



United States Department of the Interior

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Via Electronic Mail Only

August 16, 2021

Ms. Karla Petty
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Federal Highway Administration
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Subject: Final Tier 1 Environmental Impact Statement and Preliminary Section 4(f)
Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona

Dear Ms. Petty:

The Department of the Interior (Department) has reviewed the Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) Interstate 11 (I-11) Corridor Tier 1 Final Environmental Impact Statement (FEIS), dated July 2021, and provides these comments under environmental authorities, including the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act (FWCA), and Section 4(f) of the U.S. Department of Transportation Act on behalf of its bureaus: the Bureau of Reclamation (BOR), the National Park Service (NPS), and the U.S. Fish and Wildlife Service (FWS).

The Department provided comments during review of the Administrative Draft Environmental Impact Statement (DEIS) in 2018, DEIS dated March 2019, and Administrative FEIS January 2021. In the FEIS, FHWA/ADOT's preferred alternative includes both an East Option and West Option. The Department appreciates ADOT/FHWA's proposal to carry the Preferred Alternative – East Option forward for further analysis in Tier 2. The Department's bureaus continue to review relevant project materials as cooperating agencies under NEPA and provide the following outstanding concerns previously identified through review of the study which are not sufficiently resolved in the FEIS.

Bureau of Reclamation Comments

Based on the FEIS and the Section 4(f) Evaluation, the Preferred Alternative – West Option (the former Recommended Alternative) through the Tucson Mitigation Corridor (TMC) would result in permanent adverse impacts to the primary function of the TMC. The FWCA of 1958 (PL 85-624, 16 U.S.C. 661 et seq.) requires that “lands described herein for fish and wildlife purposes

shall not become subject to exchange or other transaction if those actions would defeat the initial purpose of their acquisition [16 U.S.C., section 663(d)].” As identified in past correspondence, the TMC was established under the authority of the FWCA “[t]o mitigate for the movement disruption impacts, not totally compensated for by the wildlife crossing structures over the aqueduct, by providing an undeveloped and long-term movement corridor for wildlife to maintain and promote normal gene flow while avoiding genetic isolation of the Tucson Mountains and wildlife habitat to the west.”

The FEIS contains no information supporting the proposition that construction of a major highway through the TMC would not defeat this initial purpose of the property. After reviewing the Final Tier 1 EIS/Preliminary 4(f) Analysis and after considerable review of the TMC’s historic purpose, the BOR lacks sufficient information to conclude that it could grant the right-of-way through the TMC that would be required to implement the Preferred Alternative West Option (BOR, 1983; FWS, 1984; BOR, 1985; BOR, 1990; and, BOR, 2020). At this time, the BOR does not believe the adverse impacts of a surface-level or elevated highway through the TMC can be mitigated in a manner that avoids defeating the purpose for which the TMC was acquired. Further, the BOR questions whether an underground highway beneath the TMC, with necessary surface features for ventilation and emergency access, could be designed in a manner that does not defeat that purpose.

The FWCA also requires that “the use of such waters, land, or interests therein for wildlife conservation purposes shall be in accordance with general plans approved jointly.” (16 U.S.C. 663(b)). The BOR and several partner agencies executed the TMC’s Master Management Plan in 1990 (BOR, 1990). Management goals and actions within the TMC’s Master Management Plan include: 1(a) Compensate for wildlife movement disruptions caused by aqueduct construction by providing an undeveloped wildlife movement corridor between the Tucson Mountains and the Nation to the west; 1(c) Compensate for wildlife habitat lost due to aqueduct construction by prohibiting deleterious activities within the area boundaries; and, 2(a) Prohibit any future developments within the area other than existing wildlife habitat-improvements described above or future wildlife improvements, management, or developments agreed to by the BOR, Arizona Game and Fish Department, FWS, and Pima County. The FEIS does not discuss the TMC’s Master Management Plan or its implications for the proposed development of a major highway through the TMC.

The Council on Environmental Quality NEPA Regulations state the proposed action should identify “Possible conflicts between the proposed action and the objectives of Federal, regional, state, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.” (40 CFR §1502.16). The BOR’s comments on the Draft EIS requested such an analysis. The Final EIS only mentioned that, “During Tier 2 the existing and applicable land management plans would be reviewed and evaluated in the comparison of alternatives, and ADOT will continue to coordinate with appropriate land managing agencies.” The BOR believes that known issues regarding the consistency of an alternative with land management plans should be identified and discussed in the Tier 1 EIS to adequately inform the decision maker of these important concerns. An EIS and Record of Decision should document

compliance with all applicable environmental laws or provide reasonable assurance their requirements can be met (23 CFR §771.125 and §771.133). The EIS does not describe how compliance with the FWCA or the TMC's Master Management Plan would be achieved with respect to the Preferred Alternative West Option.

The Tucson Mitigation Corridor and Gene Flow

Wildlife movement, wildlife connectivity, and connectivity are synonymous and are a general scientific concept that describes movement among habitat blocks and the multiple biological and ecosystem processes occurring in those blocks. Among those processes, promoting, and maintaining normal gene flow through long-term movements, while avoiding genetic isolation of populations, is the principal process of connectivity and a primary initial purpose for the acquisition of the TMC (FWS, 1984; Slatkin, 1985; Slatkin, 1987; Epps et al., 2005; Latch and Rhodes, 2005; Keuhn et al., 2007; Corlatti et al., 2009; Holderegger and Giulio, 2010; Menchaca et al., 2019; Jackson and Fahrig, 2011; Sawaya, 2014; Waits et al., 2016; and, others).

The FWS has historically used and continues to use gene flow as a measure of effective connectivity in its species recovery plans. For example, gene flow monitoring is a component of the recovery plan for the jaguar (*Panthera onca*), ocelot (*Leopardus pardalis*), and Sonoran pronghorn (*Antilocapra americana sonoriensis*) (FWS, 2016a; FWS, 2016b; and, FWS, 2016c). All three are found within southern Arizona where fragmentation and inadequate gene flow are among the most significant threats to those species.

Maintaining and confirming normal gene flow to the Tucson Mountains is important because small and isolated populations become vulnerable to stochastic event processes that normally pose little threat to larger populations. Some populations within Saguaro National Park (NP) and Tucson Mountain Park are becoming vulnerable to extirpation and the reduced possibility of recolonization. Populations within the Tucson Mountains are at risk because the mountain range is almost completely surrounded by some form of development (NPS, 1995).

During the transition in the I-11 Tier 1 EIS process from a Programmatic Net Benefit Evaluation to an Individual Section 4(f) Evaluation, the BOR provided supplemental comments in a January 2, 2020, letter that gave information on normal gene flow and its purpose for the TMC which was documented several years prior to its establishment in 1990 (BOR, 2020). Upon review of the Administrative Final Tier 1 EIS, the BOR noted that information within the letter was not incorporated.

When submitting comments on the Administrative Final Tier 1 EIS, the BOR recommended the language identified in the January 2020 letter be incorporated. Within our comments there were 11 locations where the term "normal gene flow" was requested to be incorporated into sections addressing the TMC. The recommendations were responded to with: (1) "GlobalTopic_3 No change made" which describes it as a minor comment and not pertinent to the decision-making process, and (2) "GlobalTopic_1 Gene flow is just one aspect used to evaluate the impact of barriers to wildlife movement. The Department has committed to wildlife movement studies

prior to the Tier 2 process. These studies will allow for biologists to establish a baseline and better assess wildlife movement through the proposed corridors. No change made.” Gene flow and normal gene flow was also mentioned 13 other times where it was also not included. Gene flow as an underlying purpose of the TMC to the Tucson Mountains and Saguaro NP is the only proven method to determine corridor success (BOR, 1983; FWS, 1984; BOR, 1985; BOR, 1990; and, BOR, 2020). Animal presence or use of a corridor is not a good measure of corridor success to animal populations (Seth et al., 2006; Strasburg, 2006; Corlatti et al., 2009; Lesbarreres and Fahrig, 2012; A. van der Gift et al., 2013; Gregory and Beier, 2014; Sawaya et al., 2014; and, Soanes et al., 2018).

For example, without information on genetic connectivity, an individual crossing a wildlife overpass leaves little to no trace on whether its attempted movement, occupation, and reproduction in new habitat was successful. A study by Seth et al. (2006) documented that methods such as radio/GPS telemetry are extremely limited and by themselves not capable of confirming success of gene flow at crossing structures. They found that observed migration rates of coyotes (*Canis latrans*) and bobcats (*Lynx rufus*) across the Ventura Freeway in southern California was a poor surrogate for evaluating gene flow. While the study did document mild levels of migration, populations on either side of the freeway were genetically differentiated and implied that individuals who crossed rarely reproduced (Seth et al., 2006). A corridor may also be occupied by a population that does not interact with populations in other or adjacent habitat blocks (e.g., the corridor acts as a sink for surplus individuals from those habitat blocks) (Gregory and Beier, 2014). Additionally, multiple researchers who study wildlife crossings stated that research has done little to verify their effectiveness, because use of crossings does not equate to their effectiveness for facilitating gene flow (Seth et al., 2006; Strasburg, 2006; Corlatti et al., 2009; Lesbarreres and Fahrig, 2012; A. van der Gift et al., 2013; Gregory and Beier, 2014; Sawaya et al., 2014; and, Soanes et al., 2017). The Tier 1 and Tier 2 NEPA analysis for the southern segment of the proposed I-11 corridor should address the importance of gene flow as a primary purpose of the TMC and gene flow as the appropriate measure of the effectiveness of crossings.

Not addressing comments on gene flow minimizes the role of the TMC and its identified function as the primary wildlife corridor of the Tucson Mountains which is accomplished through maintaining and promoting normal gene flow while avoiding genetic isolation of populations. The role of the BOR as the owner or administrator of the TMC, and thus the Section 4(f) official with jurisdiction, is to inform FHWA of the significance and function of the Section 4(f) property which is the TMC (23 CFR 774.11). In Section 4(f) regulations at 23 CFR 774.11 it states that “The determination of which lands so function or are so designated, and the significance of those lands, shall be made by the official(s) with jurisdiction over the Section 4(f) resource”. The importance of that requirement is to accurately and fully document the significance of the Section 4(f) property, which requires understanding and documenting its “function and value” (FHWA, 2012) (BOR, 1983; FWS, 1984; BOR, 1985; and, BOR, 2020). The “attributes” of a Section 4(f) property must be understood if FHWA is to properly evaluate it and compare it to other Section 4(f) properties for an Individual Section 4(f) Evaluation (FHWA,

2012). Part of the evaluation and process is “minimizing harm” and developing “comparable mitigation measures” while also “avoiding under-mitigating” another alternative (FHWA, 2012).

Given the impacts of highways on wildlife, this would result in the construction of a second linear barrier and the BOR believes that development of an I-11 corridor would contradict the initial purpose of the TMC and result in adverse effects on wildlife in the Tucson Mountains, potentially contributing to extirpation of species from Saguaro NP. Species within Saguaro NP that are particularly vulnerable to extirpation due to isolation include kit foxes, badgers, antelope jackrabbit, sidewinders, desert iguanas, and a number of smaller animals (Swann et al., 2018). If these small populations “blink out” due to stochastic processes, they may never be replaced if animals do not move back into the area and become established.

National Park Service Comments

The NPS has management responsibility for Saguaro National Park (NP) and the federally designated Saguaro Wilderness. As reflected in NPS’ comments on the Administrative FEIS, the Preferred Alternative – West Option has the potential to significantly impact multiple resources under NPS management. The Preferred Alternative - West Option will occur 0.3 miles from Saguaro NP and 0.6 miles from the federally designated Saguaro Wilderness, and has the potential to threaten the natural, cultural, and recreational experiences these areas provide the public. The NPS looks forward to the opportunity to gain a better understanding of the connectivity between the I-11 corridor and the separate Sonoran Corridor project proposed by FHWA. By analyzing the potential for increased traffic, utilities, and multimodal uses through the Affected Environment in the I-11 Tier 2 NEPA document, the NPS may better understand how that will impact NPS resources near Saguaro NP.

Preliminary Section 4(f) Evaluation

The NPS believes that the proximity of the western Preferred Alternative to Saguaro NP (0.3 mi) and the federally designated Saguaro Wilderness (0.6 mi) would meet the Section 4(f) definition of a Constructive Use by causing substantial impairment to the core purposes for which these areas were protected by Congress. The NPS disagrees with FHWA’s classification of Saguaro NP as a *recreation area* and to not apply the *Ecological Intrusion* criterion to Saguaro NP and Saguaro Wilderness. Per 23 CFR 774.11(d), “the determination of which lands so function or are so designated, and the significance of those lands, shall be made by the official(s) with jurisdiction over the Section 4(f) resource.” As the official with jurisdiction, NPS believes the Section 4(f) evaluation does not identify all the current activities, features, and attributes that may be sensitive to proximal project impacts and which qualify Saguaro NP for protection under Section 4(f).

The ADOT does not address this concern, stating in the Constructive Use analysis that: *Saguaro National Park is managed as a public park and for natural resource preservation; it is not a wildlife or waterfowl refuge. For this reason, this criterion [Ecological Intrusion] does not apply to Saguaro National Park.* However, at a distance of 200 feet from the Tucson Mountain

Park Historic District which is partially within Saguaro NP, the Preferred Alternative – West Option could result in an adverse effect to historic properties. The summary paragraph for the National Register nomination form (provided to FHWA/ADOT on February 17, 2021) states that “*The creation of the [Tucson Mountain] park was seen as a way to preserve a large tract of undeveloped wilderness just outside the city.*” The Preferred Alternative – West Option (including interstate, rail, and utility corridor) could negatively impact and diminish historically significant attributes of the district, including the cultural and environmental context in which many of the historic sites and visitor use areas promote public appreciation and conservation of the distinctive natural landscape.

As outlined in 23 CFR 774.15, all reasonably foreseeable indirect impacts to visitor use and the cultural and natural resources that contribute to the site’s significance should be considered for both Saguaro NP and the Tucson Mountain Historic District in the Final Section 4(f) Evaluation. The NPS noted that FEIS Table 4-6 *Summary of Comments from Officials with Jurisdiction over Section 4(f) Properties* does not include recent correspondence from the Department regarding the administrative FEIS (February 10, 2021) and the Section 4(f) review (February 26, 2021). Please update the table to include all relevant 2021 correspondence regarding jurisdiction over Section 4(f) properties. Should this project advance to a Tier 2 phase, Saguaro NP looks forward to formally working with FHWA/ADOT to comprehensively analyze the impacts on resources within our jurisdiction which qualify for protections under Section 4(f) and the associated impacts to our diverse user groups.

Fish and Wildlife Service Comments

The FWS reviewed all previous drafts of the EIS, identified several concerns and provided thorough comments. They are part of the FHWA administrative record for the I-11 project. In several instances, specific FWS’s concerns were stated, and the FWHA’s response was "No response needed." The FWS feels that those responses do not adequately address its concerns. The FWS requests that its concerns be reconsidered and adequately addressed in the FEIS.

Thank you for the opportunity to provide comments and your continued attention to important resources. If you have any questions related to the BOR specific comments, please contact Mr. Sean Heath at 623-773-6250 or via email sheath@usbr.gov. For questions regarding NPS comments, please contact Leah McGinnis, Superintendent (520-733-5101 or

leah_mcginis@nps.gov) or Jeff Conn, Chief of Science and Resource Management (520-286-7743 or jeffery_conn@nps.gov). To discuss FWS comments please contact Bob Lehman at 602-242-0210 or via email robert_lehman@fws.gov.

Sincerely,

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