IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO

WILDEARTH GUARDIANS,	)	
	)	
Plaintiff,	)	Case No. 1:15-cv-00159-WJ-KBM
	)	
v.	)	
	)	
U.S. ARMY CORPS OF ENGINEERS and	)	
U.S. FISH AND WILDLIFE SERVICE,	)	
	)	
Federal Defendants.	)	
	)	

GUARDIANS' OPENING MERITS BRIEF

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GLOSSARY OF TERMS

APA	Administrative Procedure Act
BO	Biological Opinion
Corps	U.S. Army Corps of Engineers
ESA	Endangered Species Act
EA	Environmental Assessment
EIS	Environmental Impact Statement
EQ	Environmental Quality
LFCC	Low Flow Conveyance Channel
MRG	Middle Rio Grande
NED	National Economic Development
NEPA	National Environmental Policy Act
NWR	National Wildlife Refuge
Rio	Rio Grande
SADD	San Acacia Diversion Dam
SAR	San Acacia Reach
SEIS	Supplemental EIS
Service	U.S. Fish & Wildlife Service

INTRODUCTION

With this lawsuit, Plaintiff WildEarth Guardians ("Guardians") seeks to protect and restore the Rio Grande ecosystem in the San Acacia Reach and prevent the U.S. Army Corps of Engineers ("Corps") from foreclosing opportunities to conduct large-scale restoration to reconnect the Rio Grande and its floodplain within the Reach. Native species that depend on this ecosystem need these intertwined riparian habitats to survive and thrive. Thus, it is necessary to safeguard the possibility of a new path forward in flood control that seriously evaluates non-structural flood control options and does not exacerbate the already critical impacts to listed species.

The San Acacia Reach of the Rio Grande is one of the last relatively wild reaches of the River in New Mexico. Stretching from just north of Socorro to Elephant Butte Reservoir, the Reach retains at least some of its natural character, providing habitat for the silvery minnow, willow flycatcher, and cuckoo. Because of the remote location of the San Acacia Reach, a more naturally functioning river system may still be restored with the proper care and management. A naturally functioning ecosystem is crucial for the health of the Rio Grande, but also to protect listed species.

The Corps has authorized a project to replace 43 miles of the existing levees along the west side of the San Acacia Reach (hereafter, "the Levee Project") with a permanent engineered levee. This Project threatens any plan for large-scale restoration of this unique segment of the Rio Grande and will further imperil the handful of listed species already struggling to survive.

In 2014, the Corps authorized the Levee Project, but failed to properly analyze the impacts of removal of the existing levees and construction of a 43-mile continuous levee on listed species occupying the Reach. The Corps also failed to analyze alternatives to the proposed action that would have met the project's flood control purpose while reducing impacts to listed species and their designated critical habitats.

In 2013, the U.S. Fish and Wildlife Service ("the Service") issued a Biological Opinion ("BO") for the Levee Project that failed to place any restrictions on the Project to ensure the survival and recovery of the silvery minnow and willow flycatcher. On October 3, 2014, the Service listed the western yellow-billed cuckoo as a threatened species under the ESA. The Service completed a supplemental BO for the effects of the Levee Project on the cuckoo on September 22, 2016. However, this 2016 BO likewise fails to place any restrictions on the Project that would ensure the survival and recovery of the cuckoo.

Accordingly, Guardians alleges that the Corps' authorization of the Levee Project violated NEPA, 42 U.S.C. § 4321 *et seq*., the ESA, 16 U.S.C. § 1531 *et seq.*, and the Administrative Procedure Act ("APA"), 5 U.S.C. § 701 *et seq*. Guardians also alleges that the Service's 2013 and 2016 BOs for the Levee Project violated the ESA, 16 U.S.C. § 1531 *et. seq.*, and the APA, 5 U.S.C. § 701 *et seq*.

FACTUAL BACKGROUND

I. The San Acacia Reach of the Rio Grande

The Rio Grande ("Rio") flows nearly 2000 miles from its headwaters in the San Juan Mountains of Colorado to the Gulf of Mexico. USACE008489. Historically, the San

Acacia Reach ("SAR") of the Rio—extending from the San Acacia Diversion Dam ("SADD") (located just north of Socorro) to San Marcial (located just north of Elephant Butte Reservoir)—was a large, braided, and meandering river system with a diversity of channels, oxbows, and marshes influenced by frequent naturally-occurring flood cycles. USACE008514. In its natural state, the SAR provided habitat for a wide variety of terrestrial and aquatic species including the Rio Grande silvery minnow ("minnow"), Southwestern willow flycatcher ("flycatcher"), and yellow-billed cuckoo ("cuckoo"). USACE008526. The SAR remains one of the last relatively wild reaches of the river in New Mexico. USACE008527. The City of Socorro is the only population center within the SAR. USACE008493. South of Socorro, the Reach supports the Bosque del Apache and Sevilleta National Wildlife Refuges ("NWRs") that provide high quality habitat for listed species. USACE008494.

The spoil bank levees built along the west side of the river in the SAR during the early part of the 20th century have confined the river to a narrow channel and raised it 10 to 12 feet above the adjacent historic floodplain. USACE008518; *see also* USACE008520 (illustration showing perched river channel looking south). This artificially "perched" river channel has altered the natural ecosystem once present along the SAR, including: a 73% decline in wet meadows, marshes, and ponds; disappearance of cottonwood forests; and displacement of native by non-native species. USACE008527. Also, changes in river channel morphology along the SAR have reduced overbank flooding and floodplain connectivity, which limits regeneration of riparian habitat. *Id*.

Despite the disruptions to the natural ecosystem caused by construction of spoil bank levees and a perched river channel, the SAR still supports ESA-listed species including the minnow, flycatcher, and the cuckoo. USACE008526; D001891. The SAR likely represents the majority of the minnow's entire remaining range. USACE008526. When the Service listed the minnow as endangered in 1994, it recognized that the species was imperiled by reduced stream flow in the Rio; dewatering of extended lengths of the Rio channel from agricultural diversions; alteration of the natural hydrograph by dams and other artificial features such as levees; and channelization. 59 Fed. Reg. 36,988 (July 20, 1994). Although the SAR's perched channel compounded degradation of minnow habitat, the Service still designated minnow critical habitat there, recognizing that it could provide connecting corridors for fish movement between areas with sufficient stream flow. 68 Fed. Reg. 8,088, 8,090-94 (Feb. 19, 2003).

The endangered flycatcher and threatened cuckoo both rely on riparian habitat along the SAR. USACE008535; 78 Fed. Reg. 344, 380 (Jan. 3, 2013); 79 Fed. Reg. 48,548, 48,566 (Aug. 15, 2014). Principal causes of riparian habitat destruction in the SAR include flood control efforts, like levee construction; channelization and other forms of bank stabilization; water diversions; alteration of hydrology due to dams; and riverflow management that differs from natural hydrological patterns. 78 Fed. Reg. 61,622, 61,646 (Oct. 3, 2013). By design, flood control structures such as levees sever the hydrologic connection between the Rio's main channel and the immediate floodplain, thereby preventing overbank flooding. *Id.* Once habitat is lost, the changed conditions

(such as changed hydrologic regime) also prevent riparian habitat from regenerating, even without other impacts. *Id*. at 61,643.

The Service determined that channelization from levees "may leave the geographical area where riparian plants once grew (such as the watercourse's floodplain) physically untouched, but the altered hydrology prevents riparian plant species from germinating and growing." *Id.* Despite the degraded condition of riparian habitat throughout the Middle Rio Grande ("MRG") in general and the SAR in particular, the MRG has the highest number of flycatcher territories of any place within its range, sometimes accounting for over 300 of the estimated 800-1,299 rangewide territories (23-37.5%) for the entire species. D005953; D005957. Also, the MRG still supports more than 100 cuckoo territories, representing more than 10-12% of all rangewide cuckoo territories. D001921.

II. The Levee Project

The Corps is proposing to construct a 43 mile engineered levee ("the Levee Project" or "Project") along the west bank of the Rio in the SAR. USACE000001. The Project's purpose "is to reduce the risk of flood damage" within the SAR. USACE008488. Historically, the SAR was prone to flooding approximately every three years until the mid-1940s when an extended drought affected the area for the next several decades. USACE008496. Even with the alleviation of the drought cycle and onset of a 7-year wet cycle in 1979, there have not been any large magnitude floods in the SAR equivalent to those that frequently occurred in the first half of the twentieth century. USACE008496, 8499. Moreover, construction of Cochiti Dam in the early 1970s has

decreased the potential for significant downstream flooding. USACE008521. Nevertheless, the Corps is pursuing the Levee Project in the event of a "recurrence" of the pre-1942 flood frequency and severity in the SAR, which could cause the existing levees to fail. USACE008488.

Flows in the SAR are already artificially manipulated by two types of structures: the Low Flow Conveyance Channel ("LFCC") and spoil bank levees. Under authority granted as part of the Flood Control Acts of 1948 (Public Law 80-858, June 30, 1948) and 1950 (Public Law 81-516, May 17, 1950) (collectively "Flood Control Acts" or "Acts"), the U.S. Bureau of Reclamation ("Reclamation") constructed the LFCC in the 1950s. USACE008494-95. The LFCC is a 54-mile long artificial channel that runs parallel to and west of the Rio between the SADD and Elephant Butte Reservoir. *Id*. The LFCC's purpose is more efficient transmission of river flows to Elephant Butte to help New Mexico meet its Rio Grande Compact delivery obligation to Texas. *Id*. Reclamation used the LFCC's excavated spoil material to construct the non-engineered, earthen levees (known as "spoil bank" levees) that exist along the west bank of the Rio in the SAR. D005906 . Reclamation built these spoil bank levees to prevent flooding of nearby communities and infrastructure, and continues to maintain the spoil bank levees by repairing any damage caused by high or flood flows in the Rio. D005906; D006017.

The Flood Control Acts also authorized construction of new levees in the SAR. USACE006849-53. The original authorization ("Authorized Project") contemplated construction of 60 miles of levees to withstand a Standard Project Flood of 30,000-40,000 cubic feet per second. USACE008597. The continuous levee along the SAR is

one of the few remaining components of the 1948 flood control plan that has not been built. USACE008503. Over the past several decades, the Corps has stopped and restarted the planning and design process for the portion of the Authorized Project in the SAR; scaled the Project down in the 1970s to include only construction of detention two dams; scaled the Project back up to a continuous engineered levee in the 1990s; and undertaken some design and environmental analysis for each of these Project iterations. USACE008507-11 (summarizing prior studies). The Corps' most recent iteration of the Levee Project culminated in the decision to remove the existing spoil bank levees in the SAR and replace them with a 42.3-mile continuous, engineered levee. USACE000001.

STANDARD OF REVIEW

Courts review agency compliance with NEPA and the ESA pursuant to the Administrative Procedure Act ("APA"), which provides that a "reviewing court shall … hold unlawful and set aside agency action, findings, and conclusions found to be … arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A); *WildEarth Guardians v. NPS*, 703 F.3d 1178, 1182-83 (10th Cir. 2013) (NEPA compliance reviewed under "arbitrary and capricious" standard); *Coal. for Sustainable Res., Inc., v. USFS*, 259 F.3d 1244, 1249 (10th Cir. 2001) (ESA citizen suit claims reviewed under the APA). Arbitrary and capricious review requires a court to "determine whether the agency considered all relevant factors and whether there has been a clear error of judgment." *Olenhouse v. Commodity Credit Corp*., 42 F.3d 1560, 1574 (10th Cir. 1994). Accordingly, agency action will be set aside 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 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. v. State Farm, 463 U.S. 29, 43 (1983).

ARGUMENT

I. Guardians Has Standing

Guardians has standing to bring this action. Standing requires a showing of injury, traceability, and redressability. *SUWA v. Palma*, 707 F.3d 1143, 1153 (10th Cir. 2013). An organization has standing "when its members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." *Friends of the Earth v. Laidlaw*, 528 U.S. 167, 181 (2000). A plaintiff's members' "reasonable concerns" of harm caused by the defendant's activity directly affecting those affiants' recreational, aesthetic, or economic interests establishes injury-in-fact. *Id*. at 183-84; *see also Comm. to Save Rio Hondo v. Lucero*, 102 F.3d 445, 450 (10th Cir. 1996).

"[E]nvironmental plaintiffs adequately allege injury in fact when they aver that they use the affected area and are persons 'for whom the aesthetic and recreational values of the area will be lessened' by the challenged activity." *Laidlaw*, 528 U.S. at 183 (citations omitted). Actual environmental harm from complained-of activity need not be shown, as "reasonable concerns" that harm will occur are enough. *Id*. at 183-84. Guardians has suffered injury from Defendants' decisions related to the Levee Project.

Guardians' members have extensively visited and recreated in the SAR, and they have plans to continue to do so regularly. *See*, *e.g.*, Pelz Decl. ¶¶ 11, 14-16 (Ex.1); Horning Decl. ¶¶ 8, 10 (Ex.2). On such visits, Guardians' members have enjoyed the aesthetic and recreational qualities of the SAR by hiking, rafting, looking for and viewing wildlife, and taking photographs. Pelz Decl. ¶¶ 14-15; Horning Decl. ¶ 10. Guardians' members have observed the effects of the existing levees in the SAR, including the separation of the floodplain from the Rio. Pelz Decl. ¶ 18; Horning Decl. ¶ 12. Construction of the Levee Project will foreclose opportunities to reconnect the floodplain with the Rio and restore a more natural flow regime to the SAR. Pelz Decl. ¶ 18; Horning Decl. ¶¶ 12-13.

To establish traceability in procedural cases, a plaintiff "need only trace the risk of harm to the agency's alleged failure to follow [NEPA] procedures." *Lucero*, 102 F.3d at 451-52. Guardians meets this test. By failing to analyze a reasonable range of alternatives and meaningfully analyze the Project's impacts to listed species, Defendants violated NEPA and ESA procedural mandates and increased the likelihood of harm to ecosystems in the SAR that support listed species and are used by Guardians' members.

Redressability is satisfied by showing that a plaintiff's "injury would be redressed by a favorable decision requiring the [agency] to comply with [NEPA's] procedures." *Lucero*, 102 F.3d at 452. Guardians' injuries would be redressed by a favorable result in this suit because Defendants would then be made to properly analyze under NEPA and the ESA the full impacts of the Levee Project. Pelz Decl. ¶ 21; Horning Decl. ¶ 15. This analysis could lead to selection of the No Action alternative or consideration of flood

control options beyond a continuous levee that would allow for habitat restoration and/or protect listed species.

II. The Corps' Decision Violated NEPA

A. The Corps Failed to Consider Reasonable Alternatives That Would Minimize the Project's Adverse Ecological Impacts.

NEPA requires agencies to consider "alternatives to the proposed action" in an EIS. 42 U.S.C. § 4332(2)(C)(iii). The alternatives analysis is the "heart" of a NEPA document, and the statute's implementing regulations direct the Corps to "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. § 1502.14(a). As the Tenth Circuit has recognized, "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of an EIS to inform agency deliberation and facilitate public involvement would be greatly degraded." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 708 (10th Cir. 2009).

During the planning process, the Corps refused to consider alternatives to a continuous engineered levee that: (1) "fall[] within the agency's statutory mandate"; (2) satisfy[y] the project's purpose; and (3) are "significantly distinguishable from the alternative[] already considered." *New Mexico*, 565 F.3d at 709. In particular, the Corps failed to consider alternatives meeting this standard that would protect and allow for restoration of aquatic and floodplain habitats in undeveloped areas along the project corridor south of Socorro.

Guardians encouraged the Corps to substantively analyze a "Middle Ground Alternative" consisting of a combination of structural (levees) and non-structural flood

control measures that included levee setbacks, flowage easements, relocation and elevation of structures, and other non-structural flood control measures along the 43-mile Project corridor. USACE010430-31. Guardians also took issue with the Corps' decision to consider each non-structural flood control measure in isolation and its use of this piecemeal consideration to summarily dismiss each non-structural measure as ineffective. USACE010431.

Instead of meaningfully considering the Middle Ground Alternative in its SEIS, the Corps only included variations on a continuous, engineered levee as alternatives for detailed study. Every one of the action alternatives in the SEIS differed only in terms of the levee's length and height. USACE008592-93. The Middle Ground Alternative is a reasonable alternative that the Corps was required to consider in the SEIS. *New Mexico*, 565 F.3d at 709. By refusing to consider the Middle Ground Alternative that would protect and allow for restoration of the aquatic and floodplain ecosystems in undeveloped areas while allowing for more substantive flood control measures in and around developed areas, the Corps violated NEPA.

1. The Middle Ground Alternative is Consistent with the Flood Control Acts and the Corps' Planning Process.

Although the 1948 Flood Control Act authorized the Corps to construct levees for flood control where needed in the MRG Valley, USACE007640-42, that authorization neither *required* that the Corps build a continuous levee to control flooding nor *prohibited* the agency from addressing flood control using a combination of measures as suggested by the Middle Ground Alternative. The Corps admitted as much in the SEIS

when it evaluated the levee design criteria underlying the 1948 authorization (referred to as the "Authorized Project") and determined that the Authorized Project "[was] not a reasonable alternative to carry forward" for detailed analysis. USACE008598. The Corps discussed several intervening events that rendered the 1948 Authorized Project ineffective for flood control, such as changes in the Rio Grande channel, availability of long-term hydrological data, an outdated design flood event, improvements in levee engineering, and listing of the minnow and flycatcher. *Id*. Accordingly, the 1948 Flood Control Act does not limit the Corps to consideration of flood control alternatives that only involve a continuous levee throughout the Project Area.

Nor do the federal planning criteria for water resources projects limit the Corps' consideration of reasonable alternatives. The Corps' planning process for the Levee Project is governed by a set of Principles and Guidelines established pursuant to the Water Resources Planning Act of 1965. 42 U.S.C. § 1962a-2(a); USACE005592. The planning principles briefly describe the purpose, scope, and objectives of the planning process along with criteria governing formulation of alternative plans and plan selection. USACE005593-94. The planning principles require the Corps to develop "[v]arious alternative plans . . . to ensure that all reasonable alternatives are evaluated" and include four "accounts" or planning criteria to evaluate the monetary and non-monetary costs and benefits of alternative plans. USACE005593-94. The two accounts relevant here—National Economic Development ("NED") and Environmental Quality ("EQ")—respectively identify the beneficial and adverse *monetary* effects of each alternative on the national economy and *non-monetary* effects of each alternative on significant

environmental resources. USACE005594. The Corps is required to analyze the NED account to comply with the Water Resources Planning Act.[1] *Id*. The alternative that maximizes net economic benefits is known as the "NED Plan" which the Corps must select as the recommended alternative *unless* there are overriding reasons for selecting a different alternative. *Id*.

Importantly, the planning guidelines for implementing these principles provide the Corps with wide latitude to formulate alternatives, and require the Corps to consider a range of structural and non-structural measures, similar to the Middle Ground Alternative, during the planning process. When formulating alternatives, the planning guidelines recognize that:

> An alternative plan consists of a system of structural and/or nonstructural measures, strategies, or programs formulated to meet, fully or partially, the identified study planning objectives subject to the planning constraints[2] . . . Management measures are the building blocks of alternative plans and are categorized as structural and nonstructural. *Equal consideration must be given to these two categories of measures during the planning process*. An alternative plan is a set of one or more management measures functioning together to address one or more objectives . . .

USACE005599-5600 (emphasis added). These guidelines relating to development and analysis of alternatives are consistent with both NEPA's requirement that the agency

[1] Although the planning principles mention only the NED account as a required analysis factor, the planning guidelines require that the Corps evaluate all alternatives under *both* the NED and EQ accounts. USACE005601.

[2] In the SEIS, the Corps identified five planning constraints for the Levee Project: flood control measures should not adversely affect flooding or environmental resources outside the study area; project benefits must equal or exceed project costs; maintenance of water delivery capabilities throughout the study area; must be within the non-federal sponsor's ability to support; and "cannot significantly impact" the silvery minnow or flycatcher. USACE008580.

evaluate a reasonable range of alternatives and the "Federal Objective" in the planning principles that federal water projects "contribute to national economic development consistent with protecting the Nation's environment." USACE005593.

Accordingly, the Middle Ground Alternative clearly "falls within the agency's statutory mandate." *New Mexico*, 565 F.3d at 709.

2. The Middle Ground Alternative Satisfies the Project Purpose.

A clearly defined purpose and need section in an EIS is critical because the project's purpose and need necessarily dictates the range of reasonable alternatives. *See Colo. Envtl. Coal. v. Dombeck,* 185 F.3d 1162, 1174 (10th Cir. 1999). The broader the purpose, the wider the range of alternatives, and vice versa. *See Simmons v. USACE*, 120 F.3d 664, 666 (7th Cir. 1997). The Middle Ground Alternative falls squarely within the Corps' stated purpose and need for the Project: "to reduce the risk of flood damages within the San Acacia to Bosque del Apache Unit." USACE008488. Here, Guardians is not arguing that the scope of the purpose and need for the Project is too narrow; rather, that the Corps adopted an unreasonably narrow *interpretation* of a fairly broad purpose and need that led the agency to arbitrarily conclude that only a continuous engineered levee would satisfy the Project's purpose. This resulted in piecemeal consideration of each alternative, apart from a continuous engineered levee, in isolation. The Corps then rejected each of these piecemeal alternatives because each, standing alone, would not meet the Project's purpose.

In the SEIS, the Corps does not deny that either non-structural measures such as flood proofing or middle-ground measures such as local levees would achieve some

degree of flood control. Instead, the Corps arbitrarily dismisses consideration of these measures because they provide an "incomplete solution" or do not provide the same degree of flood control throughout the Project corridor. USACE008578, 8588-90. However, there is nothing in Project purpose and need or in the Flood Control Acts authorizing the Project that require the Corps to take an all-or-nothing approach to flood control in the Project Area where the options are either to build a continuous engineered levee or take no action.

With respect to intermittent levee replacement, the Corps provides only an unsupported statement that this measure "was found to be impractical in previous reevaluations" and that "[n]o part of the existing spoil bank would meet the current criteria for levee performance." USACE008590. Rejection of this flood control measure as part of a reasonable Middle Ground Alternative is arbitrary for two reasons. First, the Corps does not specifically identify in the SEIS any "previous reevaluation" that includes the purported analysis or summarizes the results of this analysis. To the extent the Corps may be referring to the 1992 SEIS for the Project included as Appendix D to the current SEIS (*see generally* USACE009154-418), that document includes only a single paragraph rejecting intermittent levee replacement due to "increasing construction costs" associated with this measure. USACE009176. The 1992 SEIS does not provide any information pertaining to the number of structurally sound versus unsound levee segments, nor any cost comparisons between complete and partial levee reconstruction. Second, the Corps' rationale for rejecting intermittent levee replacement in the 2013 SEIS seems to be that, because none of the existing levees within the 43-mile Project

corridor meet current levee design standards, selective replacement of damaged or unsound levee sections cannot even be considered as a viable means of flood control. Such an all-or-nothing approach to alternatives analysis is contrary to NEPA's alternatives requirement.

The Corps' dismissal of the middle-ground measure of constructing "local" engineered levees at Socorro, San Acacia, and the Bosque del Apache NWR is also arbitrary. The Corps admits that local levees would protect these areas from a 1%-chance flood event, yet rejects this measure because local levees would not protect lands outside of these areas. USACE008590. The rationale, however, is based on the Corps' narrow conception of the local levee alternative as consisting *only* of local levees absent inclusion of any other flood control measures suitable for lands outside of urbanized locations and the NWR.

The Tenth Circuit found unlawful a similar piecemeal approach in *Davis v. Mineta*, 302 F.3d 1104 (10th Cir. 2002). There, the agency rejected a combination of options as an alternative for a highway improvement project because each option "*standing alone* . . . would not meet the purpose and need of the Project." *Id*. at 1120 (emphasis in original). Although the studies the agency relied on showed that the narrow range of alternatives analyzed in the NEPA document would meet the project's purpose and need, the Court noted "that is not the test for whether alternatives should be studied in [a NEPA] document]." *Id*. at 1121. Rather, "[a]lternatives need not be studied if they are remote, speculative . . . impractical or ineffective," and the Court found nothing in the record that justified a conclusion that the alternatives pressed by the plaintiff, "separately

or in combination," were not "practical, reasonable, and perhaps in some instances even preferable to" the agency's alternatives analyzed in the NEPA document. *Id*. The same is true here. The Corps must, but has failed to, consider the Middle Ground Alternative that provides for local engineered levees in the areas where flood damage would be the most costly (i.e., urbanized areas and the Bosque del Apache NWR) and non-structural flood control measures in areas where it is necessary to protect and restore critical habitat for listed species.

3. The Middle Ground Alternative Differs Significantly from the Alternatives Selected for Detailed Consideration.

An alternative is reasonable if it is "significantly distinguishable from the alternatives already considered." *New Mexico*, 565 F.3d at 709. That test was met here because none of the alternatives analyzed in the SEIS contained the key feature of the Middle Ground Alternative: a combination of structural and non-structural flood control measures tailored to the specific needs of diverse areas within the Project corridor. Every action alternative analyzed in detail in the SEIS involved a 40+-mile-long engineered levee, differing only with respect to levee height, minor length variations ranging from 41.5-45.2 miles, and the addition of a 4-mile levee extension along the eastern side of the Tiffany Basin. USACE008622-23.

"The range of alternatives that the agency must consider is not infinite, of course, but it does include all reasonable alternatives to the proposed action." *Utahns for Better Transport. v. USDOT*, 305 F.3d 1152, 1166 (10th Cir. 2002). A reasonable alternative is "non-speculative," and "bounded by some notion of feasibility." *Id.* at 1172 (citations

omitted). The Corps never claimed that the Middle Ground Alternative was speculative or not feasible, and, as discussed above, the record indicates that it is in fact reasonable. Because the Middle Ground Alternative is significantly different from the alternatives analyzed in detail in the SEIS and is reasonable, the Corps' rejection of the Middle Ground Alternative was arbitrary.

B. The Corps is Required to Supplement the SEIS to Analyze Project Impacts to Yellow-Billed Cuckoo.

The Corps violated NEPA's supplementation requirement when it failed to consider significant new information about the Project's impacts to the threatened cuckoo and make a determination regarding whether supplementation of the SEIS was necessary. NEPA requires supplementation of an EIS when new circumstances or information arise "relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. § 1502.9(c)(1). As a result, NEPA imposes an ongoing obligation for agencies to consider and address new information, even after a proposed action has received initial approval. *See Marsh v. ONRC*, 490 U.S. 360, 374 (1989); *see also Warm Springs Dam Task Force v. Gribble,* 621 F.2d 1017, 1023 (9th Cir. 1980) (recognizing an agency's "*continuing duty* to gather and evaluate new information relevant to the environmental impact of its actions.") (emphasis added). As part of this duty, the Corps must assess "the extent to which the new information presents a picture of the likely environmental consequences associated with the proposed action not envisioned by the original EIS." *Wis. v. Weinberger*, 745 F.2d 412, 418 (7th Cir. 1984).

In the 2016 BO, the Service identified several adverse impacts to the cuckoo and its habitat from the Levee Project. Once the Service shared this information with the Corps, it triggered the Corps' responsibility to assess the significance of these impacts and determine whether to supplement the SEIS. For example, the Service stated that the Project will nearly double vertical sediment accumulation in the riverbed, "increas[ing] the physical separation of riparian vegetation from groundwater that is necessary for cuckoo habitat" and resulting in loss of "between 50.5 and 200 acres" of cuckoo habitat. USACE008441-42; *see also* USACE008444 (recognizing that "[t]he potential loss of up to 200 acres of suitable cuckoo habitat within the floodway is anticipated to adversely affect cuckoos and proposed critical habitat for the cuckoo."). The Service also identified "chronic noise pollution" from levee construction traffic as adversely affecting at least one cuckoo territory per year of construction, and recognized that the Corps' proposed best management practices "may not adequately minimize" the effects of construction noise on the species. USACE008433-34.

Although listing a species under the ESA does not on its own automatically trigger the requirement that an agency supplement an EIS, courts have found supplementation necessary where the record shows that (1) the project will impact the newly listed species, and (2) the agency did not analyze these impacts in the existing NEPA document. *See*, *e.g.*, *Friends of the Clearwater v. Dombeck*, 222 F.3d 552, 558-59 (9th Cir. 2000) (holding that the designation of sensitive species required supplementation where timber sales would impact newly-designated species); *Cascadia Wildlands v. BLM*, 2012 WL 6738275, at *10-11 (D. Or. Dec. 21, 2012) (holding supplementation

required where record indicated that tree-thinning would "negatively effect" newly-listed species). Here, the Service determined that the Levee Project would adversely affect the cuckoo, and the Corps was aware of these impacts from the 2016 BO. Yet the Corps has not supplemented the SEIS with an analysis of whether these impacts to the cuckoo are significant, as required by NEPA. If the Corps had thoroughly considered the new information about Project impacts to the cuckoo, it should have concluded that a supplemental EIS was necessary. But even if it had determined that the new information was not significant, the Corps was still obligated to produce some record of its decision and reasoning. *Marsh*, 490 U.S. at 385 (noting that "regardless of its eventual assessment of the significance of this information, the [agency] had a duty to take a hard look at the proffered evidence."). By not taking the requisite "hard look" and documenting its analysis, the Corps violated NEPA. To the extent the Corps considers its consultation with the Service over Project impacts to the cuckoo as fulfilling the *Corps'* obligation to take a hard look at project impacts under NEPA, the Corps is mistaken (see Section II.C.3 below).

C. The Corps Failed to Take a Hard Look at Direct, Indirect, and Cumulative Impacts to Endangered Species in the Project Area.

NEPA's statutory mandate—that an agency take a 'hard look' at the impacts of a proposed action—serves two important purposes. First, "[i]t ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). Second, it "guarantees that the relevant

information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision." *Id.* These action-forcing requirements "ensure[] that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast." *Id.*

Far from "thoroughly investigat[ing] and forthrightly acknowledg[ing]" the environmental effects of its action, *Nat'l Audubon Soc'y v. Dep't of Navy*, 422 F.3d 174, 199 (4th Cir. 2005), the SEIS failed to analyze the direct, indirect, and cumulative impacts to the minnow, flycatcher, and their designated critical habitats, from: (1) continued vertical sediment accumulation in the floodway exacerbated by the engineered levee and (2) disturbance activities associated with removal of the existing spoil bank levees and construction of the engineered levee. The Corps violated NEPA because it authorized the Levee Project without taking a hard look at the consequences of that decision on listed species in the Project Area.

1. The Corps Failed to Take a Hard Look at the Impacts to Listed Species from Increased Vertical Sediment Accumulation.

The Corps failed to analyze one of the key impacts associated with the Levee Project, *i.e.*, increased aggradation/"perching" of the river channel. The existing spoil bank levees built along the west side of the Rio in the SAR have confined the river to a narrow channel and raised it 10 to 12 feet above the adjacent historic floodplain situated outside the "leveed floodway." USACE008518. This artificially "perched" river channel has altered the natural ecosystem once present along the SAR, including a reduction of

overbank flooding and floodplain connectivity that has curtailed regeneration of riparian habitat. USACE008527. Yet the SAR still supports listed species. USACE008532-39; 78 Fed. Reg. 61,622. In the 2013 BO, the Service recognized that riparian vegetation supporting flycatcher habitat "was currently stressed" by the perched river condition and the corresponding increased depth to groundwater. D006017. The Service stated that because the Project would exacerbate sediment accumulation in the river channel by an additional 12 feet, up to 460 acres of flycatcher habitat could be lost, adversely affecting flycatcher "survivorship and recovery in the [SAR]." D006018. Therefore, the Corps must take a hard look at both the degree to which the Project will exacerbate ongoing river channel aggradation and floodplain separation and the impacts of these exacerbated conditions on listed species.

Although the Corps recognized that the existing spoil bank levees caused the Rio's perched condition in the Project Area, USACE008518, the Agency stubbornly refused to consider both the extent to which a continuous engineered levee would exacerbate the already-perched channel, and the attendant impacts to listed species from the Project's increased aggradation.[3] In its response to comments on the SEIS, the Corps repeatedly stated as its reason for not analyzing these impacts that "future aggradation within the

[3] The Corps' two-paragraph discussion of Project impacts to river geomorphology and sedimentation in the SEIS simply concludes that "river geomorphology within the study area would not change" under any of the levee alternatives. USACE008654. When discussing Project impacts to the aquatic environment, the Corps only considers (1) how 1%-chance and 10%-chance flood events will affect aquatic habitat with and without the Project, and (2) changes in floodway size if the Project is built. USACE008659-63. The Corps' discussion of Project impacts to riparian habitats is limited to the number of acres of vegetation removed to build the Levee. USACE008664-65.

floodway of the [SAR] would be similar both with and without the Corps' proposed action." USACE010463 (response to supplemental Draft SEIS comments); *see also* USACE010438 (response to SEIS comments). Basically, the Corps arbitrarily concluded that because building the engineered levee will have the same impact on floodway aggradation as the No Action alternative, an analysis of impacts to listed species from Project-induced aggradation was not necessary.

The Tenth Circuit has stated that it will not blindly defer to an agency's "unanalyzed, conclusory assertion[s]" and that where evidence "points uniformly in the opposite direction from the agency's determination, we cannot defer to that determination." *New Mexico*, 565 F.3d at 707, 715; *see also WildEarth Guardians v. BLM*, 870 F.3d 1222, 1224 (10th Cir. 2017) (rejecting as arbitrary agency's conclusion that no action and action alternatives had same environmental impacts where contradicted by record). Here, the Corps did not provide any evidence to support its conclusion that floodway aggradation from a continuous engineered levee and its attendant impacts to listed species would be "similar" to without-Project conditions. However, record evidence plainly demonstrates that the engineered levee will exacerbate floodplain aggradation, causing adverse—and potentially significant—impacts to listed species and their habitats.

The Corps' conclusion that the degree of floodway aggradation will be the same with or without the Levee Project is refuted by the very document the Corps cites to in support of this conclusion: the 2013 BO. In its response to comments regarding its failure to analyze aggradation and the attendant impacts to listed species, the Corps cites the BO

as evidence that *the Service* considered those impacts when analyzing Project impacts under the ESA's jeopardy standard, and implies that the Service agreed with the Corps' conclusion. USACE010463. However, the Service reached a different conclusion regarding the Project's impacts to listed species from floodway aggradation, recognizing that "the proposed San Acacia Levee Project will continue to raise [the river] up to 11 feet more in the San Acacia Levee Project area." D006016. The Service also determined that "riparian vegetation was currently stressed . . . and increasing the height of the floodway would continue to stress riparian vegetation and result in flycatcher habitat loss in the future." D006017. In fact, the Service's biologist stated that "[t]here is a low probability that flycatcher breeding habitat in the Middle Rio Grande valley will increase over the next 50-70 years with the existing spoil bank and proposed levee," "[t]here is a high probability that flycatcher populations will decrease in the Middle Rio Grande valley over the next 50 years with the existing spoil bank and proposed levee," and that failure to agree on sufficient protections for flycatchers would result "in one of the largest cumulative harms to flycatcher critical habitat within the next 50-70 years thereby reducing flycatchers and their distributions in the Middle Rio Grande valley." E001679.

Although the Service's no jeopardy conclusions for the Levee Project in the BOs are arbitrary for the reasons discussed below, the Service's statements about the Project exacerbating aggradation and the impacts resulting from it directly contradict the Corps' assertion that the degree of floodway aggradation would be the same with or without the Project. "NEPA does not permit an agency to remain oblivious to different environmental impacts, or hide these from the public." *New Mexico*, 565 F.3d at 707. The Corps never

reconciled its theory of similar aggradation impacts with or without the Project with this directly contradictory information from the very report on which it relied; and by ignoring relevant factors, without explanation, in reaching its ultimate conclusion, the Corps failed to take the "hard look" NEPA requires. By failing to take a hard look at the Project's impacts to listed species from increased riverbed aggradation, the Corps misled the public and violated NEPA.

2. The Corps Failed to Take a Hard Look at the Impacts to Listed Species from Construction Activities.

The SEIS does not include any discussion of whether there will be significant impacts to the minnow, flycatcher, and their designated critical habitats during the nearly 20-year construction period for the new levee. When discussing the Project's impacts to aquatic habitat, the Corps limits its discussion to the state of aquatic habitat once the entire levee is built, comparing after-Project conditions to before-Project conditions in terms of how much of the floodplain would be inundated by the 1%-chance and 10%-chance flood events and changes in the size of the floodway area. USACE008659-63. The Corps also uses before- and after-Project comparisons as the framework for assessing Project impacts on the silvery minnow, discussing "[p]ost-construction water depths and velocities," the functioning of the vegetation free zone "after levee replacement," and the state of minnow habitat *after* construction of specific engineered features such as riprap and soil cement. USACE008673-77. The Corps does not analyze impacts to the minnow and its habitat during the construction phase of the Project.

The need to consider the impacts of Project construction on the minnow stems from the minnow's short lifespan—about 30 months. D005922; USACE008533; *see also* D005923 (describing the minnow as "a very short-lived species"). The minnow spawns from May to June, larval fish hatch within 24-50 hours, and those fish grow quickly between June and October. D005921-22. By the late spring spawning period, "[t]he majority of spawning silvery minnows is 1 year in age," but, because minnows experience high mortality after spawning, by December the majority of the surviving minnow population is represented by fish that hatched the previous spring. D005923. In the SEIS, the Corps proposed to construct the Project "in 20, 1-year phases." USACE008713. Since 2013, the Corps has changed the Project construction sequence, dividing construction into six phases ranging from 2-6 years. Dkt. 21-1 (declaration of Corps employee). Even the shortest duration construction phase of two years could significantly impact the minnow by disrupting one or more spawning cycles. The Service noted that interruption of the minnow's spawning cycle for two consecutive years can impact or eliminate "a short-lived species such as the silvery minnow."[4] D005923.

Just because construction impacts seem short-term compared to the 50-year post-construction life of the Levee Project does not mean that these short-term activities will not significantly impact listed species. *See*, *e.g.*, *Nat'l Wildlife Fed'n v. Norton*, 332 F. Supp. 2d 170, 183-84 (D.D.C. 2004) (finding agency analysis arbitrary when it only evaluated impacts at the end of the 35-year project duration and ignored impacts to the

[4] Although the Service recognizes that the minnow can be adversely affected by even short-term "environmental variation," it also fails to consider impacts to the minnow during Project construction. *See* Section III.D below.

species "during the intervening 35 years."); *Pac. Coast Fed'n of Fishermen's Ass'ns v. NMFS,* 265 F.3d 1028, 1037 (9th Cir. 2001) (rejecting agency's impacts analysis to aquatic habitat where agency only analyzed impacts accruing at the end of a 10-year period because "this generous time frame ignores the life cycle and migration cycle of anadromous fish."). By failing to analyze the impacts of Project construction activities on the minnow in the SEIS, the Corps has "entirely failed to consider an important aspect of the problem." *Motor Vehicle*, 463 U.S. at 43.

The Corp uses similar before- and after-Project comparisons as the framework for assessing Project impacts on the flycatcher. When discussing the Project's impacts to riparian habitat that includes flycatcher breeding areas, the Corps summarizes how much riparian vegetation would be permanently removed for each alternative and the mitigation plan for revegetation after the Project is built. USACE008665-67. Specific to the flycatcher, the Corps limits its discussion to the statements that "riparian vegetation within the floodway would not be adversely affected" and "no vegetation would be lost . . . on the riverward side" of the new levee. USACE008680. As with the minnow, the Corps does not analyze impacts to the flycatcher and its habitat during the construction phase of the Project.

Yet the Corps was aware of the potential for construction impacts to the flycatcher from the 2013 BO. There, the Service identified harm to the flycatcher from (1) increased noise and traffic from heavy equipment along the spoil bank road during levee construction, and (2) installation of riprap blankets. D006013-15. The Service recognized that the Corps did not quantify noise impacts, and that these impacts "are expected to

increase significantly for the duration of the project." D006013. The Service expects construction noise to adversely affect numerous flycatcher breeding sites, an effect not mitigated by the spoil bank levees as noise buffers. *Id*. The Service also identified temporary adverse effects to more than 18 acres of flycatcher breeding habitat from installation of six miles of riprap blankets, causing dewatering of groundwater supporting riparian vegetation for the flycatcher. D006014. The Corps did not quantify the "duration and distance of the groundwater depletion effects in flycatcher breeding habitat," nor the rate of groundwater recharge. Therefore, the extent of the impact to the flycatcher from riprap installation is unknown. These unknowns defeat NEPA's purpose of informed decisionmaking.

Because of the potential for significant impacts to the minnow and flycatcher from Project construction activities, the Corps was required to take a hard look at construction impacts and present the results of that analysis to the public. *Utah Shared Access Alliance v. USFS*, 288 F.3d 1205, 1207 (10th Cir. 2002). Analysis and disclosure of construction impacts is necessary even if the Corps' analyses of post-Project impacts to the minnow and flycatcher complied with NEPA's hard look requirement (which they do not as discussed above). Moreover, the Service's conclusions about Project impacts in the BO, even if they were not arbitrary (which they are as discussed below), are not the functional equivalent of a significance analysis under NEPA and do not excuse the Corps from analyzing construction impacts in the SEIS.

3. Consultation with the Service is Not a Substitute for Taking a Hard Look at Project Impacts Under NEPA.

Rather than analyzing the Levee Project's impacts to the minnow and flycatcher in its SEIS, the Corps cherry picks from the Service's discussion in the 2013 BO about Project impacts to these species and presents the Service's Terms and Conditions ("T&C") governing incidental take as if to imply that preventing take will mitigate any potentially significant impacts to listed species. USACE008677-82. The Corps cannot simply rely on the BO in place of analyzing Project impacts in the SEIS because the BO is not the "functional equivalent" of NEPA's environmental review process. *Fund for Animals v. Hall*, 448 F. Supp. 2d 127, 134 (D.D.C. 2006).

First, the "jeopardy" standard under the ESA is a much higher threshold than "may adversely affect an endangered or threatened species" (the standard for preparing an EIS under NEPA).[5] As a result, the courts have been clear that a finding of "no jeopardy" does not avoid the need for an EIS where a project may nonetheless adversely affect a listed species. *See Greater Yellowstone Coal. v. Flowers*, 359 F.3d 1257, 1275-76 (10th Cir. 2004) (recognizing that the Service's no jeopardy conclusion does not necessarily

[5] Under the ESA, "jeopardize the continued existence of" means the action would reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of either the survival or recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. *Nat'l Wildlife Fed'n v. NMFS*, 524 F.3d 917, 931-33 (9th Cir. 2008). Under NEPA, significance considers for both the "context" and "intensity" of those impacts. 40 C.F.R. § 1508.27. Context "means that the significance of an action must be analyzed in several contexts . . . [including] . . . the affected region, the affected interests, and the locality" and "varies with the setting of the proposed action." 40 C.F.R. § 1508.27(a). Intensity "refers to the severity of the impact" and includes "[t]he degree to which the action may adversely affect" a listed species or its critical habitat. *Id.* § 1508.27(b)(9).

mean impacts are insignificant); *Makua v. Rumsfeld*, 163 F. Supp. 2d 1202, 1218 (D. Haw. 2001) (accord); *Portland Audubon Soc'y v. Lujan*, 795 F. Supp. 1489, 1509 (D. Or. 1992) (accord).

Second, relying on the ESA consultation process to satisfy NEPA ignores NEPA's objective that the Corps "inform the public that it has indeed considered environmental concerns in its decisionmaking process." *Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1153–54 (9th Cir. 2006). A BO is not a public document, and the ESA consultation process does not allow for public participation. Therefore, the consultation process does not inform the public about the impacts of a federal action. *Fund for Animals*, 448 F. Supp. at 136.

III. The Service's No Jeopardy Determinations for the Project Violate the ESA

A. The Service's Environmental Baseline Analyses in the BOs Fail to Adequately Account for Harms to These Species.

The Service's 2013 and 2016 BOs fail to adequately account for the environmental baseline existing in the Levee Project Area, thus the Service's determinations that the Project will not jeopardize the minnow, flycatcher, or cuckoo are arbitrary. The Service's jeopardy determination must consider all of the "effects of the action" (direct and indirect effects and the effects of interrelated and interdependent actions) in the context of the other harms to the species that are already occurring (the environmental baseline). 50 C.F.R. § 402.02; *see also Oregon Nat. Desert Ass'n v. Tidwell*, 716 F. Supp. 2d 982, 1004 (D. Or. 2010). The "environmental baseline" includes:

> the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all

> proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process.

50 C.F.R. § 402.02. Only by considering all of the Project's effects on the species and by adding those effects to the environmental baseline can the Service comply with its substantive duty to ensure that the Project, given all other threats, will not jeopardize species survival. *See NWF v. NMFS*, 524 F.3d at 930. Because the Service did not adequately account for the ongoing impacts to listed species from aggradation and water operations and management on the MRG in its BOs, its jeopardy analyses amounted to "little more than an analytical slight of hand, manipulating the variables to achieve a 'no jeopardy' finding." *Id.* at 929, 933 (recognizing agency may not ignore environmental baseline and conduct its jeopardy analysis "in a vacuum.").

1. The Service Failed to Adequately Consider Aggradation Effects as Part of the Environmental Baseline.

The Service's analyses of aggradation in the BOs fundamentally misunderstand the nature of the jeopardy inquiry. Jeopardy determinations consider the species' likelihood of extinction when the harm from the proposed action is added to the other past and future expected harm to the species (the environmental baseline). *See, e.g.*, *id.* at 930 (discussing proper baseline analysis); *see also* R023721-22 (baseline includes present and expected drought).

The spoil bank levees in the Project Area have effectively split the floodplain in half, and the Project would maintain that division in perpetuity. R024507. This division limits the area available for sediment deposition in the floodplain, causing approximately

double the vertical sediment accumulation. R024507. This phenomenon has caused the floodway to rise by up to 12 feet over the last 50 years, with an additional 11-foot rise predicted over the next 50 years with the engineered levee in place. R024507, 24515; E002035; D005964. The distance from riparian areas to groundwater is thus increasing and stressing riparian vegetation in the SAR. *See* R024517; D006017. The willows and cottonwoods for flycatcher and cuckoo habitat become stressed at 6.6 to 7.5 feet from groundwater and die at 10 to 16 feet from groundwater respectively. R024509; D005987. Quite simply, the Project will exacerbate increasing depths to groundwater, eliminating much of the flycatcher and cuckoo habitat in the SAR. *See* R024514; D005987.

The Service failed to realistically assess the aggradation threat. Its jeopardy determinations arbitrarily discount 50% of the aggradation that it estimates *will* occur with the engineered levee, reasoning that 50% of the aggradation would still occur without floodplain-dividing structures in place. *See* E001150-51; R024518. The Service added this partial aggradation accounting to the current depth to groundwater in the SAR and then used this discounted estimate of total aggradation for its Project jeopardy determinations. E001150-51; R024518. However, the Service's failure to account for 50% of the expected aggradation in the SAR effectively only addresses *the effects of the action* and ignores the additional 50% of aggradation (the environmental baseline) that the Service admits will occur during that time. E001150-51; D006019; D001912-13. This estimate is thus equivalent to the amount of aggradation that would occur if the existing

spoil bank levees were eliminated and the engineered levee was not built, rendering arbitrary the Service's use of this estimate in its jeopardy determinations.[6]

Despite heavily discounting aggradation estimates, the Service found (with 95% confidence) that the Project-caused aggradation would eliminate 195 to 460 acres of flycatcher habitat and take 76 flycatcher territories from 2023-2073.[7] E002035; R024505; E002150; *see also* E001074 (loss of 82 territories from aggradation and construction). The Service's draft BO required 200 acres of flycatcher habitat mitigation to offset these impacts. E002035. However, the Corps refused to accept any responsibility, claiming all sedimentation—past, present, and future—was already part of the environmental baseline. E002036; E001326-31; R024524.

The Service "disagree[d] *strongly*" with the Corps' claim that all aggradation was part of the environmental baseline, but the Service eventually caved to pressure from the Corps on this issue. E004394 (emphasis in original); E002036-37; R024525. The Service jettisoned its actual habitat loss estimate from the BOs and substituted the Corps' proposed *habitat replacement number* (50.4 acres) and the lower confidence interval of the Service's projection (200 acres)[8] as the likely range of habitat loss. E001456. However, there is no basis for this range in the record. The Corps' 50.4-acre number

[6] Accounting for only 50% of aggradation, the Service already expects approximately 40% of the native vegetation in the SAR to become separated from groundwater over the first 50 years of the Levee's existence, with only less suitable invasive vegetation to fill in the gap. R024520.

[7] To appease the Corps, the Service also discounted *all* aggradation that would occur before 2023.

[8] This 200-acre figure appears to be based on the 195-acre minimum expectation for aggradation loss plus 5 acres for groundwater extraction associated with construction. E002035.

rejects *all* aggradation and relates only to the engineered levee's physical footprint. E001456; E001458; E001596; E004444; E047269. The 50-200 acre habitat loss "estimate" is merely an arbitrary attempt to disregard the science and "split the baby" to appease the Corps. The Service then used this arbitrary estimate to reduce its incidental take estimate from 76 flycatcher territories due to aggradation to 11 territories from all phases of Project construction, operation, and maintenance. E002150; D006023. However, the Service's jeopardy analysis fails to "articulate[] a rational connection between the facts found and the conclusions made." *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 525 (9th Cir. 2010) (citation omitted).

2. The Service Failed to Consider as Part of the Environmental Baseline Harm to Listed Species from Water Operations and Management.

The Service omitted from its environmental baseline in the BOs the harm caused to listed species by Reclamation and the Corps' water operations and management ("O&M") in the Project Area. In the 2013 BO, the Service listed NEPA and ESA documents that considered the environmental effects of Reclamation and/or the Corps' O&M activities in the MRG, but failed to analyze the baseline harm that O&M activities are already having on listed species and Project impacts to those ongoing harms. D005978-79.

Relevant here, this section of the 2013 BO mentions Reclamation and the Corps' joint 2003 water O&M BO that found that O&M is *jeopardizing* the minnow and

flycatcher. D005978; E046983-84.[9] The 2003 BO only covered O&M through February 28, 2013. E046900. However, the Service indicated that it would not evaluate the impact of these activities because it expected the Corps and Reclamation to reinitiate formal consultation on O&M in 2012. D005979. This was the entire analysis for actions *that the Service previously found were jeopardizing the existence of the minnow and flycatcher*.

The Service apparently did not consider O&M activities part of the environmental baseline for the Levee Project because the agencies were reinitiating consultation on O&M. *See* 50 C.F.R. § 402.02. However, these O&M activities clearly involve "past and present impacts of all Federal actions in the action area," which are also part of the environmental baseline for the challenged Levee Project. *See id.*

The Service's failure to consider the effects of O&M in the environmental baseline became even more egregious by 2016, but the Service did not correct its omission of these O&M activities from the environmental baseline in the 2016 BO. D001892. After the Service released the 2013 BO, the Corps decided it would no longer complete consultation on its O&M responsibilities for five flood control dams on the Rio Grande and its tributaries, all of which are upstream of the SAR. R020138; E046909-10; R029657-61.[10] As a result, the interplay of the Corps' O&M activities throughout the MRG and the Project was ignored here and will escape analysis. This leaves a gaping

[9] The cuckoo was not yet listed. However, the flycatcher and cuckoo have very similar habitat needs, D001913, so the impacts on the cuckoo and its habitat are comparable.

[10] Whether the Corps is correct that it need not consult on O&M operations is not material here. *Cf.* E045821 (Service believes Corps needs to consult); E046604 (same); E002109-11 (Service thinks only a joint Corps/Reclamation O&M BO is sufficient).

hole in the Service's jeopardy analysis by omitting a highly serious threat to these species.

B. The Service Segmented the Proposed Action, Precluding Its Ability to Rationally Determine Whether the Project Will Jeopardize Species or Adversely Modify Critical Habitat.

The Service improperly relies on its duty to reinitiate consultation with the Corps when flycatcher habitat loss exceeds the amount permitted in the 2013 BO's ITS to avoid a full accounting for expected harm to the species and its habitat now. However, the possibility of future consultation does not legitimize the Service's arbitrary habitat loss bargain with the Corps. *See* D001914; D001918; *see also* E001462 (bargain will lead to "re-initiation within a degraded baseline condition much sooner…"). "The duty to reinitiate consultation in the future … does not diminish the Service's obligation to prepare a comprehensive biological opinion now." *Wild Fish*, 628 F.3d at 525. The Service's segmented consultation precludes a meaningful jeopardy determination at a point where the species can still be protected.

The Service must "analyze the effect of the *entire* agency action … because caution can only be exercised if the agency takes a look at all the possible ramifications of the agency action." *Id.* at 521 (citation and punctuation omitted, emphasis in original). Considering harm over a series of limited time periods could obscure an appreciable reduction in the species' likelihood of survival or recovery across the entire life of the action. *Id.* at 522-23; *Town of Superior v. U.S. Fish & Wildlife Serv.*, 913 F. Supp. 2d 1087, 1141 (D. Colo. 2012), *aff'd sub nom. WildEarth Guardians v. U.S. Fish & Wildlife Serv.*, 784 F.3d 677 (10th Cir. 2015). Where incomplete information on harm exists, the

Service must still use the *best available information* to prepare a comprehensive evaluation of the total harm caused to the species. *Wild Fish*, 628 F.3d at 525; 50 C.F.R. § 402.14(g)(8).

Here, the agencies agreed that 70 years was a reasonable time period for evaluating the Project's harm to listed species. E000110. The Service estimated that the Project would cause 195-460 acres of flycatcher habitat loss from aggradation, and, while this range already under-represents likely habitat loss, the Service further reduced the range in its jeopardy and adverse modification determinations to 50-200 acres. This is arbitrary because the Service actually estimates that flycatcher habitat loss will very likely exceed 200 acres in the next 70 years. By limiting Project take to 200 acres of flycatcher habitat, the Service virtually ensures that it will have to reinitiate consultation over the Project's lifetime, an outcome the Service actually anticipated when it made this bargain with the Corps. E001462. This means the BOs fail to account for the harm that the Service expects to the species and their habitats from the Project. *See Wild Fish*, 628 F.3d at 524. Analysis of total harm will thus improperly escape review until it is too late to protect the species. *Id.* at 522 (piecemeal consideration of impacts violates the ESA) (citation omitted). Under the Service's approach, "a listed species could be gradually destroyed, so long as each step on the path to destruction is sufficiently modest. This type of slow slide into oblivion is one of the very ills the ESA seeks to prevent." *Id.* at 523 (quoting *NWF v. NMFS*, 524 F.3d at 930); *see also Am. Rivers v. U.S. Army Corps of Eng'rs*, 271 F. Supp. 2d 230, 255 (D.D.C. 2003).

C. The Service Arbitrarily Relied on Vague and Uncertain Mitigation.

To avoid jeopardy or adverse modification determinations, the BOs arbitrarily rely on uncertain and vague aspirations as actual mitigation for habitat loss. Instead, the Service must consider "any beneficial actions taken by the Federal agency or applicant" that could mitigate harm to species and their habitat. 50 C.F.R. § 402.14(g)(8). However, the Service "may only consider mitigation measures embodied in 'specific and binding plans' evidencing a 'clear, definite commitment of resources for future improvements.'" *Town of Superior*, 913 F. Supp. 2d at 1140 (citation omitted). The mitigation measures the Service relied on for its determinations for the Project do not meet this stringent standard.

The BOs require less flycatcher and cuckoo mitigation habitat than the amount the Service admits will be destroyed by the Project. D001918. However, the Service relies on T&Cs in the BO providing only aspirational mitigation measures to offset Project harm. For example, T&C 3.5 in the 2013 BO states the Corps will resolve aggradation uncertainty through monitoring, modeling, and analysis. D006029; *see also* D001924. T&C 3.5.5 further states that, based on that monitoring, modeling, and analysis, "the Corps shall determine and develop commensurate mitigation for the duration of the project." D006029; *see also* D001921 (requiring only "commensurate mitigation *as appropriate*.") (emphasis added). This allows the Corps to begin construction with no firm commitments for additional mitigation. These mitigation measures are thus "vague [and] unenforceable future goals" and are not "integral pieces of the proposed action."

See Town of Superior, 913 F. Supp. 2d at 1143 (citing *NWF v. NMFS*, 524 F.3d at 935-36).

Even if these T&Cs were appropriate mitigation measures in the 2013 BO, events transpiring in the interim show that the Service had no reasonable basis to rely on those provisions in the 2016 BO. A December 17, 2015 draft letter to the Corps from the Service indicates that the Corps violated its duty to comply with *all* of its monitoring requirements (including T&C 3.5.5) from the 2013 BO for both calendar years 2013 and 2014. E066213; E066215.[11] Without monitoring, the extent of Project-caused aggradation will be unknown, and the Service cannot determine whether reinitiation of consultation is required. *See Wild Fish*, 628 F.3d at 532 (determining that "a numerical cap [on take] is useful only insofar as the action agency is capable of quantifying take to determine when the trigger has been met.") (citations omitted); *NRDC v. Evans*, 279 F. Supp. 2d 1129, 1187 (N.D. Cal. 2003) (holding that "[i]t is arbitrary and capricious to set the trigger at one animal unless defendants can adequately detect the taking of a single animal."); D001914. In short, the Corps does not comply with these nondiscretionary requirements, and this means that the agencies cannot comply with their duties to ensure against jeopardy and adverse modification. 50 C.F.R. § 402.14(i)(3) (stating "[i]n order to monitor the impacts of incidental take, the Federal agency or any applicant must report

[11] The Corps also failed to comply with 2013 BO RPM 4, which requires the Corps to "[m]inimize take of silvery minnows due to construction activities." E066215-16. This includes failure to monitor effects to the minnow; to coordinate with, and report to, the Service; to create a "robust" mitigation plan using the best available science; to delineate specific locations and schedules for habitat mitigation; and to take other actions protecting the species and its habitat during construction. *Id.*

the progress of the action and its impact on the species to the Service *as specified in the incidental take statement.*") (emphasis added). As a result, it was also arbitrary for the Service to rely on the Corps' monitoring duties to mitigate habitat loss in the 2016 BO.

D. The Service Failed to Meaningfully Address Harm to Listed Species from Project Construction Activities.

1. Construction Below San Acacia Diversion Dam Could Take Minnows Far in Excess of the Service's Projections.

The first 1.5 miles of the Rio below the San Acacia Diversion Dam ("SADD") is indispensable minnow habitat and will also experience extensive Project construction activity. *See* E017343; E045128; D005907-10. The Service's jeopardy determination ignored the importance of this area for the minnow. Unlike the majority of the Project Area: (1) flow persists downstream of the SADD even when all flow is being diverted upstream of the Dam; (2) the river channel below the SADD is deeply incised rather than aggraded, allowing water from surrounding lands to seep into this reach. E045128. Therefore, even in severe drought years where the river dries, water persists directly below the SADD. E045128.

Annual fish surveys show that the majority of the remaining minnow population is often concentrated just below the SADD. E007584. For example, in May of 2012 surveyors located 71 minnows directly below SADD, 8 minnows 1.5 miles below SADD, and only 29 minnows elsewhere at the remaining 18 survey sites. E013249-59; *see also* E005838-50 (3 of the 20 sites dry; only 285 minnows sampled from remaining sites; 104 and 50 minnows sampled directly below SADD and 1.5 miles downstream of SADD respectively). In dry years, surveyors sometimes find more minnows directly below

SADD than throughout the remainder of its habitat. *See* E020420-30 (4 minnows directly below SADD; only 3 more minnows at all other sites); E020391-400 (8 minnows directly below SADD; only 4 more minnows at all other sites). In fact, the Service previously recognized the vital nature of this reach to minnow conservation when it recommended that the area below SADD be included as one of only three priority refugia areas for minnows in anticipation of the 2013 drought. E017343.[12]

Instead of realistically estimating take in this clearly vital reach, the Service provides a generic analysis of minnow harm from the Project. The Corps plans to excavate roughly 12.4 acres of riparian land directly below the SADD over a four-month period. D005907-08. To access this area, the Corps will construct a 300-foot long, 15-foot wide dirt crossing directly across the Rio prior to excavation. D005908; D005999. The Service calculates that the fill area for this crossing would be 9,000 square feet (0.2 acres) resulting in harassment of 79 minnows based on the average density of minnows in a 0.2-acre area of the SAR since 2003. D0059999-6000. However, this take estimate arbitrarily ignores the fact that this particular area often has *much* higher minnow concentrations than the remainder of the SAR.

Similarly, the Corps also intends to install a 5,700-foot concrete embankment along the West side of the Rio starting at the SADD and extending downstream to where the Levee begins. D005908; D005910. The Service again only allocated take from the physical in-river portion of this activity at the average minnow density across the whole

[12] This was not part of the Levee consultation.

SAR since 2003. D006002. This arbitrary take estimate again ignores the importance of this area.

Finally, Project construction will remove the dense salt cedar that currently exists over portions of the bank areas below the SADD, increasing water temperatures in this reach due to reduced shading. D006001; D006003. This temperature increase will be worst during river intermittency when the area serves as a refuge for minnows and water here is essentially stagnant. This is important because dissolved oxygen is inversely proportional to water temperature. D005967. The Service has acknowledged that water quality, marked by dissolved oxygen and temperature, in refugial areas may be even more important than water quantity for minnow survival. *See* E045128; E014580. Therefore, these reductions in dissolved oxygen will cause heightened impacts here.[13] Essentially, the Service's decision to analyze harm to minnows in this reach in a generic way arbitrarily disregards the significance of this area.

2. The Service Failed to Consider Whether Construction and Operation of the Levee Would Increase Pollutants in the Project Area.

In the 2013 BO, the Service only discusses water degradation by pollutants as part of the environmental baseline. D005966-67; D005969-72; D005983. These pollutants can seriously harm minnows and can cause deformity and death. D005970-72. The Service mentions that these pollutants are interred in sediment here, but then never addresses the fact that levee construction will disturb riparian areas and the dirt spoil bank, allowing

[13] Construction of the river crossing structure discussed above may also temporarily decrease dissolved oxygen. D006000.

that sediment to enter the Rio.[14] The Service thus failed to consider this effect of the Project on minnows.

3. The Service Failed to Adequately Consider Construction Traffic Effects to Flycatchers and Cuckoos.

The BOs do not require the Corps to mitigate the effects of heavy construction vehicles freely traveling at all times of day throughout the year on the landward side of the levee/spoil bank because the Service arbitrarily considers the levee/spoil bank an adequate noise buffer. D005914. In addition, the BOs allow pickup trucks and SUVs to travel along the top of the spoil bank with no buffer year-round. *Id*. The Service does not explain why it flip-flopped on more stringent protections from traffic or why it determined that no buffer was needed for truck and SUV traffic. The Service also under-represented the harm caused by traffic within 0.25 miles of flycatcher and cuckoo territories.

Traffic harms flycatchers and cuckoos by increasing noise that correspondingly reduces the species' likelihood of occupancy and successful mating in affected areas. D006013; D001904-05. Harm from traffic also includes harm from dust and other human activities. D001904. However, despite previously admitting that even its original, more protective "Levee construction measures *do not adequately minimize effects of disturbance*" on flycatchers, the Service issued no jeopardy determinations for the flycatcher and cuckoo. E000132 (flycatchers) (emphasis added); *see also* D006013

[14] The spoil bank is composed of sediment from the floodway that was excavated during construction of the LFCC and therefore also contains these pollutants. *See* D005906.

(tempered to "may not adequately minimize effects of disturbance"); D001904 (tempered to "may not adequately minimize effects of disturbance" on cuckoos).

The Corps was consistently unwilling to constrain Project construction traffic, and it managed to strong-arm the Service to remove protections the Service felt were necessary to minimize species impacts. During the BA drafting process, the Corps made clear that it would not attempt to reroute traffic near flycatcher nests, even where practical alternate routes are available, and would instead rely solely on the spoil bank/levee to buffer the effects of traffic on species. E066641. The Service determined that these measures were not sufficient to minimize effects of traffic disturbance on the flycatcher, and would have instead required a strict prohibition on traffic within 0.25 miles of flycatcher territories and additional restrictions on use of maintenance roads and traffic along the top of the spoil bank. E000132. These restrictions were most necessary along river miles 73-90 where many flycatcher territories are within 300 feet of the spoil bank, meaning they would be very close to traffic. E000132.

Instead of agreeing to these protections, the Corps proposed removing the requirement to avoid traffic within 0.25 miles of flycatcher territories between dawn and 9:00 AM. E002156-57. The Service's notes refer to the Corps' proposed changes as a "deal breaker," presumably because early morning is the most important time for male flycatcher song used to attract mates. *See, e.g.,* E002156; E026870; E046485; E046578; R010131. However, despite the Service's protest and admission that, even including its more stringent requirements, these efforts were insufficient, the Corps won and its proposed change became T&C 2.1 verbatim. E002156-57 (September 26, 2012 proposed

change/deal breaker discussion); E000132 (proposed T&Cs already "*do not adequately minimize effects of disturbance*" in August 8, 2012 document); D006028 (final T&C 2.1); *see also* D001923 (minor language difference in T&C 2.1 for cuckoo, but no requirement to avoid construction during breeding season or near cuckoo territories). In addition, T&C 2.3 requires only that the Corps monitor territories if traffic is within 0.25 miles to determine ongoing occupancy, but doesn't require any changes in vehicle activity that would benefit the species. D006028; D001923. T&C 2.3 thus provides absolutely no protection to the species.

The BOs are also devoid of protections for the flycatcher and cuckoo from traffic on the landward side of the Project construction zone. The Corps claimed this area is not suitable flycatcher habitat and that harm is therefore discountable. E004372-73. However, the Service cited to a study finding that flycatchers use the landward side of the current spoil bank levee near the LFCC despite mowing. E004394; *see also, e.g.,* R010208 (report cited by Service showing flycatcher use); R010217 (noting cuckoo use here as well). Despite this information, the Corps rejected the Service's T&C relating to this area because the area is not designated critical habitat and is periodically mowed. E002091. The Service caved to the Corps again, providing no protection to these species on the landward side of the Levee.

As a result of these deficiencies, the Service under-represented the traffic harm to flycatchers and cuckoos and under-protected the species. The Service thus arbitrarily failed to adequately address harm from construction traffic.

E. The Service Unduly Relied on the Ability of Current Flycatcher Breeding Success in the San Acacia Reach To Mitigate Project Harm.

The Service relies on the non sequitur that, because flycatchers are currently successfully breeding in the MRG, harm caused by the Project will not jeopardize the species. D005955; D006022; *see also* D001877 (cuckoo). The record demonstrates that this breeding success is tenuous and could easily be reversed by management of the Elephant Butte Reservoir. As a result, the Service's heavy reliance on this relative breeding success is arbitrary.

The Service admits that the vast majority of known flycatcher territories, including approximately 75% of the total known territories in the Rio Grande Basin during the 2010 season, were within the conservation pool of Elephant Butte Reservoir ("Conservation Pool"). D005958.[15] The Conservation Pool is part of the San Marcial Reach, the backbone of the flycatcher population in the MRG and in the Rio more generally. *See, e.g.,* R016633 (300 of 344 territories in San Marcial Reach in 2015); R016422 (298 of 360 territories in San Marcial Reach in 2010); R016538 (approximately 80% of flycatcher territories in San Marcial Reach in 2011).[16] The Service further admits "[b]reeding habitat availability in [the Conservation Pool] appears to have been a key

[15] The Rio Grande Recovery Unit primarily includes the Rio Grande watershed from its headwaters in southern Colorado downstream to the Pecos River confluence in Texas. The Middle Rio Grande Management Unit is just one part of this larger Recovery Unit. D005936.

[16] Similarly, 59 of the 91 cuckoo territories found in the MRG in 2015 were in the Conservation Pool, and only 19 territories were found in the remainder of the Rio Grande. D001891; D001892. Though there are no similar territory goals, the Service did rely on the relatively high number of cuckoos presently in the MRG to reach its no jeopardy conclusion. D001921.

component to the increasing population trend in the Middle Rio Grande Management Unit." D005958. However, the Service fails to acknowledge the impact that the importance of the Conservation Pool must have on its jeopardy determinations.

The Conservation Pool habitat developed when Elephant Butte Reservoir lowered due to drought, and stagnation of water levels could cause it to again disappear. *See* R016562; D005953. This highlights the ephemeral nature of this habitat. The remainder of the habitat in the MRG is incapable of compensating for any Conservation Pool habitat loss, and this lack of sufficient alternative habitat in the MRG will only get worse once the Project is built. *See* R016448 (only 62 flycatcher territories were located in the remainder of the MRG in 2010).

Even if the Conservation Pool were managed in a way that would preserve flycatcher and cuckoo habitat under normal conditions, this area will experience some of the most extreme aggradation of any area in the MRG. E047278-79. In fact, the San Marcial Reach is expected to aggrade an additional 11-16 feet by 2079. E047279. The Service's own data indicates this will result in the loss of 1,515 acres of suitable flycatcher habitat in the San Marcial Reach alone. E047288.

Habitat quality in the San Marcial Reach is highly vulnerable to Project-exacerbated aggradation and management of Elephant Butte Reservoir that diminishes habitat quality in the Conservation Pool. As a result, it is reasonably foreseeable that much of this habitat will be degraded or lost once the Project is built, causing flycatcher and cuckoo declines in the MRG. In fact, Reclamation has explained "decline in the overall number of territories in the reservoir pool seem imminent in the near future and

emphasizes the need for additional suitable habitat elsewhere within the [MRG]." R016562. The Service's heavy reliance on the San Marcial Reach's current success as an indicator of future conditions post-Project is thus arbitrary.

CONCLUSION

For the reasons stated above, Guardians respectfully requests that this Court (1) declare that the Corps' approval of the Levee Project violated NEPA, and that the Service's 2013 and 2016 BOs violated the ESA and APA, (2) remand the Levee Project authorization to the Corps for compliance with NEPA, (3) remand the 2013 and 2016 BOs to the Service for compliance with the ESA and APA; and (4) enjoin the U.S. Army Corps of Engineers from proceeding with any levee construction beyond the two phases currently underway to protect the town of Socorro and from depositing any material into the Tiffany Basin until it has complied with NEPA and the Service has issued new, valid biological opinions for the Levee Project.

Respectfully submitted on the 27th day of October 2017.

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CERTIFICATE OF SERVICE

I certify that a copy of the foregoing Opening Brief and attached exhibits are being filed with the Clerk of the Court using the CM/ECF system, thereby serving it on all parties of record, this 27th day of October, 2017.

/s/ Samantha Ruscavage-Barz_____

CERTIFICATE OF WORD LIMIT COMPLIANCE

Pursuant to Rule 32(a)(7)(B)(1) of the Federal Rules of Appellate Procedure, I hereby certify that this Opening Brief contains 12,998 words. I relied on my word processing program, Microsoft Word, to obtain this word count.

/s/ Samantha Ruscavage-Barz