, considering only its benefits, but not its significant costs, and then concluded that the mine's economic benefits were in the public interest. But the South Pacific Division ignored other costs associated with the mine, including impacts to downstream WOTUS due to the drawdown of the regional aquifer; degradation of surface water quality and reduction in surface water quantity, including impacts to OAWs (Davidson Canyon and Cienega Creek) downstream of the proposed project; impacts to fish and wildlife, including threatened and endangered species; loss of nature-based recreation and reduced property values due to development of the mine; and, the visual blight of a massive open-pit copper mine on the landscape.

309. The South Pacific Division also failed to provide a rational explanation for why a modified permit to clear, grub, and grade all of the WOTUS was in the public

interest, when neither Rosemont nor the L.A. District identified these activities as part of the original proposal and when they would cause severe, irreparable, and irreversible harm to tribal cultural resources.

310. The South Pacific Division's failure to fully consider all required and relevant factors in making its public interest determination was arbitrary, capricious, an abuse of discretion, or not otherwise in accordance with the CWA and the Corps' implementing regulations. The decision therefore should be set aside under the APA. 5 U.S.C. § 706(2)(A).

SIXTH CAUSE OF ACTION

(CWA, NEPA, and APA —Violation of Public Notice and Comment Requirements)

311. Plaintiffs allege and incorporate by reference the preceding paragraphs.

312. The CWA authorizes the Corps to issue permits, after notice and opportunity for public hearing, for the discharge of dredged or fill material into the waters of the U.S. at specified disposal sites. 33 C.F.R. § 320.2(f). "[P]ublic notice is the primary method of advising interested parties of the proposed activity for which a permit is sought, and of soliciting comments and information necessary to evaluate the probable impact on the public interest. The notice must, therefore, include sufficient information to give a clear understanding of the nature and magnitude of the activity to generate meaningful comment." *Id.* § 325.3(a).

313. To ensure informed decisionmaking, NEPA requires that all federal agencies "[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures." 40 C.F.R. § 1506.6(a). The agencies "shall involve environmental agencies, applicants, and the public, to the extent practicable, in preparing assessments required by [40 C.F.R.] § 1508.9(a)(1)." *Id.* § 1501.4(b).

314. The L.A. District issued a Public Notice identifying Rosemont's proposal to construct the mine pit and discharge waste rock into WOTUS in accordance with the Barrel Alternative, as described in the EIS. The public notice specifically advised the

public and other reviewing agencies that "[i]mpacts to potential [WOTUS] within the waste rock storage area will result from the placement of [Run of Mine] waste rock."[385]

315. For almost eight years—until March 8, 2019—EPA, Pima County, the Tribes, and the vast majority of the public addressed the activities described in the public notice. They vigorously opposed Rosemont's request for a 404 Permit to construct the mine pit and discharge toxic waste rock into WOTUS, identifying the unacceptable direct, secondary, and cumulative effects from the discharge of waste rock and tailings into WOTUS.

316. Without notice, the South Pacific Division significantly modified the 404 Permit from the original proposal described in the public notice. The South Pacific Division instructed Rosemont, at the last minute, to discharge "native material" into WOTUS located at the waste rock and tailings sites, and modified the scope of analysis to exclude the impacts from the waste rock and tailings piles that had long been the focus of the 404 permitting process. The South Pacific Division also authorized new discharges of 8.9 acres of fill into Sonoita Creek, destroying the existing channel. However, the South Pacific Division never issued a public notice for these proposed discharges. These significant modifications of the proposal undermined the public and the Tribes' ability to participate meaningfully in the permitting process.

317. The South Pacific Division failed to provide the public with any opportunity to comment on the Supplemental EA that purportedly analyzed the two entirely new mitigation components: the destruction of 8.9 acres of WOTUS at Sonoita Creek and the removal of four stock tanks.

318. The South Pacific Division's failure to provide sufficient public notice and the opportunity for meaningful public comment on the new discharges and the HMMP was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the

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[385] Corps Public Notice at 4.

CWA, NEPA, and implementing regulations. The decision therefore should be set aside under the APA. 5 U.S.C. § 706(2)(A).

SEVENTH CAUSE OF ACTION

**(Violation of CWA, NEPA and APA –
Failure to Analyze and Mitigate Adverse Impacts)**

319. Plaintiffs reallege and incorporate by reference the preceding paragraphs.

320. The Corps shall not issue a 404 permit (1) "unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem," and (2) the proposed discharge will not "cause or contribute to significant degradation of the waters of the United States." 40 C.F.R. § 230.10(c), (d).

321. The Corps "must determine the compensatory mitigation to be required in a DA [404] permit, based on what is practicable and capable of compensating for aquatic resource functions that will be lost as a result of the permitted activity." *Id.* § 230.93(a)(1). In making this determination, "the district engineer must assess the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project." *Id.*

322. A correct determination of the "secondary effects" of a proposed discharge is critical to any evaluation of the adequacy of a plan to mitigate those effects. Without such a determination, it is impossible to determine whether the proposed mitigation is "commensurate with the amount and type of impact that is associated with a particular [404] permit." *Id.*

323. NEPA requires an agency to "include appropriate mitigation measures not already included in the proposed action or alternatives," *id.* § 1502.14(f), as well as "[m]eans to mitigate adverse environmental impacts (if not fully covered under § 1502.14(f))," *id.* § 1502.16(h). The Corps must evaluate any mitigation measures it adopts and relies upon in approving an agency action for their effectiveness.

324. In addition, the Corps is required to "[s]tate whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not. A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation." *Id.* § 1505.2(c). "Any such measures that are adopted must be explained and committed in the ROD." Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,036 (Mar. 23, 1981).

325. The South Pacific Division failed to analyze the secondary effects associated with granting a 404 Permit for the Rosemont Mine. As a result, the South Pacific Division never ensured that Rosemont's HMMP includes mitigation measures to offset the significant degradation to WOTUS caused by the reduced stormwater runoff, acid rock drainage, groundwater dewatering, and formation of a toxic pit lake. Furthermore, the South Pacific Division failed to assess whether there were practicable measures to mitigate the loss of stormwater runoff, acid rock drainage, groundwater dewatering, or formation of a toxic pit lake.

326. Consequently, the South Pacific Division's decision to grant a 404 Permit was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the CWA, NEPA, and implementing Guidelines. The decision therefore should be set aside under the APA. 5 U.S.C. § 706(2)(A).

EIGHTH CAUSE OF ACTION

(Violation of NEPA and APA – Failure to Prepare an EIS)

327. Plaintiffs reallege and incorporate by reference the preceding paragraphs.

328. NEPA requires federal agencies to prepare an EIS for all "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(C). To forego preparation of an EIS, an agency must prepare an EA that provides sufficient evidence and analysis to support a Finding of No Significant Impact. 40 C.F.R. §§ 1508.9, 1508.13. The EA must take a hard look at the direct, indirect, and cumulative impacts of each reasonable alternative to determine if there may be any significant

impacts requiring preparation of an EIS. *Id.* §§ 1502.16(a), (b), 1508.25(c). Furthermore, the EA must take a hard look at mitigation measures for a proposed action in order to evaluate the severity of the action's adverse effects. *Id.* §§ 1502.14(f), 1502.16(h), 1508.25(b)(3).

329. In determining whether a proposed project may result in significant impacts, the agency must analyze ten "Intensity" criteria listed in 40 C.F.R. § 1508.27(b). Some of the factors relevant to "intensity" are:

- The degree to which the effects on the quality of the human environment are likely to be highly controversial.
- The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.
- Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Id. § 1508.27(b)(4)–(5), (7), (10).

330. The South Pacific Division impermissibly relied on the Supplemental EA to forego preparation of an EIS. Among other things, the Supplemental EA failed to take a hard look at (1) the highly controversial impacts related to the destruction of Sonoita Creek to earn mitigation credits for the Rosemont Mine; (2) the significant uncertainty regarding the reconstruction of Sonoita Creek and the unverified impact of the stock tank removals; and (3) the inadequacies in Arizona's 401 Certification, which lacks any enforceable or verified measures to prevent significant degradation of OAWs.

331. As a result of the flawed Supplemental EA, the South Pacific Division's decision to forego preparation of an EIS was arbitrary, capricious, an abuse of discretion, and not otherwise in accordance with NEPA and its implementing regulations. The decision therefore should be set aside under the APA. 5 U.S.C. § 706(2)(A). Due to the

significant impacts of granting the 404 Permit, the Corps must prepare an EIS to comply with NEPA.

PRAYER FOR RELIEF

THEREFORE, Plaintiffs respectfully request that this Court:

1. Declare that the Corps violated the CWA, NEPA, and their implementing regulations;

2. Set aside and vacate the Corps' ROD, 404 Permit, and Supplemental EA;

3. Issue an injunction barring Defendants from approving any mine-related activities pursuant to the Section 404 Permit, unless and until Defendants comply with NEPA, the CWA, and their implementing regulations;

4. Order the Corps to prepare an EIS analyzing the significant impacts of the proposed mitigation measures and modifications to the 404 Permit;

5. Enter such other declaratory relief, and temporary, preliminary, or permanent injunctive relief as may be prayed for hereafter by Plaintiffs;

6. Award Plaintiffs their reasonable fees, costs, and expenses, including attorney's fees, associated with this litigation pursuant to the Equal Access to Justice Act, 28 U.S.C. § 2412(d), and/or all other applicable authorities; and

7. Grant Plaintiffs such additional relief as the Court deems just and proper.

DATED this 10th day of April, 2019,

/s/ Stuart C. Gillespie
Heidi J. McIntosh (CO Bar No. 48230)
(pro hac vice pending)
Stuart C. Gillespie (CO Bar No. 42861)
(pro hac vice pending)
Caitlin Miller (CO Bar No. 50600)
(*pro hac vice pending*)
Earthjustice

633 17th Street, Suite 1600
Denver, CO 80202
sgillespie@earthjustice.org
Phone: (303) 996-9616
Fax: (720) 550-5757

Attorneys for Plaintiffs Tohono O'odham Nation; Pascua Yaqui Tribe; and Hopi Tribe