



Final Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation

Appendix F, Section 4(f) Evaluation Supporting Documents

July 2021



Federal Aid No. 999-M(161)S
ADOT Project No. 999 SW 0 M5180 01P



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1 FHWA and ADOT coordinated with the public as required by the Section 4(f) regulations (23
2 CFR 774.5(2)). Public coordination activities for Section 4(f) were combined with the public
3 involvement activities undertaken for the EIS process, documented in Final Tier 1 EIS
4 **Chapter 5** (Coordination and Outreach) and in Final Tier 1 EIS **Appendix H** (Comments on
5 Draft Tier 1 EIS and Responses). Key themes among the public comments relevant to Section
6 4(f) were concerns regarding the potential for I-11 Corridor project impacts to Vulture
7 Mountains, Saguaro National Park, other protected properties in the Avra Valley region, and
8 historic properties in the City of Tucson.

9 Early coordination with the Bureau of Reclamation and Tucson Mitigation Corridor management
10 partners included discussions pertaining to the application of Section 4(f) on the Tucson
11 Mitigation Corridor as well as the consideration of applying the Programmatic Net Benefit
12 approach for the Tucson Mitigation Corridor. After publication of the Draft Tier 1 EIS, and after
13 consideration of public and agency comments on the Draft Tier 1 EIS, FHWA determined that a
14 net benefit determination would no longer be pursued.

15 This appendix contains the following supporting documents for the Section 4(f) evaluation.

16 **APPENDIX F1: APPLICABILITY OF IDENTIFIED WILDLIFE AREAS AS SECTION 4(F)**
17 **PROPERTIES FOR THE I-11 TIER 1 EIS**

18 **APPENDIX F2: SECTION 4(F) CONSTRUCTIVE USE WHITE PAPERS**

19 **White Paper Regarding Potential Section 4(f) Constructive Use**
20 **Impacts, Ironwood Forest National Monument, Tucson Mitigation**
21 **Corridor, Saguaro National Park, and Tucson Mountain Park, July**
22 **2021**

23 **White Paper Regarding Potential Section 4(f) Constructive Use**
24 **Impacts, Public Land Order (PLO) 1015 Lands and Adjacent AGFD**
25 **Parcels, July 2021**

26 **APPENDIX F3: CORRESPONDENCE RELATED TO PRELIMINARY SECTION 4(F)**
27 **EVALUATION**

28 **General**



- 1 **Pre-Scoping Meeting Summary (All Agencies), April 29, 2016**
- 2 **Cooperating Agency Coordination Meeting #1 Notes, November 3, 2016**
- 3 **I-11 ASR and Tier I EIS Meeting Summary, February 24, 2017**
- 4 **Agency Coordination Meeting #4 – Avondale Meeting Notes, May 16, 2017**
- 5 **Tier I EIS Cooperating Agency Meeting, August 2, 2017**
- 6 **Letter to Cooperating and Participating Agencies, October 4, 2017**
- 7 **Federal Agencies**



- 1 **National Park Service**
- 2 **Letter from National Park Service, March 14, 2016**
- 3 **Pre-Scoping Meeting with National Park Service, April 8, 2016**
- 4 **Letter from National Park Service, June 15, 2016**
- 5 **Letter from National Park Service, July 11, 2016**
- 6 **Letter from National Park Service, dated November 3, 2016**
- 7 **Letter from National Park Service, received December 16, 2016**
- 8 **Letter from National Park Service, March 17, 2017**
- 9 **Letter from National Park Service, June 2, 2017**
- 10 **Letter from National Park Service, August 31, 2017**
- 11 **Letter from National Park Service, November 3, 2017**
- 12 **ADOT I-11 Coordination Meeting with Saguaro National Park, December 19, 2017**
- 13 **Letter from National Park Service, August 6, 2018**
- 14 **Letter from Department of the Interior with National Park Service DEIS Comments, July 8,**
15 **2019**
- 16 **Department of the Interior**
- 17 **Letter from Department of the Interior with DEIS Comments, July 8, 2019**
- 18 **Bureau of Land Management**
- 19 **Pre-Scoping Meeting with Bureau of Land Management, April 13, 2016**
- 20 **Letter from Bureau of Land Management, July 13, 2016**
- 21 **Letter from Bureau of Land Management, February 24, 2017**
- 22 **Letter from Bureau of Land Management, May 12, 2017**
- 23 **Letter to Bureau of Land Management, Signed Concurrence, April 30, 2018**
- 24 **Email from Bureau of Land Management, September 7, 2018**
- 25 **Letter from Department of the Interior with Bureau of Land Management DEIS Comments,**
26 **July 8, 2019**
- 27 **Email from Bureau of Land Management, October 11, 2019**



- 1 **Bureau of Reclamation**
- 2 **Cooperating Agency Meeting Notes, April 20, 2016**
- 3 **Letter from Bureau of Reclamation, July 8, 2016**
- 4 **Letter from Bureau of Reclamation, Cooperating Agency Acceptance, July 8, 2016**
- 5 **Cooperating Agency Meeting Notes, November 3, 2016**
- 6 **Letter from Bureau of Reclamation, ASR Report, March 16, 2017**
- 7 **BOR-FHWA-ADOT Agency Leadership Meeting Notes, September 18, 2017**
- 8 **Bureau of Reclamation, TMC Meeting Notes, March 5, 2018**
- 9 **Bureau of Reclamation, TMC Meeting Notes, March 26, 2018**
- 10 **Letter from Bureau of Reclamation, June 8, 2018**
- 11 **Bureau of Reclamation, TMC Coordination Meeting Summary, October 18, 2018**
- 12 **Letter from Department of the Interior with Bureau of Reclamation DEIS Comments, July**
13 **8, 2019**
- 14 **Email from Bureau of Reclamation, January 2, 2020**
- 15 **US Fish and Wildlife Service**
- 16 **I-11 PLO Lands Discussion with USFWS, Meeting Notes, December 3, 2018**
- 17 **I-11 PLO Lands Discussion with USFWS, Meeting Agenda, February 12, 2019**
- 18 **Letter from Department of the Interior with USFWS DEIS Comments, July 8, 2019**
- 19 **Letter from Department of the Interior with USFWS DEIS Comments, August 30, 2019**
- 20 **US Forest Service**
- 21 **Letter from US Forest Service with CNF DEIS Comments, July 1, 2019**
- 22 **State Agencies**



- 1 **Arizona Game and Fish Department**
- 2 **Email from Arizona Game and Fish Department, July 8, 2016**
- 3 **Letter from Arizona Game and Fish Department, February 1, 2017**
- 4 **Letter from Arizona Game and Fish Department, February 1, 2017**
- 5 **Meeting with Arizona Game and Fish Department to discuss GIS data provided for I-11,**
- 6 **March 7, 2017**
- 7 **Letter from Arizona Game and Fish Department, June 1, 2017**
- 8 **Letter from Arizona Game and Fish Department, August 6, 2018**
- 9 **Letter from Arizona Game and Fish Department, July 8, 2019**
- 10 **Arizona State Historic Preservation Office**
- 11 **Pre-Scoping Meeting with State Historic Preservation Office, Meeting Notes, April 27,**
- 12 **2016**
- 13 **Letter from State Historic Preservation Office, June 7, 2016**
- 14 **I-11 Cultural Resources Update Meeting Notes, September 14, 2016**
- 15 **I-11 Cultural Resources Update Meeting Notes, April 16, 2018**
- 16 **FHWA, ADOT, and SHPO I-11 Coordination Meeting Notes, November 7, 2018**
- 17 **Letter to State Historic Preservation Office, Arizona State Parks, Concurrence Received**
- 18 **November 23, 2018**
- 19 **Letter to State Historic Preservation Office, Arizona State Parks, Concurrence Received**
- 20 **December 19, 2018**
- 21 **Arizona State Land Department**
- 22 **Pre-Scoping Meeting with Arizona State Land Department, April 14, 2016**
- 23 **Letter from Arizona State Land Department, July 8, 2019**
- 24 **Coordination Meeting with Arizona State Land Department, January 27, 2020**
- 25 **Arizona State Parks**
- 26 **Email from Arizona State Parks, July 8, 2016**
- 27 **Letter to Arizona State Parks regarding Picacho Peak State Park, October 8, 2020**



- 1 Email from Arizona State Parks regarding Picacho Peak State Park, November 6, 2020
- 2 **Tribes**
- 3 **Tohono O’odham Nation**
- 4 Resolution Letter from Tohono O’odham Nation, February 11, 2017
- 5 **County Agencies**
- 6 **Maricopa County**
- 7 Pre-Scoping Meeting with Maricopa County, Agenda, April 6, 2016
- 8 Letter from Maricopa County, July 7, 2016
- 9 Letter to Maricopa County, October 8, 2020
- 10 Email from Maricopa County, October 14, 2020
- 11 **Pima County**
- 12 Consultation with Pima County, Meeting Notes, December 3, 2017
- 13 Letter from Pima County, July 8, 2019
- 14 Meeting with Pima County, Meeting Notes, October 29, 2019
- 15 Letter from Pima County, December 6, 2019
- 16 **Pinal County**
- 17 Letter from Pinal County, May 31, 2017
- 18 **Municipal**



- 1 **City of Tucson**
- 2 **Letter from City of Tucson, July 8, 2016**
- 3 **Section 106 Consulting Parties Acceptance Form, City of Tucson Historic Preservation**
- 4 **Office, August 19, 2016**
- 5 **Letter from City of Tucson, March 17, 2017**
- 6 **Letter from City of Tucson, November 16, 2017**
- 7 **Letter from City of Tucson, DEIS Comments, July 1, 2019**
- 8 **City of Tucson Meeting Notes, October 29, 2019**
- 9 **Town of Marana**
- 10 **Letter from Town of Marana, DEIS Comments, July 8, 2019**
- 11 **Letter to Town of Marana, October 8, 2020**
- 12 **Letter from Town of Marana, November 9, 2020**
- 13 **Town of Sahuarita**
- 14 **Letter to Town of Sahuarita, October 8, 2020**
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**Appendix F1: Applicability of Identified Wildlife Areas as Section 4(f)
Properties for the I-11 Tier 1 EIS**



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MEMORANDUM

TO: Aryan Lirange (FHWA), Rebecca Yedlin (FHWA)

FROM: Katie Rodriguez (ADOT), Jay Van Echo (ADOT)

DATE: October 31, 2018

RE: Applicability of Identified Wildlife Areas as Section 4(f) Properties for the I-11 Tier 1 EIS

During the I-11 Administrative Tier 1 DEIS Review, questions regarding the applicability of various wildlife parcels within the I-11 study area as Section 4(f) properties were discussed. ADOT was asked to review the applicability of these parcels under the Section 4(f) policy and provide recommendations to FHWA for their consideration based on available information. As a result of ADOT's review of the available documentation, ADOT has the following recommendations for FHWA:

- The following properties should be retained at this time as Section 4(f) wildlife refuges properties based on the following information available at this time:
 - **Arlington State Wildlife Area, Robbins Butte Wildlife Area, and Powers Butte Wildlife Area:**
These parcels and identified associated areas are owned and/or managed by the Arizona Game and Fish Department (AZGFD). According to the publicly available information and scoping information that the I-11 study team has at this time, the management objectives for these wildlife areas stated by AZGFD include “maintaining habitat, nesting areas, and food crops for waterfowl, doves, endangered species such as Yuma clapper rails and the Western yellow-billed cuckoo, special status species, and other wildlife.” The secondary management emphasis for these properties is to provide compatible hunting, wildlife viewing, and other wildlife oriented recreational opportunities. In previous correspondence with AZGFD for the I-11 Tier 1 EIS agency and public scoping period, it was noted by AZGFD that “the various wildlife areas represent significant conservation values to the local community.” Because the available information at this time suggests that the wildlife area serves a primary purpose for conservation and management of wildlife resources, is regarded significant for its conservation values by AZGFD, is publicly owned, and is open to the public, ADOT’s recommendation at this time is that FHWA recognize these properties as a Section 4(f) resources.

- The following properties should not be considered Section 4(f) properties based on the following information available at this time:
 - **Santa Rita Experimental Range and Wildlife Area** – This parcel is owned and managed by the University of Arizona (School of Agriculture). According to the available information that the study team has at this time, the primary purpose of this property is for research regarding livestock production on native rangeland to “further the restoration, protection, and

management of rangelands in the arid southwest.” Because the primary purpose of the property is for research purposes and not associated with a significant and primary recreational, historical, or wildlife refuge purpose, ADOT’s recommendation at this time is that FHWA should not recognize this property as a Section 4(f) resource.



Appendix F2: Section 4(f) Constructive Use White Papers



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White Paper Regarding Potential Section 4(f) Constructive Use Impacts, Ironwood Forest National Monument, Tucson Mitigation Corridor, Saguaro National Park, and Tucson Mountain Park, July 2021



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1 **White Paper Regarding Potential Section 4(f) Constructive Use Impacts**

2 **Ironwood Forest National Monument, Tucson Mitigation Corridor, Saguaro National Park,**
3 **and Tucson Mountain Park**

4 **Purpose of White Paper**

5 The purpose of this paper is to respond to a specific comment from the Bureau of Reclamation
6 (Reclamation) on the Interstate 11 (I-11) project. Reclamation reviewed and commented on the
7 I-11 Tier 1 Administrative Draft Environmental Impact Statement (ADEIS) dated July 2018.
8 Reclamation’s comment number 17 references four properties and requests analysis on
9 potential Section 4(f) constructive use. 23 Code of Federal Regulations (CFR) 774.15 (c) states
10 that “The Administration shall determine when there is a constructive use, but the Administration
11 is not required to document each determination that a project would not result in a constructive
12 use of a nearby Section 4(f) property. However, such documentation may be prepared at the
13 discretion of the Administration.” The four properties are:

- 14 • Ironwood Forest National Monument
- 15 • Tucson Mitigation Corridor
- 16 • Saguaro National Park
- 17 • Tucson Mountain Park

18 The Federal Highway Administration (FHWA) is evaluating Section 4(f) applicability and
19 constructive use for the four properties mentioned in Reclamation’s comment. FHWA is not
20 proposing to make constructive use determinations on any other Section 4(f) properties in the
21 I-11 study area at this time.

22 **Regulatory Context and Practice**

23 The regulations of Section 4(f) define a constructive use as occurring when a transportation
24 project “does not incorporate land from a Section 4(f) property, but the project’s proximity
25 impacts are so severe that the protected activities, features, or attributes that qualify the
26 property for protection under Section 4(f) are substantially impaired” (23 CFR 774.15(a)).

27 Key criteria in this definition are:

- 28 • There can be no incorporation of land and also have a constructive use.
- 29 • The proximity impacts are so severe to cause substantial impairment of the protected
30 activities, features, or attributes.

31 While 23 CFR 774 provides for a constructive use finding, the application of a constructive use
32 finding is an extremely rare occurrence in practice. The subjectivity of the regulatory language
33 can make proving or denying the case for a constructive use difficult.



White Paper Regarding Potential Section 4(f) Constructive Use Impacts *Ironwood Forest National Monument, Tucson Mitigation Corridor, Saguaro National Park, and Tucson Mountain Park*

1 23 CFR 774.15 (d) states, “When a constructive use determination is made, it will be based
2 upon the following:

3 (1) Identification of the current activities, features, or attributes of the property which
4 qualify for protection under Section 4(f) and which may be sensitive to proximity impacts;

5 (2) An analysis of the proximity impacts of the proposed project on the Section 4(f)
6 property. If any of the proximity impacts will be mitigated, only the net impact need be
7 considered in this analysis. The analysis should also describe and consider the impacts
8 which could reasonably be expected if the proposed project were not implemented,
9 since such impacts should not be attributed to the proposed project; and

10 (3) Consultation, on the foregoing identification and analysis, with the official(s) with
11 jurisdiction over the Section 4(f) property.”

12 **Applicability of Section 4(f) to Properties**

13 **Ironwood Forest National Monument**

14 The Ironwood Forest National Monument (IFNM) is not protected by Section 4(f). While publicly
15 owned by the Bureau of Land Management (BLM), the property does not function as, nor is it
16 designated within its management plan as, “a significant park, recreation area, or wildlife and
17 waterfowl refuge” as defined in 23 CFR 774.11(g).

18 The BLM website states that the monument is comprised of:

- 19 • 128,400 acres of public land administered by the BLM
- 20 • 54,700 acres of land administered by the Arizona State Land Department
- 21 • Approximately 6,000 acres of privately owned land

22 Private land in a park, recreation area, or wildlife/waterfowl refuge is not protected by Section
23 4(f) and the Arizona State Land Department has no official publicly adopted designation for the
24 land within the monument.

25 The February 2013 *Ironwood Forest National Monument, Record of Decision and Approved*
26 *Resource Management Plan* for the BLM land states that:

27 “The IFNM was designated to protect objects of scientific interest within the Monument,
28 including the drought-adapted vegetation of the Sonoran Desert, geological resources
29 such as Ragged Top Mountain, and abundant archaeological resources. The purpose of
30 the IFNM is to preserve, protect, and manage the biological, cultural and geological
31 resources, and other objects of this area for future generations, and to further our
32 knowledge and understanding of these resources through scientific research and
33 interpretation.”



1 Tucson Mitigation Corridor

2 The Tucson Mitigation Corridor is owned and managed by Reclamation in cooperation with the
3 United States Fish and Wildlife Service, Arizona Game and Fish Department, and Pima County
4 for the purpose of restoring and conserving wildlife populations and movements across the Avra
5 Valley between other protected lands. The Tucson Mitigation Corridor land was acquired and
6 designated for this purpose as a mitigation commitment and, therefore, achieves the Section
7 4(f) definition as a significant wildlife refuge property.

8 Saguaro National Park

9 The National Park Service (NPS) owns and manages Saguaro National Park, a property that is
10 significant for historic and natural resource preservation and public recreation. Specifically,
11 NPS's mission is to "preserve unimpaired the natural and cultural resources and values of the
12 NPS for the enjoyment, education and inspiration of current and future generations of people."
13 On the webpage for Saguaro National Park, the general mission statement is repeated. As
14 such, Saguaro National Park is protected by Section 4(f) as a park and a recreation resource.

15 Tucson Mountain Park

16 Pima County Natural Resources, Parks and Recreation Department owns and manages Tucson
17 Mountain Park to conserve the resources on the property and to provide for public recreation.
18 Their website identifies human-related activities and features for Tucson Mountain Park, such
19 as picnicking, hiking, wildlife viewing, and hunting. The May 2018 *Tucson Mountain Park*
20 *Management Plan* states that the management objective is:

21 "...providing the public with developed facilities that accommodate a range of uses and
22 activities that are appropriate for the park's natural resource setting, that are safe, and
23 that can be conducted without degradation of the park's biological, cultural, visual, or
24 physical resources."

25 As such, Tucson Mountain Park is protected by Section 4(f) as a park and a recreation
26 resource.

27 Applicability of Section 4(f) Constructive Use

28 Based on the foregoing descriptions of Section 4(f) applicability, three of the four properties are
29 protected by Section 4(f): Tucson Mitigation Corridor, Saguaro National Park, and Tucson
30 Mountain Park. To determine whether constructive use can apply to each property, the
31 conditions under which a constructive use may be considered were applied:

- 32 • There can be no incorporation of land and also have a constructive use.
- 33 • The proximity impacts are so severe to cause substantial impairment of the protected
34 activities, features, or attributes.



White Paper Regarding Potential Section 4(f) Constructive Use Impacts Ironwood Forest National Monument, Tucson Mitigation Corridor, Saguaro National Park, and Tucson Mountain Park

1 In considering the applicability of the first bullet, the Recommended, Preferred Alternative with
2 west option in Pima County, Purple Alternative (Option C), and Green Alternative (Option D)
3 have the potential to incorporate land from the Tucson Mitigation Corridor as described in
4 Chapter 4 of the Final Tier 1 EIS. Each of the alternatives include the Central Arizona Project
5 (CAP) Design Option. Because constructive use cannot be applied to a property where
6 incorporation of land would occur, constructive use cannot be considered for the Tucson
7 Mitigation Corridor.

8 The Preferred Alternative with east option in Pima County and Orange Alternative (Option B)
9 are east of the three protected properties described above and would be co-located with
10 existing I-10. Because the Preferred Alternative with east option and Orange Alternative fall
11 within the urban Tucson area on an existing interstate, each was not evaluated for proximity
12 impacts or constructive use related to the Tucson Mitigation Corridor, Saguaro National Park,
13 and Tucson Mountain Park.

14 None of the Build Corridor Alternatives would incorporate land from Saguaro National Park or
15 Tucson Mountain Park. However, the Recommended, Preferred Alternative with west option,
16 Purple, and Green Build Corridor Alternatives would be close to these parks.

17 Therefore, this white paper evaluates the Recommended, Preferred Alternative with west
18 option, Purple, and Green Build Corridor Alternatives for potential constructive use of Saguaro
19 National Park and Tucson Mountain Park. Table 1 summarizes the findings of this initial test of
20 constructive use applicability. The test of proximity impacts is described later in this white paper.

21 **Table 1. Applicability of Constructive Use**

Property Name	Protected by Section 4(f)?	Incorporation of Land?	Potential Constructive Use Candidate?
Ironwood Forest National Monument	No	No	No
Tucson Mitigation Corridor	Yes	Yes	No
Saguaro National Park	Yes	No	Yes
Tucson Mountain Park	Yes	No	Yes

22 **Regulatory Context for Constructive Use**

23 An evaluation of the potential for the Build Corridor Alternatives to cause a constructive use of
24 Saguaro National Park and the Tucson Mountain Park was undertaken according to the
25 requirements of 23 CFR 774.15.

26 “(a) A constructive use occurs when the transportation project does not incorporate land
27 from a Section 4(f) property, but the project's proximity impacts are so severe that the
28 protected activities, features, or attributes that qualify the property for protection under
29 Section 4(f) are substantially impaired. Substantial impairment occurs only when the
30 protected activities, features, or attributes of the property are substantially diminished.”



**White Paper Regarding Potential Section 4(f) Constructive Use Impacts
Ironwood Forest National Monument, Tucson Mitigation Corridor,
Saguaro National Park, and Tucson Mountain Park**

1 Substantial impairment is a high threshold; an impact does not rise to the level of being so
2 severe unless specific criteria are achieved. FHWA has determined that a constructive use
3 occurs when (23 CFR 774.15(e)):

4 “(1) The projected noise level increase attributable to the project substantially interferes
5 with the use and enjoyment of a noise-sensitive facility of a property protected by
6 Section 4(f), such as:

7 (i) Hearing the performances at an outdoor amphitheater;

8 (ii) Sleeping in the sleeping area of a campground;

9 (iii) Enjoyment of a historic site where a quiet setting is a generally recognized
10 feature or attribute of the site's significance;

11 (iv) Enjoyment of an urban park where serenity and quiet are significant
12 attributes; or

13 (v) Viewing wildlife in an area of a wildlife and waterfowl refuge intended for such
14 viewing.

15 (2) The proximity of the proposed project substantially impairs esthetic features or
16 attributes of a property protected by Section 4(f), where such features or attributes are
17 considered important contributing elements to the value of the property. Examples of
18 substantial impairment to visual or esthetic qualities would be the location of a proposed
19 transportation facility in such proximity that it obstructs or eliminates the primary views of
20 an architecturally significant historical building, or substantially detracts from the setting
21 of a Section 4(f) property which derives its value in substantial part due to its setting;

22 (3) The project results in a restriction of access which substantially diminishes the utility
23 of a significant publicly owned park, recreation area, or a historic site;

24 (4) The vibration impact from construction or operation of the project substantially
25 impairs the use of a Section 4(f) property, such as projected vibration levels that are
26 great enough to physically damage a historic building or substantially diminish the utility
27 of the building, unless the damage is repaired and fully restored consistent with the
28 Secretary of the Interior's Standards for the Treatment of Historic Properties, i.e., the
29 integrity of the contributing features must be returned to a condition which is
30 substantially similar to that which existed prior to the project;

31 (5) The ecological intrusion of the project substantially diminishes the value of wildlife
32 habitat in a wildlife and waterfowl refuge adjacent to the project, substantially interferes
33 with the access to a wildlife and waterfowl refuge when such access is necessary for
34 established wildlife migration or critical life cycle processes, or substantially reduces the
35 wildlife use of a wildlife and waterfowl refuge.”



**White Paper Regarding Potential Section 4(f) Constructive Use Impacts
Ironwood Forest National Monument, Tucson Mitigation Corridor,
Saguaro National Park, and Tucson Mountain Park**

- 1 FHWA has determined that a constructive use does not occur when (23 CFR 774.15(f)):
- 2 “(1) Compliance with the requirements of 36 CFR 800.5 for proximity impacts of the
3 proposed action, on a site listed on or eligible for the National Register, results in an
4 agreement of ‘no historic properties affected’ or ‘no adverse effect;’
- 5 (2) The impact of projected traffic noise levels of the proposed highway project on a
6 noise-sensitive activity do not exceed the FHWA noise abatement criteria as contained
7 in Table 1 in part 772 of this chapter, or the projected operational noise levels of the
8 proposed transit project do not exceed the noise impact criteria for a Section 4(f) activity
9 in the FTA guidelines for transit noise and vibration impact assessment;
- 10 (3) The projected noise levels exceed the relevant threshold in paragraph (f)(2) of this
11 section because of high existing noise, but the increase in the projected noise levels if
12 the proposed project is constructed, when compared with the projected noise levels if
13 the project is not built, is barely perceptible (3 dBA or less);
- 14 (4) There are proximity impacts to a Section 4(f) property, but a governmental agency's
15 right-of-way acquisition or adoption of project location, or the Administration's approval of
16 a final environmental document, established the location for the proposed transportation
17 project before the designation, establishment, or change in the significance of the
18 property. However, if it is reasonably foreseeable that a property would qualify as eligible
19 for the National Register prior to the start of construction, then the property should be
20 treated as a historic site for the purposes of this section;
- 21 (5) Overall (combined) proximity impacts caused by a proposed project do not
22 substantially impair the activities, features, or attributes that qualify a property for
23 protection under Section 4(f);
- 24 (6) Proximity impacts will be mitigated to a condition equivalent to, or better than, that
25 which would occur if the project were not built, as determined after consultation with the
26 official(s) with jurisdiction;
- 27 (7) Change in accessibility will not substantially diminish the utilization of the Section 4(f)
28 property;
- 29 (8) Vibration levels from project construction activities are mitigated, through advance
30 planning and monitoring of the activities, to levels that do not cause a substantial
31 impairment of protected activities, features, or attributes of the Section 4(f) property.”



1 **Assessment of Constructive Use for Saguaro National Park**

2 **Noise**

3 A constructive use occurs when:

4 “(1) The projected noise level increase attributable to the project substantially interferes
5 with the use and enjoyment of a noise-sensitive facility of a property protected by
6 Section 4(f), such as:

7 (i) Hearing the performances at an outdoor amphitheater;

8 (ii) Sleeping in the sleeping area of a campground;

9 (iii) Enjoyment of a historic site where a quiet setting is a generally recognized
10 feature or attribute of the site's significance;

11 (iv) Enjoyment of an urban park where serenity and quiet are significant
12 attributes; or

13 (v) Viewing wildlife in an area of a wildlife and waterfowl refuge intended for such
14 viewing.”

15 A constructive use does not occur when:

16 “The impact of projected traffic noise levels of the proposed highway project on a noise-
17 sensitive activity do not exceed the FHWA noise abatement criteria as contained in
18 Table 1 in part 772 of this chapter, or the projected operational noise levels of the
19 proposed transit project do not exceed the noise impact criteria for a Section 4(f) activity
20 in the FTA guidelines for transit noise and vibration impact assessment.”

21



**White Paper Regarding Potential Section 4(f) Constructive Use Impacts
Ironwood Forest National Monument, Tucson Mitigation Corridor,
Saguaro National Park, and Tucson Mountain Park**

Table 1 to Part 772—Noise Abatement Criteria

[Hourly A-Weighted Sound Level_decibels (dB(A))¹]

Activity category	Activity Leq(h)	Criteria ² L10(h)	Evaluation location	Activity description
A	57	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ³	67	70	Exterior	Residential.
C ³	67	70	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	55	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E ³	72	75	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F				Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G				Undeveloped lands that are not permitted.

¹Either Leq(h) or L10(h) (but not both) may be used on a project.

²The Leq(h) and L10(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.

³Includes undeveloped lands permitted for this activity category.

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2 Noise levels at specific distances from the Build Corridor Alternatives and at parks and
3 recreation areas were predicted using the FHWA's Traffic Noise Model 2.5. The methodology
4 for this Tier 1 serves as a screening-level tool to assess the potential for Project noise impacts.
5 Model inputs included traffic volumes and source-receiver distances. The modeling results were
6 then compared to the applicable FHWA Noise Abatement Criteria (NAC) in Table 1. The
7 criterion applicable to Saguaro National Park is Category C.

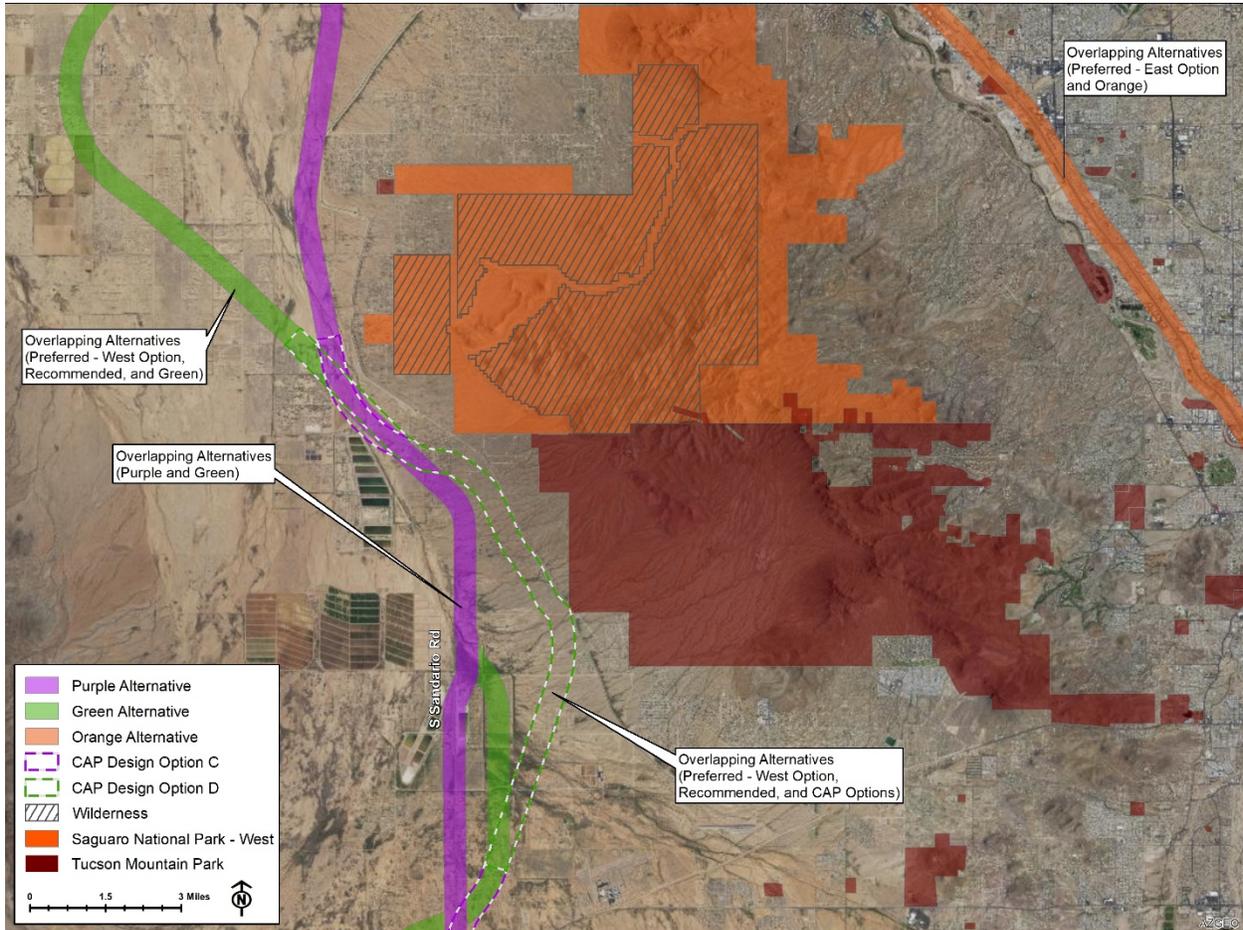
8 The Final Tier 1 EIS reports that the predicted noise level under the Purple Alternative would be
9 50 dBA at a distance of 1,000 feet. Predicted noise levels for the Purple Alternative are higher
10 than the predicted noise levels for the Recommended Alternative, Preferred Alternative with
11 west option, and Green Alternative because the Purple Alternative would attract higher traffic
12 volumes than those alternatives. All the Build Corridor Alternatives are at least 1,500 feet away
13 from Saguaro National Park at their closest point. Therefore, I-11 noise levels at Saguaro



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- 1 National Park would be less than 50 dBA for any alternative. Although I-11 may increase noise
- 2 levels over existing conditions, the predicted noise levels under each Build Corridor Alternative
- 3 would not exceed the 67 dBA NAC for Activity Category C. Therefore, no constructive use
- 4 would occur due to noise.

- 5 The category for which wilderness would qualify was not evaluated. However, even if the
- 6 wilderness within Saguaro National Park fell under Category A, the predicted noise levels would
- 7 not exceed the threshold (57 dBA). Wilderness is shown on Figure 1.



8
9 **Figure 1. Saguaro National Park, Tucson Mountain Park, and Wilderness with the**
10 **Recommended, Preferred Alternative with West Option, Purple, or Green Build**
11 **Corridor Alternatives**

12 Additional information on the noise assessment and modeling methodology is included in Draft
13 Tier 1 EIS Section 3.8 and Appendix E8 (I-11 Traffic Noise Technical Report), as well as Final
14 Tier 1 EIS Section 3.8 and Appendix E8 (I-11 Traffic Noise Technical Report Addendum).
15 During Tier 2 studies, ADOT would undertake a more detailed noise analysis that examines a
16 specific 400-foot-wide roadway alignment within the 2,000-foot wide Build Corridor and
17 considers additional factors such as terrain. The topography in the vicinity of Saguaro National
18 Park is mountainous and would likely affect sound attenuation across these distances. If the



1 selected alignment falls on the west side of a Build Corridor, the edge of I-11 right-of-way could
2 be over 3,000 feet from the western boundary of Saguaro National Park.

3 **Esthetic Features**

4 A constructive use occurs when:

5 “(2) The proximity of the proposed project substantially impairs esthetic features or
6 attributes of a property protected by Section 4(f), where such features or attributes are
7 considered important contributing elements to the value of the property. Examples of
8 substantial impairment to visual or esthetic qualities would be the location of a proposed
9 transportation facility in such proximity that it obstructs or eliminates the primary views of
10 an architecturally significant historical building, or substantially detracts from the setting
11 of a Section 4(f) property which derives its value in substantial part due to its setting;”

12 The esthetic features of Saguaro National Park are the viewsheds of and from the park as well
13 as the night sky views within the park. The potential for the Project to impact each of these
14 features is described below.

15 **Viewshed:** The existing viewshed from the park where the Recommended, Preferred
16 Alternative with west option, Purple, or Green Build Corridor Alternatives would be located
17 includes existing residential developments, farms, the CAP canal structures, and the Central
18 Area Valley Storage and Recovery Project and Southern Area Valley Storage and Recovery
19 Project recharge basins. Each Build Corridor Alternative would be a new element in the middle
20 ground of this viewshed from the park. In the context of the other manmade elements in the
21 viewshed, the visual change caused by a Build Corridor Alternative would not be so severe as
22 to substantially impair or diminish the public park, natural, and preservation attributes that
23 qualify Saguaro National Park for protection by Section 4(f).

24 **Night Skies:** FHWA and ADOT have committed to mitigate impacts on night skies by complying
25 with dark skies ordinances and by limiting lighting to be consistent with land use and
26 development patterns at the time of Project implementation.

27 **Mitigation:** The Final Tier 1 EIS identifies general mitigation strategies as part of the Project
28 that will help FHWA and ADOT avoid, minimize, or compensate for adverse visual impacts at
29 viewpoints from the park. These strategies involve landscape planning in visually sensitive
30 areas, grading designs for more natural looking slopes, surfaces, and transitions, blending of
31 stormwater managements structures with the existing landscape, enhancement of highly visible
32 features such as noise barriers and other hardscape elements, lighting design strategies, and
33 other considerations (ADEIS Section 3.9.5). Tier 2 analysis will include further visual impact
34 assessment and coordination with NPS regarding the potential visual impacts to Saguaro
35 National Park.

36 **Conclusion:** The foregoing esthetic effects assessment indicates that the proximity of the
37 Recommended, Preferred Alternative with west option, Purple, or Green Build Corridor
38 Alternatives would not substantially impair the esthetic features or attributes of Saguaro National
39 Park. The Project would not substantially detract from the setting of the park.



1 **Restriction of Access**

2 A constructive use occurs when:

3 “(3) The project results in a restriction of access which substantially diminishes the utility
4 of a significant publicly owned park, recreation area, or a historic site;”

5 A constructive use does not occur when:

6 “(7) Change in accessibility will not substantially diminish the utilization of the Section
7 4(f) property;”

8 The Recommended, Preferred Alternative with west option, Purple, or Green Build Corridor
9 Alternatives would not restrict access to Saguaro National Park and, therefore, would not
10 substantially diminish the utility of the park. Existing roads and routes across the Build Corridors
11 would either be retained or adjustments made to maintain access. No restriction of access
12 would occur and no change in accessibility would occur that would substantially diminish the
13 utilization of the park.

14 **Vibration**

15 A constructive use occurs when:

16 “(4) The vibration impact from construction or operation of the project substantially
17 impairs the use of a Section 4(f) property, such as projected vibration levels that are
18 great enough to physically damage a historic building or substantially diminish the utility
19 of the building, unless the damage is repaired and fully restored consistent with the
20 Secretary of the Interior’s Standards for the Treatment of Historic Properties, i.e., the
21 integrity of the contributing features must be returned to a condition which is
22 substantially similar to that which existed prior to the project;”

23 A constructive use does not occur when:

24 “(8) Vibration levels from project construction activities are mitigated, through advance
25 planning and monitoring of the activities, to levels that do not cause a substantial
26 impairment of protected activities, features, or attributes of the Section 4(f) property.”

27 Ground vibration during construction of the Recommended, Preferred Alternative with west
28 option, Purple, or Green Build Corridor Alternatives was not quantitatively evaluated as part of
29 the Tier 1 analysis. As described in Final Tier 1 EIS Section 3.15.7, the potential for construction
30 activities to cause vibration impacts will be assessed during Tier 2. At that time and if Project
31 impacts are indicated for Saguaro National Park, specific mitigation strategies will be developed
32 for the Project in coordination with NPS to reduce or eliminate impacts.

33 **Ecological Intrusion**

34 A constructive use occurs when:



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1 “(5) The ecological intrusion of the project substantially diminishes the value of wildlife
2 habitat in a wildlife and waterfowl refuge adjacent to the project, substantially interferes
3 with the access to a wildlife and waterfowl refuge when such access is necessary for
4 established wildlife migration or critical life cycle processes, or substantially reduces the
5 wildlife use of a wildlife and waterfowl refuge.”

6 Saguaro National Park is managed as a public park and for natural resource preservation; it is
7 not a wildlife or waterfowl refuge. For this reason, this criterion does not apply to Saguaro
8 National Park.

9 **Historic Sites**

10 A constructive use does not occur when:

11 “(1) Compliance with the requirements of 36 CFR 800.5 for proximity impacts of the
12 proposed action, on a site listed on or eligible for the National Register, results in an
13 agreement of ‘no historic properties affected’ or ‘no adverse effect;’”

14 Saguaro National Park is not a historic site; therefore, this criterion does not apply.

15 **Transportation Right of Way**

16 A constructive use does not occur when:

17 “(4) There are proximity impacts to a Section 4(f) property, but a governmental agency's
18 right-of-way acquisition or adoption of project location, or the Administration's approval of
19 a final environmental document, established the location for the proposed transportation
20 project before the designation, establishment, or change in the significance of the
21 property. However, if it is reasonably foreseeable that a property would qualify as eligible
22 for the National Register prior to the start of construction, then the property should be
23 treated as a historic site for the purposes of this section;”

24 This criterion does not apply to Saguaro National Park because the Project does not involve a
25 location for the proposed transportation project that was established before the designation,
26 establishment, or change in the significance of the park.

27 **Combined Proximity Impacts**

28 A constructive use does not occur when:

29 “(5) Overall (combined) proximity impacts caused by a proposed project do not
30 substantially impair the activities, features, or attributes that qualify a property for
31 protection under Section 4(f);”

32 This constructive use assessment finds that combined proximity impacts to Saguaro National
33 Park, after mitigation, would not substantially impair the activities, features, or attributes that
34 qualify the park for protection by Section 4(f).



1 **Mitigation**

2 A constructive use does not occur when:

3 “(6) Proximity impacts will be mitigated to a condition equivalent to, or better than, that
4 which would occur if the project were not built, as determined after consultation with the
5 official(s) with jurisdiction;”

6 ADOT is committed to mitigating for impacts to natural areas and parks. However, this
7 mitigation is unlikely to result in a condition equivalent to or better than that which would occur if
8 the project were not built.

9 **Assessment of Constructive Use for Tucson Mountain Park**

10 **Noise**

11 A constructive use occurs when:

12 “(1) The projected noise level increase attributable to the project substantially interferes
13 with the use and enjoyment of a noise-sensitive facility of a property protected by
14 Section 4(f), such as:

15 (i) Hearing the performances at an outdoor amphitheater;

16 (ii) Sleeping in the sleeping area of a campground;

17 (iii) Enjoyment of a historic site where a quiet setting is a generally recognized
18 feature or attribute of the site's significance;

19 (iv) Enjoyment of an urban park where serenity and quiet are significant
20 attributes; or

21 (v) Viewing wildlife in an area of a wildlife and waterfowl refuge intended for such
22 viewing.”

23 A constructive use does not occur when:

24 “The impact of projected traffic noise levels of the proposed highway project on a noise-
25 sensitive activity do not exceed the FHWA noise abatement criteria as contained in
26 Table 1 in part 772 of this chapter, or the projected operational noise levels of the
27 proposed transit project do not exceed the noise impact criteria for a Section 4(f) activity
28 in the FTA guidelines for transit noise and vibration impact assessment.”

29 The noise screening methodology described in the discussion of Saguaro National Park (earlier
30 in this white paper) is the same methodology used in the evaluation of potential for noise
31 impacts at Tucson Mountain Park. As a public park, Tucson Mountain Park is categorized as a
32 park in Category C in Table 1 above. Specifically, the FHWA Noise Abatement Criteria (NAC)
33 for Land Use applies Category C (67 dBA) to parks, recreation areas, and Section 4(f)



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1 properties. Additional information on the noise assessment and modeling methodology is
2 included in Final Tier 1 Section 3.8 and Appendix E8 (I-11 Traffic Noise Technical Report
3 Addendum).

4 The Final Tier 1 EIS reports that the predicted noise level under the Purple Alternative would be
5 65 dBA at 100 feet from the I-11 roadway right of way and 61 DBA at 250 feet. All the Build
6 Corridor Alternatives are 210 feet away from Tucson Mountain Park at their closest point. Noise
7 level from the Purple Alternative at Tucson Mountain Park are estimated to be between 61 and
8 65 dBA. Predicted noise levels at the boundary of Tucson Mountain Park for the Recommended
9 Alternative, Preferred Alternative with west option, and Green Alternative are 54 dBA. As stated
10 above, predicted noise levels for the Purple Alternative are higher than the other alternatives
11 because the Purple Alternative attracts higher volumes of traffic.

12 Therefore, although I-11 may increase noise levels over existing conditions, the predicted noise
13 levels under each Build Corridor Alternative would not exceed the 67 dBA NAC for Activity
14 Category C. Therefore, no constructive use would occur due to noise.

15 During Tier 2 studies, a specific 400-foot-wide alignment would be chosen within the 2,000-foot-
16 wide Build Corridor. If the selected alignment falls on the west side of the corridor, the edge of
17 right-of-way could be over 1,450 feet from the western boundary of the Tucson Mountain Park.

18 **Esthetic Features**

19 A constructive use occurs when:

20 “(2) The proximity of the proposed project substantially impairs esthetic features or
21 attributes of a property protected by Section 4(f), where such features or attributes are
22 considered important contributing elements to the value of the property. Examples of
23 substantial impairment to visual or esthetic qualities would be the location of a proposed
24 transportation facility in such proximity that it obstructs or eliminates the primary views of
25 an architecturally significant historical building, or substantially detracts from the setting
26 of a Section 4(f) property which derives its value in substantial part due to its setting;”

27 The esthetic features of Tucson Mountain Park are the viewsheds of and from the park as well
28 as the night sky views within the park. The potential for the Project to impact each of these
29 features is described below.

30 **Viewshed:** The existing viewshed from the park where the Recommended, Preferred
31 Alternative with west option, Purple, or Green Build Corridor Alternatives are located includes
32 existing residential developments, farms, the CAP canal structures, and the Central Area Valley
33 Storage and Recovery Project and Southern Area Valley Storage and Recovery Project
34 recharge basins. Each Build Corridor Alternative would be a new element in the middle ground
35 of this viewshed from the park. In the context of the other manmade elements in the viewshed,
36 the visual change caused by a Build Corridor Alternative would not be so severe as to
37 substantially impair or diminish the public park, natural, and preservation attributes that qualify
38 Tucson Mountain Park for protection by Section 4(f).



**White Paper Regarding Potential Section 4(f) Constructive Use Impacts
Ironwood Forest National Monument, Tucson Mitigation Corridor,
Saguaro National Park, and Tucson Mountain Park**

1 **Night Skies:** FHWA and ADOT have committed to mitigate impacts on night skies by complying
2 with dark skies ordinances and by limiting lighting to be consistent with land use and
3 development patterns at the time of Project implementation.

4 **Mitigation:** The Final Tier 1 EIS identifies general mitigation strategies as part of the Project
5 that will help FHWA and ADOT avoid, minimize, or compensate for adverse visual impacts at
6 viewpoints from the park. These strategies involve landscape planning in visually sensitive
7 areas, grading designs for more natural looking slopes, surfaces and transitions, blending of
8 stormwater management structures with the existing landscape, enhancement of highly visible
9 features such as noise barriers and other hardscape elements, lighting design strategies, and
10 other considerations (ADEIS Section 3.9.5). Tier 2 analysis will include further visual impact
11 assessment and coordination with Pima County regarding the potential visual impacts to Tucson
12 Mountain Park.

13 **Conclusion:** The foregoing esthetic effects assessment indicates that the proximity of the
14 Recommended, Preferred Alternative with west option, Purple, or Green Build Corridor
15 Alternatives would not substantially impair the esthetic features or attributes of Tucson Mountain
16 Park. The Project would not substantially detract from the setting of the park.

17 **Restriction of Access**

18 A constructive use occurs when:

19 “(3) The project results in a restriction of access which substantially diminishes the utility
20 of a significant publicly owned park, recreation area, or a historic site;”

21 A constructive use does not occur when:

22 “(7) Change in accessibility will not substantially diminish the utilization of the Section
23 4(f) property;”

24 The Recommended, Preferred Alternative with west option, Purple, or Green Build Corridor
25 Alternatives would not restrict access to Tucson Mountain Park and, therefore, would not
26 substantially diminish the utility of the park. Existing roads and routes across the Build Corridors
27 would either be retained or adjustments made to maintain access. No restriction of access
28 would occur and no change in accessibility would occur that would substantially diminish the
29 utilization of the park.

30 **Vibration**

31 A constructive use occurs when:

32 “(4) The vibration impact from construction or operation of the project substantially
33 impairs the use of a Section 4(f) property, such as projected vibration levels that are
34 great enough to physically damage a historic building or substantially diminish the utility
35 of the building, unless the damage is repaired and fully restored consistent with the
36 Secretary of the Interior’s Standards for the Treatment of Historic Properties, i.e., the



White Paper Regarding Potential Section 4(f) Constructive Use Impacts *Ironwood Forest National Monument, Tucson Mitigation Corridor, Saguaro National Park, and Tucson Mountain Park*

1 integrity of the contributing features must be returned to a condition which is
2 substantially similar to that which existed prior to the project;”

3 A constructive use does not occur when:

4 “(8) Vibration levels from project construction activities are mitigated, through advance
5 planning and monitoring of the activities, to levels that do not cause a substantial
6 impairment of protected activities, features, or attributes of the Section 4(f) property.”

7 Ground vibration during construction of the Recommended, Preferred Alternative with west
8 option, Purple, or Green Build Corridor Alternatives was not quantitatively evaluated as part of
9 the Tier 1 analysis. As described in Final Tier 1 EIS Section 3.15.7, the potential for Project
10 construction activities to cause vibration impacts will be assessed during Tier 2. At that time and
11 if Project impacts are indicated for the Tucson Mountain Park, specific mitigation strategies will
12 be developed for the Project in coordination with Pima County to reduce or eliminate impacts.

13 **Ecological Intrusion**

14 A constructive use occurs when:

15 “(5) The ecological intrusion of the project substantially diminishes the value of wildlife
16 habitat in a wildlife and waterfowl refuge adjacent to the project, substantially interferes
17 with the access to a wildlife and waterfowl refuge when such access is necessary for
18 established wildlife migration or critical life cycle processes, or substantially reduces the
19 wildlife use of a wildlife and waterfowl refuge.”

20 Tucson Mountain Park is managed for resource conservation and public recreation; it is not a
21 wildlife or waterfowl refuge. For this reason, this criterion does not apply to Tucson Mountain
22 Park.

23 **Historic Sites**

24 A constructive use does not occur when:

25 “(1) Compliance with the requirements of 36 CFR 800.5 for proximity impacts of the
26 proposed action, on a site listed on or eligible for the National Register, results in an
27 agreement of ‘no historic properties affected’ or ‘no adverse effect;”

28 Tucson Mountain Park is not a historic site. For this reason, this criterion does not apply.

29 **Transportation Right of Way**

30 A constructive use does not occur when:

31 “(4) There are proximity impacts to a Section 4(f) property, but a governmental agency's
32 right-of-way acquisition or adoption of project location, or the Administration's approval of
33 a final environmental document, established the location for the proposed transportation
34 project before the designation, establishment, or change in the significance of the



White Paper Regarding Potential Section 4(f) Constructive Use Impacts Ironwood Forest National Monument, Tucson Mitigation Corridor, Saguaro National Park, and Tucson Mountain Park

1 property. However, if it is reasonably foreseeable that a property would qualify as eligible
2 for the National Register prior to the start of construction, then the property should be
3 treated as a historic site for the purposes of this section;”

4 This criterion does not apply to Tucson Mountain Park because the Project does not involve a
5 location for the proposed transportation project that was established before the designation,
6 establishment, or change in the significance of the park.

7 **Combined Proximity Impacts**

8 A constructive use does not occur when:

9 “(5) Overall (combined) proximity impacts caused by a proposed project do not
10 substantially impair the activities, features, or attributes that qualify a property for
11 protection under Section 4(f);”

12 This constructive use assessment finds that combined proximity impacts to Tucson Mountain
13 Park, after mitigation, would not substantially impair the activities, features, or attributes that
14 qualify the park for protection by Section 4(f).

15 **Mitigation**

16 A constructive use does not occur when:

17 “(6) Proximity impacts will be mitigated to a condition equivalent to, or better than, that
18 which would occur if the project were not built, as determined after consultation with the
19 official(s) with jurisdiction;”

20 ADOT is committed to mitigating for impacts to natural areas and parks. However, this
21 mitigation is unlikely to result in a condition equivalent to or better than that which would occur if
22 the project were not built.

23 **Conclusion**

24 The assessment in this white paper was completed to respond to Reclamation’s comment
25 regarding the potential for Build Corridor Alternatives to have a constructive use on four
26 properties: Ironwood Forest National Monument, Tucson Mitigation Corridor, Saguaro National
27 Park, and Tucson Mountain Park. The assessment resulted in the following Tier 1 findings:

- 28 • Ironwood Forest National Monument is not protected by Section 4(f).
- 29 • The constructive use provisions of Section 4(f) do not apply to the Tucson Mitigation
30 Corridor because the Recommended, Preferred Alternative with west option, Purple and
31 Green Build Corridor Alternative would incorporate land from the property.
- 32 • No constructive use of Saguaro National Park would occur because the impacts of the
33 Project (assuming the Recommended, Preferred Alternative with west option, Purple, or
34 Green Build Corridor Alternatives) after mitigation would not rise to the level of being so



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1 severe that the protected activities, features, or attributes that qualify the property for
2 protection under Section 4(f) would be substantially impaired.

- 3 • No constructive use of the Tucson Mountain Park would occur because impacts of the
4 Project (assuming the Recommended, Preferred Alternative with west option, Purple, or
5 Green Build Corridor Alternatives) after mitigation would not rise to the level of being so
6 severe that the protected activities, features, or attributes that qualify the property for
7 protection under Section 4(f) would be substantially impaired.

8 During Tier 2, ADOT will follow up on the commitments to coordinate with NPS and Pima
9 County and to identify and develop specific mitigation measures for the Project that address
10 visual and potential construction vibration impacts.

11

12



White Paper Regarding Potential Section 4(f) Constructive Use Impacts, Public Land Order (PLO) 1015 Lands and Adjacent AGFD Parcels, July 2021



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1 **White Paper Regarding Potential Section 4(f) Constructive Use Impacts of**
2 **Recommended and Purple Build Corridor Alternatives**

3 **Public Land Order (PLO) 1015 Lands and Adjacent AGFD Parcels**

4 **Constructive Use Assessment**

5 Originally under the jurisdiction of the Bureau of Land Management (BLM), Public Land Order
6 (PLO) 1015 lands were withdrawn from BLM jurisdiction in 1954 under PLO 1015 and “reserved
7 under the jurisdiction of the USFWS for wildlife refuge purposes.” The PLO 1015 lands are
8 owned/administered by the United States Fish and Wildlife Service (USFWS) but managed by
9 the Arizona Game and Fish Department (AGFD). USFWS considers PLO 1015 lands to be in a
10 special category of lands called “Coordination areas” under the National Wildlife Refuge Act.
11 The adjacent AGFD parcels are in furtherance of the USFWS/AGFD Cooperative Agreement
12 from 1954, clause 7.

13 The Federal Highway Administration (FHWA) and the Arizona Department of Transportation
14 (ADOT) assessed the potential for the Project to cause a constructive use on the PLO 1015
15 lands. The assessment focuses on PLO 1015 lands on either side of the Recommended and
16 Purple Alternative corridors (figure below).

17 The primary purpose of the PLO 1015 lands is to provide open space, wildlife habitat, and
18 locations for outdoor-related recreation. The PLO 1015 lands are managed passively for the
19 most part; for example, no designated public access infrastructure is provided to the properties
20 adjacent to the Purple Alternative corridor.

21 The AGFD document, *Lower Gila River Wildlife Area Property Operational Plan (2012)*, refers to
22 an original, preliminary project statement and subsequent amendments as they relate to the
23 PLO 1015 lands, stating that the lands were acquired for the purpose of providing ponds and
24 food areas for wildfowl, upland game birds, and other wildlife species. PLO 1015 lands will not
25 be used for any activity other than game propagation.

26 The PLO 1015 properties on either side of the Recommended and Purple Alternative corridors
27 are in the Gila River floodplain, which experiences seasonal flooding. Small game hunting
28 occurs on PLO 1015 lands, focusing on rabbits and game birds such as doves and quail.
29 However, no designated public access infrastructure is present.

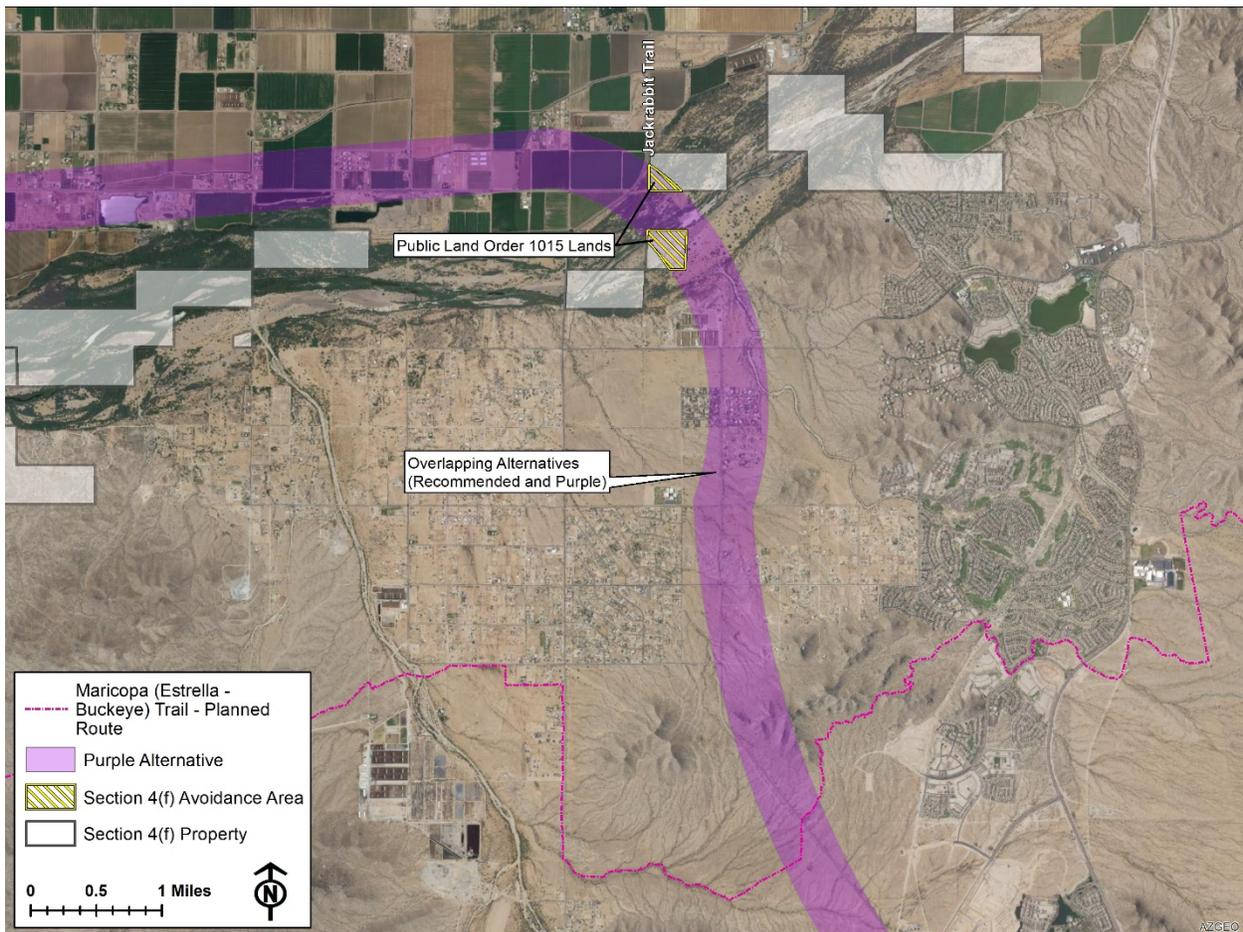
30 In light of the activities, features, and attributes of the PLO 1015 lands, FHWA examined the
31 potential for the Recommended and Purple Alternative corridors to cause a constructive use to
32 occur as defined in 23 CFR 774.15(d). As defined by the regulation, the impacts of concern to
33 constructive use analysis are noise and light, aesthetics, public access, vibration, and ecological
34 intrusion. Of these, aesthetic and public access impacts do not apply because AGFD does not
35 have designated public access infrastructure for the properties.

36 Noise, vibration, and light impacts from the Recommended or Purple Alternative corridor could
37 cause some wildlife to move away from the highway, thereby reducing wildlife use near the
38 highway. However, in terms of the activities, features, and attributes of the PLO 1015 properties,
39 noise, vibration, and light impacts would not substantially interfere with the ability of the
40 properties to provide shooting opportunities or reduce game bird habitat on the properties in the

1 long-term. Based on this analysis, FHWA has determined that, in the case of the PLO 1015
 2 lands, no constructive use would occur due to the Recommended or Purple Alternative corridor
 3 noise, vibration, or light.

4 Ecological intrusion impacts from I-11 could reduce the value of habitat near the highway due to
 5 noise, light, and vibration. However, the impact would not substantially reduce habitat for game
 6 birds or other wildlife on the properties. Connectivity between PLO 1015 lands on either side of
 7 the highway would be provided by wildlife crossing opportunities under the highway. Based on
 8 this analysis, FHWA has determined that, in the case of the PLO 1015 lands, no constructive
 9 use would occur due to ecological intrusion.

10 Based on this analysis, FHWA has determined that, in the case of the PLO 1015 lands, the
 11 proximity effects of the Recommended or Purple Alternative corridor would not be so severe
 12 that the protected activities, features, or attributes that qualify the properties for protection under
 13 Section 4(f) would be substantially impaired. No constructive use of PLO 1015 lands or adjacent
 14 AGFD parcels would occur as a result of the Recommended or Purple Alternative corridor.



15
 16 **PLO 1015 Land Parcels – Recommended and Purple Alternatives**



1 Other Build Corridor Alternatives

2 The Preferred, Green, and Orange Build Corridor Alternatives would be co-aligned with SR 85.
3 As described in Section 4.6.3.1 of the Preliminary Section 4(f) Evaluation, the Robbins Butte
4 Wildlife Area is comprised of PLO 1015 lands on either side of SR 85, which are managed by
5 AGFD. Preliminary analysis indicates the existing SR 85 right-of-way is wide enough to
6 accommodate the proposed I-11 highway cross section. However, increased traffic could
7 increase the likelihood of wildlife collisions, noise and light pollution, and runoff. Tier 2 studies
8 involving project-level design will be required to assess the nature and extent of such potential
9 impacts, to identify and evaluate the effectiveness of measures to avoid or minimize harm
10 related to these potential impacts, and to develop and apply specific measures to mitigate
11 impacts if needed. ADOT will undertake these activities in coordination with AGFD. In Tier 2,
12 appropriate minimization and mitigation measures would be included in the Final Section 4(f)
13 determination for Robbins Butte Wildlife Area as well as the Final Section 4(f) Evaluation.



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**Appendix F3: Correspondence Related to
Preliminary Section 4(f) Evaluation**



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General



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Pre-Scoping Meeting Summary (All Agencies), April 29, 2016



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PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
Federal				
U.S. Environmental Protection Agency (EPA) (Conference Call)	March 28, 2016	Jay Van Echo, ADOT; Joanie Cady, ADOT; Alan Hansen, FHWA; Aryan Lirange, FHWA; Rebecca Yedlin, FHWA; Lisa Ives, AECOM; Jennifer Pyne, AECOM; Heather Honsberger, HDR; Clifton Meek, EPA	Clifton Meek	<ul style="list-style-type: none"> EPA has prior Tier 1 experience in California and on recent Arizona Passenger Rail Study EPA does not see any issues with a combined FEIS/ROD; e-NEPA has not accommodated combined FEIS/ROD in the past EPA would like to be a Cooperating Agency; suggested monthly meetings for Cooperating Agencies throughout process, even if by phone
National Park Service (NPS)	April 8, 2016	Jay Van Echo, ADOT; Jan Gordley, Gordley Group; Lisa Ives, AECOM; Jen Pyne, AECOM; Kimberly Bodington, AECOM; Aryan Lirange, FHWA; Rebecca Yedlin, FHWA; Darla Sidles, NPS; Scott Stonum, NPS; Natasha Kline, NPS	Scott Stonum	<ul style="list-style-type: none"> Concerned with I-11 on west side of Saguaro National Park; possible impairment due to designated wilderness, night sky, noise levels, etc. Issues with landscape connectivity and wildlife mobility Perception that the I-11 route is predetermined NPS would like to be a Cooperating Agency; interested in monthly meetings
Bureau of Indian Affairs (BIA) (Conference Call)	April 11, 2016	Jay Van Echo, ADOT; Joshua Fife, ADOT; Lauren Clementino, ADOT; Rebecca Yedlin, FHWA; Aryan Lirange, FHWA; Lisa Ives, AECOM; Jennifer Pyne, AECOM; Gene Rogge, AECOM; Kimberly Bodington, AECOM; Carolyn Richards, BIA; Chip Lewis, BIA; David Smith, BIA	Chip Lewis	<ul style="list-style-type: none"> Be mindful of Tohono O’odham Nation’s autonomy BIA cannot grant right-of-way (ROW) without consent of tribes, and suggests engaging tribes early-on Suggested reaching out to Inter Tribal Council of Arizona, Inc. (ITCA) BIA would not like to be a Cooperating Agency at this time, but instead a Participating Agency
Bureau of Land Management (BLM)	April 13, 2016	Dorothea Boothe, BLM; Joanie Cady, ADOT; Lauren Clementino, ADOT; Rebecca Heick, BLM; Nancy Favour, BLM; Joshua Fife, ADOT; Lisa Ives, AECOM (phone); Michael Kies, ADOT; Aryan Lirange, FHWA; Elroy	State Office	<ul style="list-style-type: none"> BLM interested in the inclusion of major utilities; they have identified preferred locations for solar development on BLM land It would be useful to clearly identify mitigation responsibilities BLM will provide information on landscape assessments Concerned for national monuments managed by BLM

PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
		Masters, BLM; Karla Petty, FHWA; Jennifer Pyne, AECOM; Raymond Sauzo, BLM; Jay Van Echo, ADOT; Rebecca Yedlin, FHWA		<ul style="list-style-type: none"> • Potential for new monuments to be delineated in Arizona; will not be known until early 2017 • BLM would like to be a Cooperating Agency
U.S. Customs and Border Protection (USCBP)	April 18, 2016	Jay Van Echo, ADOT; Lisa Ives, AECOM (phone); Kimberly Bodington, AECOM (phone); Juan Delgadillo, USCBP; Samuel Lucio, USCBP (phone); Fredberto Moreno, USCBP; Kevin Hecht, USCBP	Sam Lucio (Tucson) Kevin Hecht (Nogales)	<ul style="list-style-type: none"> • Prominent border issues need fixing immediately • Build-out should go from Ruby Road to border; trucks are gridlocked at 20+ impacting traffic and safety • Produce houses keep growing, but roads are beyond capacity to handle traffic • USCBP would not like to be a Cooperating Agency at this time, but instead a Participating Agency
Bureau of Reclamation (Reclamation)	April 20, 2016	Jay Van Echo, ADOT; Rebecca Yedlin, FHWA; Aryan Lirange, FHWA; Lisa Ives, AECOM; Doug Smith, AECOM; Tab Bommarito, BOR; Sean Heath, BOR; Marcia Nesby, BOR; Mary Reece, BOR; Eve Halper, BOR	Tab Bommarito	<ul style="list-style-type: none"> • Tier 1 EIS experience includes programmatic EIS; lessons learned with not adequately defining language resulted in follow-up studies/redundancy • Tucson Mitigation Corridor supports the largest number of mule deer in the state and big horn sheep; language that established Tucson Mitigation Corridor will help determine if it qualifies as a Section 4(f) resource • Five wildlife crossings have been constructed within the I-11 Corridor • Reclamation is interested in being a Cooperating Agency
U.S. Army Corps of Engineers (USACE)	April 20, 2016	Jay Van Echo, ADOT; Lisa Ives, AECOM; Jennifer Pyne, AECOM; Rebecca Yedlin, FHWA; Aryan Lirange, FHWA; Joanie Cady, ADOT; Kim Gavigan, USACE; Kathleen Tucker, USACE; Jesse Rice, USACE; Tracy Lester, USACE	Jessie Rice	<ul style="list-style-type: none"> • USACE is currently working on an EIS for Flood Risk Management within the 500 year floodplain of the Santa Cruz River • Nogales Wash is an area of interest; Deconcini Crossing is a flood risk • Soil contamination found at the Santa Rosa wash near SR 84 due to agricultural activities • Salt Cedar around the Gila River is an issue • USACE would not like to be a Cooperating Agency at this time, but instead a Participating Agency

PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
<p>U.S. Fish and Wildlife Service (USFWS) and Arizona Game and Fish Department (AGFD)</p>	<p>April 21, 2016</p>	<p>Jay Van Echo, ADOT; Joanie Cady, ADOT; Joshua Fife, ADOT; Rebecca Yedlin, FHWA; Aryan Lirange, FHWA; Lisa Ives, AECOM; Jennifer Pyne, AECOM; Douglas Smith, AECOM; Bob Lehman, USFWS; Dana Warnecke, AGFD; Cheri Boucher, AGFD; Bill Knowles, AGFD; Kelly Wolff-Krauter, AGFD; Kristin Terpening, AGFD; Scott Sprague, AGFD</p>	<p>Cheri Boucher</p>	<ul style="list-style-type: none"> • AGFD views the Tier 1 EIS as an advantage, allowing adequate time for the process • AGFD will provide data that can be used as input into alternatives analysis, working through ADOT • AGFD is interested in being a Cooperating Agency
<p>Federal Aviation Administration (FAA)</p>	<p>April 27, 2016</p>	<p>Jay Van Echo, ADOT; Joanie Cady, ADOT; Allen Hansen, FHWA; Rebecca Yedlin, FHWA; Aryan Lirange, FHWA; Lisa Ives, AECOM; Jennifer Pyne, AECOM; Douglas Smith, AECOM; Lorraine Herson-Jones, FAA; Jared Raymond, FAA; Kyler Erhard, FAA; Amanda Velasquez, FAA; Joseph Carlini, FAA</p>	<p>Lorraine Herson-Jones</p>	<ul style="list-style-type: none"> • FAA notes Nevada's interest in I-11 due to accessibility, especially freight • Tucson Airport is interested in improved access • FAA will provide a list of FAA regulated airports within the study area • FAA does not know at this point if they will be a Cooperating or Participating agency
<p>Federal Railroad Administration (FRA)</p>	<p>April 28, 2016</p>	<p>Jay Van Echo, ADOT; Carlos Lopez, ADOT; Aryan Lirange, FHWA; Rebecca Yedlin, FHWA; Lisa Ives, AECOM; Jennifer Pyne, AECOM; Kimberly Bodington, AECOM; Stephanie Perez, FRA</p>	<p>Stephanie Perez</p>	<ul style="list-style-type: none"> • FRA has a lot of experience in Tier 1 EIS • If freight rail is considered as an alternative, then important to coordinate with Surface Transportation Board (STB) • FRA will reach out to regional surface transportation planners on different engineering criteria for passenger vs freight rail and future planning efforts • FRA is not decided on Cooperating or Participating Agency status yet (depends on rail decision); they are interested in monthly/quarterly coordination meetings

PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
State				
Arizona State Land Department (ASLD)	April 14, 2016	Joshua Fife, ADOT; Joanie Cady, ADOT; Michael Kies, ADOT; Aryan Lirange, FHWA; Jennifer Pyne, AECOM; Jay Van Echo, ADOT; Rebecca Yedlin, FHWA; Micah Horowitz, ASLD; Max Masel, ASLD; Mike Dennis, ASLD; Michelle Green, ASLD; Mark Edelman, ASLD; Ruben Ojeda, ASLD; Alan Hansen, FHWA	Mark Edelman and Ruben Ojeda	<ul style="list-style-type: none"> • ASLD is most interested in providing input to best leverage economic development opportunities • ASLD will look at sales on a case-by-case basis for preservation; does not support sales for land speculation • ALSD expects to be a Participating Agency
Arizona State Parks (ASP)	April 19, 2016	Jay Van Echo, ADOT; Lisa Ives, AECOM; Kimberly Bodington, AECOM; Margy Parisella, ASP; Paula Pflapsen, ASP; Russell Moore, ASP; Jim Keegan, ASP	Russell Moore	<ul style="list-style-type: none"> • ASP would prefer the I-11 Corridor along the existing I-19/I-10, east of Picacho Peak State Park; they would have issues with an alignment west of the park • ASP would share project information with their stakeholder email lists • ASP is interested in being a Participating Agency
Arizona State Historic Preservation Office (SHPO)	April 27, 2016	Jay Van Echo, ADOT; Joanie Cady, ADOT; Rebecca Yedlin, FHWA; Aryan Lirange, FHWA; Lisa Ives, AECOM; Jennifer Pyne, AECOM; Gene Rogge, AECOM; David Jacobs, SHPO; Mary-Ellen Walsh, SHPO; Jim Garrison, SPHO; Lauren Clementino, ADOT (phone)	Mary-Ellen Walsh	<ul style="list-style-type: none"> • SHPO suggested that at least 3 categories of sensitivity be considered, as well as Traditional Cultural Properties (TCP) based on tribal input, major waterways, and ethnographic/cultural landscapes • Recommended that tribes be engaged early in the process, including during alternatives development • The group wanted more cultural data collection during the Alternatives Selection Report (ASR) phase • Potential historic bottlenecks within the study area include Gila River and Ironwood/Picacho Peak areas • Documentation of the specific De Anza trail location varies and locations of passes, watering holes, and other features provide the best indication of the historic location • Tribal trails cross the study area

PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
County				
Yavapai County (YC)	March 30, 2016	Mike Willett, Yavapai County; Jay Van Echo, ADOT; Lisa Ives, AECOM; Kristin Darr, Central Creative	Mike Willett and Byron Jaspers	<ul style="list-style-type: none"> West of 89 makes sense for connection point with 93 due to terrain Proposals/plans for new connection between I-17 and I-40 (Central Yavapai Metropolitan Planning Organization [CYMPO] 2030 Regional System); important to look at CYMPO studies Connecting Prescott area to the western part of the state (93, I-11) is important to the County I-11 vs. improving I-17 is political issue in Northern Arizona; I-17 is regularly highly congested with no current plans to fix it Increase of development in Williamson Valley may mean need for connection
Maricopa County (MC)	April 6, 2016	From MCDOT: Clem Ligocki, Mitch Wagner, Denise Lacey, Jennifer Toth; From MCPRD: Leigh Johnson, Ken Vonderscher, RJ Cardin; Jay Van Echo, ADOT; Lisa Ives, AECOM; Kristin Darr, Central Creative	Jennifer Toth and RJ Cardin	<ul style="list-style-type: none"> Need to follow up with Maricopa County Flood Control District (Bill Wiley), Air Quality (Phil McNeely) and Emergency Management (Pete Weaver) Full avoidance of Vulture Mine Park/Recreation Area is preferred; Hassayampa River is the eastern boundary and County is looking at acquiring a piece of the Hassayampa River preserve as well Power line corridor is County's preference for I-11 Palo Verde Generating Station and residents will be very interested in I-11 process A lot of MCDOT decisions over the next 3-5 years depend greatly on I-11 Raptor nesting at Vulture Peak Area of Critical Environmental Concern (ACEC) (BLM) Avoid Toyota Proving Ground; they have a 90-year renewable lease
Santa Cruz County (SCC) and City of Nogales	April 7, 2016	Jay Van Echo, ADOT; Lisa Ives, AECOM; Alice Templeton, Gordley Group; Carlos Rivera,	Juan Guerra, CON; Jesus Valdez,	<ul style="list-style-type: none"> SCC concerned about balancing the need to move freight through the corridor quickly with the potential negative impact that traffic being funneled out of cities could have

PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
(CON)		CON; Aaron White, CON; Alejandro Barcenas, CON; Juan Guerra, CON; Jesus Valdez, SCC; Jennifer St. John, SCC	SCC	<ul style="list-style-type: none"> on local economies • CON concerned about Nogales water supply if there are spills or accidents on the interstate; suggested staying away from the Santa Cruz River • CON mentioned on the Nogales-Sonora side, there is interest in installing a new port of entry at Kino Springs; this would involve a new highway that bypasses Nogales to the east
Pinal County (PC)	April 8, 2016	Kathy Borquez, Pinal County; Greg Stanley, Pinal County; Louis Anderson, Pinal County; Andy Smith, Pinal County; Jay Van Echo, ADOT; Lisa Ives, AECOM; Heather Honsberger, HDR	Andy Smith	<ul style="list-style-type: none"> • PC was involved in Passenger Rail Tier 1 EIS • Potential Public-Private Partnerships with Lower Santa Cruz River Alliance • Preferred Route is the West Pinal Highway • Anticipates Board Resolution for Regional Transportation Authority (RTA) in June 2016 • Accidents on I-10 and SR 347 cause major delays • Fissures in area should be noted; PC can provide GIS data layers • PC wants to be a Participating Agency
Pima County	April 18, 2016	Jay Van Echo, ADOT; Jennifer Pyne, AECOM; Jan Gordley, Gordley Group; Priscilla Cornelio, PCDOT; John Bernal, PC; John Moffatt, PC; Ana Olivares, PCDOT; Jonathan Crowe, PCDOT	Priscilla Cornelio	<ul style="list-style-type: none"> • Noted importance of regional economic development • Pima County analyzed, worked with tribes, identified an I-11 corridor; they prefer west of the Tucson Mountains and have made it public • Flood Control concerns along their identified corridor • Concerned with congestion in Tucson on I-10 • Stressed need for alternate route if I-10 is closed due to an incident • Concern about lack of management committees for each section and plan to participate through Pima Association of Governments (PAG)

PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
Local Municipality				
City of Surprise (COS)	March 30, 2016	From Surprise: Lloyd Abrams, Karl Zook, Eric Fitzer, Dana Owsiany, Stephen Chang, Martin Lucaero; Jay Van Echo, ADOT; Lisa Ives, AECOM; Kristin Darr, Central Creative	Martin Lucero and Bob Wingenroth	<ul style="list-style-type: none"> • Sees proximity to I-11 as a plus • COS will provide shape layers related to their General Plan • Alignment close to Luke AFB would be good location because already noisy • Surprise annexing north and west • White Tank Freeway shown on Hassayampa Framework and Surprise General Plan for necessary east-west connection, if I-11 is placed too far west • Concerned about leapfrog development and sprawl if I-11 is placed too far west • Consider interface with existing rail (BNSF)
Town of Wickenburg (TOW)	March 30, 2016	From Wickenburg: Vince Lorefice, Steve Boyle, Josh Wright; Jay Van Echo, ADOT; Lisa Ives, AECOM; Kristin Darr, Central Creative	Josh Wright	<ul style="list-style-type: none"> • Wickenburg is growing mostly to the north • Hassayampa Framework showed SR 74 extension to connect to I-11—Town is opposed • Noted importance of I-11 to be close enough to Town that they can annex and capture tax revenue • Pointed to potential I-11 intersections at US 60 and US 93 • Downtown is not a registered historic district; some individual buildings are on the National Register
City of Buckeye (COB)	April 12, 2016	From Buckeye: Scott Lowe, Stephanie Wilson, Ed Boik, Stephen Cleveland, Adam Copeland, Scott Zipprich, Roger Klinger, Jason Mahkovtz, George Flores, Terri Hogan, Len Becker; John McNamara, AECOM; Jackie Kuechenmeister, CH2M; Jay Van Echo, ADOT; Kristin Darr, Central Creative	Stephanie Wilson	<ul style="list-style-type: none"> • Important to keep project visible to community • Noted sensitive wildlife corridor between the Sonoran Desert National Monument and Estrella Mountains, White Tanks to Belmonts, across Hassayampa River • North of Gila Bend is a potential National Monument • Suggested coordination with Maricopa Association of Governments (MAG) Gap and MCDOT Parkway Studies • Union Pacific owns 250 acres adjacent to Buckeye Airport • Suggested I-11 needed to be below grade near Toyota Proving Ground; need to be extremely sensitive to them • State land is key—88 square miles of it in Buckeye; need to avoid.

PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
City of South Tucson (COST)	April 14, 2016	Jay Van Echo, ADOT; Jennifer Pyne, AECOM; Alice Templeton, Gordley Group; Joel Gastelum, COST; Lorenzo Gonzalez, COST; Mick Jensen, COST	Joel Gastelum	<ul style="list-style-type: none"> • Long range strategy is to make South Tucson a cultural destination; they want to have a strong link to Mexico, with Mexican businesses opening stores in S. Tucson • South Tucson has no issues and is happy the study is progressing because of the need for a strong connection to Mexico
Town of Marana (TOM)	April 15, 2016	Jay Van Echo, ADOT; Jennifer Pyne, AECOM; Alice Templeton, Gordley Group; Scott Leska, TOM; Jennifer Christelman, TOM; Keith Brann, TOM; Mohammad El-Ali, TOM; Morris Reyna, TOM; Steven Cheslak, TOM; Janine Spencer, TOM; Shannon Shula, TOM		<ul style="list-style-type: none"> • Marana Aerospace area is being considered for annexation • TOM participated in a PAG study (Regionally Significant Corridors) and comment on the corridors within Marana are planned to extend to I-11 • TOM boundaries, landfill and the Santa Cruz River could all come into play • TOM would not be in favor of an alignment in the Tortolita Fan • TOM supports a western alignment that would also allow for skirting the Tohono O’odham San Xavier District • Rillito is an environmental justice area surrounded by the Town in unincorporated Pima County, predominantly African American with 100 residents • The YOM Pueblo, located in the Town of Marana, is on land owned by the Pascua Yaqui Tribe and low income
Town of Sahuarita (TOS)	April 19, 2016	Jay Van Echo, ADOT; Lisa Ives, AECOM; Alice Templeton, Gordley Group; Kelly Udall, TOS; Sheila Bowen, TOS; Sarah More, TOS		<ul style="list-style-type: none"> • Ensure social impacts will be studied, including economics such as tax impacts • TOS is currently focused on land development and transportation linkage, as well as the Sonoran Corridor study with El Toro Road connecting to I-11 • Honing in on loop concept for everything, emphasizing capture of industrial and commercial development, sales tax to; current planning is focused on trade with Mexico, especially Tech Sector • TOS has a lot of the CEOs from Mexican maquiladoras living in community and they are building on it

PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
				<ul style="list-style-type: none"> South Eastern Arizona Community Action Plan (SEACAP) includes an annexation plan to the east and includes State Land If the I-11 / Sonoran Corridor connection happens too far south a bypass around the town is created that would be negative; too far North won't have as much impact I-19 functions as an arterial for Sahuarita / Green Valley, if improved, frontage roads could relieve congestion on I-19
City of Goodyear (COG)	April 21, 2016	Christopher Baker, City of Goodyear (COG); Joe Schmitz, COG; Rob Bohr, COG; Luke Albert, COG; Jay Van Echo, ADOT; Lisa Ives, AECOM; Heather Honsberger, HDR	Joe Schmitz	<ul style="list-style-type: none"> COG staff to provide previous letters to ADOT during the Feasibility Study COG supported the Loop 303 alignment for I-11 Informed team of the Sonoran Valley Parkway Project; BLM utility corridor also in same area COG wants to be a Participating Agency COG suggests public meetings in Buckeye/Goodyear south of I-10; suggested having security at public meetings and researching Arizona gun laws
City of Tucson (COT)	April 25, 2016	Jay Van Echo, ADOT; Lisa Ives, AECOM; Jan Gordley, Gordley Group; Carolyn Laurie, COT; Shellie Ginn, TDOT; Tom Fisher, TDOT; Wally Wilson, Tucson Water; Andrew Greenhill, COT; James MacAdam, COT	James MacAdam	<ul style="list-style-type: none"> COT is concerned that I-11 corridor west of the Tucson Mountains and I-10's inability to accommodate projected I-11 traffic has been predetermined Negative impacts on COT economic development with a corridor west of Tucson Mountains COT prefers I-11 corridor using I-10 Noted importance of strong basis for traffic projections and that the use of new and Smart technologies be considered, to the extent possible Impacts of a corridor west of Tucson Mountains on Tucson Water's Avra Valley area large water recharge and storage facilities providing long term water resources for Tucson and soon for Phoenix COT has no concerns with corridor on I-19 or corridors north of Marana

PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
City of Eloy (COE)	April 26, 2016	Jay Van Echo, ADOT; Lisa Ives, AECOM; Jan Gordley, Gordley Group; Ken Martin, COE; Harvey Krauss, COE; Jon Vlaming, COE	Ken Martin	<ul style="list-style-type: none"> • COE wants I-11 to connect with the North-South Corridor alignment and prefers a corridor that follows SR 87 in their area • COE is looking at a potential alignment west of I-10 and identifies it as bypassing Eloy, which would not benefit them
City of Casa Grande	May 12, 2016			<ul style="list-style-type: none"> •
Town of Gila Bend				<ul style="list-style-type: none"> •
Tribal Communities				
San Xavier District, Tohono O'odham Nation	April 9, 2016	Jay Van Echo, ADOT; Jan Gordley, Gordley Group	Mark Pugh	<ul style="list-style-type: none"> • Concerns for wildlife and hunting impacts • Need to protect what the community has, including agricultural land use • Consider archeological sites and ancestors • Concerns about health impacts • Consider needs and desires of future generations • Concerns about how decisions will be made and who will be involved
Four Southern Tribes	April 22, 2016	Rebecca Yedlin, FHWA; Jay Van Echo, ADOT; Joanie Cady, ADOT		<ul style="list-style-type: none"> •
Gila River Indian Community (GRIC)	April 25, 2016	Rebecca Yedlin, FHWA (attended monthly coordination meeting)	June Shorthair	<ul style="list-style-type: none"> • GRIC asked that a Class I be completed and consulted on as part of the Section 106 process • GRIC would like to be provided the overall Section 106 process that will be completed with the Tier I so that they can provide recommendations on any additional or different work that needs to be completed • Recommended that cultural resource commitments and agreements for Tier 2 be developed in with them • They would like individual meetings throughout the study process to discuss the project and provide input before decisions are made • They may require more detail on issues that are more

PRE-SCOPING MEETING SUMMARY

Updated: April 29, 2016

Agency	Meeting Date	Attendees	Agency Point of Contact	Meeting Summary and Highlights
				<ul style="list-style-type: none"> sensitive in nature GRIC asked that the entire project team attend Cultural Sensitivity Training given by the Tribal Historic Preservation Officer (THPO)
Ak-Chin Indian Community	May 10, 2016			<ul style="list-style-type: none">
				<ul style="list-style-type: none">
Other Stakeholders				
Arizona Transportation Builders (ATB)	March 9, 2016	Jay Van Echo, ADOT; Jan Gordley, Gordley Group; Alice Templeton, Gordley Group	Ramon Gaanderse	<ul style="list-style-type: none"> Concerned that rail will be considered in the study ATB wants to know if study team is really open to all possible alignments, including an Avra Valley alignment and expanding existing I-10 alignment into a double-deck facility
Green Valley-Sahuarita Chamber of Commerce	March 22, 2016	Jay Van Echo, ADOT; Jan Gordley, Gordley Group	Jim DiGiacomo	<ul style="list-style-type: none"> Impacts of increased traffic on I-19 will involve increased noise Concerned the impacts of a corridor other than I-19, would be felt throughout Green Valley
Southern Arizona Leadership Council (SALC)	April 27, 2016	Jay Van Echo, ADOT; Jan Gordley, Gordley Group	Ted Maxwell	<ul style="list-style-type: none"> Concerned about process and options following Tier 1 EIS Stressed importance of clarifying that the purpose of the corridor is more than truck traffic Concerned about conducting the study when no funds have been allocated
				<ul style="list-style-type: none">
				<ul style="list-style-type: none">
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Cooperating Agency Coordination Meeting #1 Notes, November 3, 2016



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MEETING PURPOSE: Cooperating Agency Coordination Meeting #1
DATE & TIME: Thursday, November 3, 2016, 1:00 PM (AZ Time)
LOCATION: ADOT Enforcement Office, 5th Floor Conference Room
 3838 N Central Avenue
 Phoenix, AZ

ATTENDEES: (*Participated via teleconference)
 Rebecca Yedlin, Aryan Lirange: Federal Highway Administration (FHWA)
 Jay Van Echo, Joanie Cady, Carlos Lopez*: Arizona Department of Transportation (ADOT)
 Dana Wamecke, Cheri Boucher*, Scott Sprague, Kristin Terpening*: Arizona Game and Fish Department (AGFD)
 Lane Cowger: US Bureau of Land Management (BLM)
 Clifton Meek*: US Environmental Protection Agency (USEPA)
 Don Swann*, Scott Stonum*: US National Park Service (NPS)
 Tab Bommarito, US Bureau of Reclamation (Reclamation)
 Bob Lehman*, US Fish and Wildlife Service (USFWS)
 Lisa Ives, Jennifer Pyne, Kimberly Bodington: AECOM

MEETING NOTES

Purpose:	
Monthly coordination meeting between the FHWA, ADOT, and Cooperating Agencies for the I-11 Corridor Alternatives Selection Report (ASR) and Tier 1 Environmental Impact Statement (EIS).	
Key Discussion Points/Action Items:	Responsible Party / Action Item
1. Introductions and Agenda Review Aryan Lirange, FHWA, Rebecca Yedlin, FHWA, and Jay Van Echo, ADOT, welcomed the group to the meeting.	No action.
2. Recap of Major Deliverable(s) The 30-day review of the draft Public Outreach and Agency Coordination Plan is complete. The project team has been following up with agencies that did not respond to be a Participating Agency or Section 106 Consulting Party and incorporating this into the plan (and Scoping Summary Report) accordingly. Once finalized, the Plan will be posted to the study website and an email with the link will be distributed to the agencies. Comments on the Scoping Summary Report were due Thursday, November 3, 2016. FHWA and ADOT are finalizing the report, and then will distribute to agencies by posting the report to the Study Website and emailing the link to agencies.	FHWA and ADOT to finalize follow-up with agencies that did not respond and post Plan to Study Website. FHWA and ADOT to finalize Scoping Summary Report and post to Study Website.
3. Current Major Deliverable(s) The Purpose and Need Memorandum is currently being reviewed by the FHWA legal department. The memorandum will be distributed to	FHWA and ADOT will distribute Purpose and Need

Purpose:	
Monthly coordination meeting between the FHWA, ADOT, and Cooperating Agencies for the I-11 Corridor Alternatives Selection Report (ASR) and Tier 1 Environmental Impact Statement (EIS).	
Key Discussion Points/Action Items:	Responsible Party / Action Item
the agencies in November, giving a 30-day comment period following the distribution.	Memorandum to agencies.
4. Next Major Deliverable(s) Jay Van Echo presented an overview of the Alternatives Selection Report Evaluation Methodology and Criteria for discussion purposes. The draft ASR Methodology and Criteria Report is currently being reviewed by ADOT and will be the next major deliverable distributed to the agencies following Purpose and Need.	No action at this time.
5. Upcoming Major Deliverables and Discussion Topics Aryan Lirange reported that the Alternatives Selection Report and Tier 1 EIS Annotated Outline and Methodology are the next major deliverables that will be distributed to the Cooperating Agencies in the coming months.	No action at this time.
6. Upcoming Agency and Public Outreach Jay Van Echo and Aryan Lirange discussed the upcoming agency and public outreach efforts for the ASR process. Key Milestone Agency Meetings are targeted for early 2017, along with a webinar for those who cannot attend in person. Public Information meetings will be held thereafter in early 2017.	FHWA and ADOT to hold Key Milestone Agency meetings and then Public Information meetings in early 2017.
7. Other Issues or Items Aryan Lirange and Tab Bommarito, Reclamation, discussed an issue that has evolved about clarifying legal language in the local and federal designation of land associated with the Tucson Mitigation Corridor. Appropriate agencies will hold a meeting Thursday, November 10, 2016 to identify correct designation, authority, and language.	Agencies to organize and hold meeting associated with Tucson Mitigation Corridor.
8. Next Meeting Date Jay Van Echo confirmed the next Cooperating Agency Coordination Meeting will be held on Wednesday, December 7, 2016 at 1 PM in Wickenburg, AZ.	No action.

c Document Control

Attachments:

- (1) Sign In Sheet
- (2) Agenda

Meeting Purpose: Monthly Cooperating Agency Coordination

Location: ADOT Enforcement Office, 5th Floor Conference Room, 3838 N. Central Avenue, Phoenix AZ

Date: Thursday, November 3, 2016 Time: 1:00 PM

SIGN-IN SHEET

Name	Organization	Phone	E-mail	Address
Kimberly Bodington	AECOM	602.448.2580	kimberly.bodington@aecom.com	7720 N. 16th St., Suite 100 PHX 85020
Lane Cowger	BLM	602-417-9612	lcowger@blm.gov	1 N Central Ave #800 Phoenix AZ 85013
Lisa Ives	AECOM			
Jen Pyne	AECOM			
Cheri Boucher	AGFID			
Clifton Meek	EPA			
Rebecca Yedlin	FHWA			
Anyah Lirange	FHWA			
Joanie Cady	ADOT			
Jay Van Echo	ADOT			
Scott Sprague	AGFD			
Dana Warnecke	AGFD			

ph
ph

SIGN-IN SHEET

	Name	Organization	Phone	E-mail	Address
ph	Bob Lehman	FWS			
	Scott Stonum				
ph	Don Swann	NPS			
ph	Carlos Lopez	ADOT			
	Tab Bommerito	BOR			
ph	SCOTT Stonum	AGFD			
	Dana				

COOPERATING AGENCY COORDINATION MEETING #3

**** NOTE CHANGE IN MEETING DATE AND LOCATION ****

THURSDAY, NOVEMBER 3, 2016
1:00 PM (AZ TIME)
ADOT ENFORCEMENT OFFICE, 5TH FLOOR CONFERENCE ROOM
3838 N. CENTRAL AVENUE, PHOENIX AZ

OR

CLICK HERE: [HTTPS://WWW.CONNECTMEETING.ATT.COM](https://www.connectmeeting.att.com)
MEETING/CALL-IN NUMBER: 1-888-369-1427; ACCESS CODE: 6874525#

* * * AGENDA * * *

1. Introductions and Agenda Review
2. Recap of Major Deliverable(s) Reviewed
 - a. Public Outreach and Agency Coordination Plan
 - b. Scoping Summary Report
3. Current Major Deliverable(s)
 - a. Purpose and Need Memorandum
4. Next Major Deliverable(s)
 - a. Alternatives Selection Report Evaluation Methodology
5. Upcoming Major Deliverables and Discussion Topics
 - a. Tier 1 EIS Annotated Outline and Methodology
6. Upcoming Agency and Public Outreach
 - a. Key Milestone Agency Meetings
 - b. Public Information Meetings
7. Other Issues or Items
8. Next Meeting Date: 12/7/16 at 1 PM (AZ Time) in Wickenburg or via Conference Call



I-11 ASR and Tier I EIS Meeting Summary, February 24, 2017



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MEETING PURPOSE: Discuss I-11 ASR and Tier 1 EIS

DATE & TIME: February 24, 2017

LOCATION: Conference Call

ATTENDEES: Rebecca Yedlin, FHWA; Aryan Lirange, FHWA; Jay Van Echo, ADOT; Lane Cowger, BLM; Rem Hawes, BLM; Jennifer Pyne, AECOM

MEETING SUMMARY

Key Discussion Points/Action Items:	Responsible Party / Action Item
1. BLM would prefer alternatives that are west of the Vulture Mountains Recreation Area (VMRA). In lieu of this option, an alternative within the multi-use corridor in Vulture Mountains would be considered acceptable. The third choice would be to deviate from the designated corridor in order to have a more direct route. BLM does not consider an alternative on Vulture Mine Road to be acceptable.	
2. Regardless of whether an alternative is located within the multi-use corridor, the VMRA would be considered a 4(f) resource. An exception could occur if FHWA and BLM engage in joint planning and required mitigation would be identified in this area. Rem Hawes stated that BLM can provide a letter on this topic, and he will coordinate with resource specialists regarding potential mitigation.	BLM to provide letter on joint planning for 4(f) resource [Vulture Mountains Recreation Area]. BLM will review 4(f) issues and coordinate with FHWA.
3. FHWA indicated that alternatives through VRMA may not be presented unless a letter on joint planning is provided, due to the 4(f) issue. The study team needs to know which alternatives are realistic on BLM-managed lands.	
4. BLM indicated that a Resource Management Plan Amendment would not be required if an alternative is entirely within the multi-use corridor. It was noted that scattered BLM parcels throughout the I-11 study area would require a ROW grant and/or new corridor designation.	
5. ADOT/FHWA will provide shapefiles for rough alternatives locations so BLM can provide input on potential issues.	ADOT/FHWA to provide GIS shapefiles for preliminary alternative locations.
6. The I-8 corridor is generally 300 feet wide. It was stated that alternatives	

Key Discussion Points/Action Items:	Responsible Party / Action Item
following I-8 could probably fit within the existing ROW. It was noted that it would be difficult decision for BLM to allow encroachment along this corridor.	
7. The group discussed whether a meeting was warranted between Ray Suazo and Karla Petty, and concluded that it was not needed at this time. They should touch base before the Draft EIS is issued.	
8. Rem Hawes indicated that an MOU was under preparation between BLM and Maricopa County Parks regarding recreation management in VMRA.	

cc: Document Control



Agency Coordination Meeting #4 – Avondale Meeting Notes, May 16, 2017



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MEETING PURPOSE: Agency Coordination Meeting #4 – Avondale

DATE & TIME: Tuesday, May 16, 2017 10:00 AM

LOCATION: Estrella Mountain Community College
3000 N. Dysart Rd., Avondale, AZ

ATTENDEES: List of attendees provided in the attached sign-in sheets

MEETING NOTES

Purpose:	
The purpose of the Agency Coordination meeting was to meet with federal, state, regional, local, and tribal agencies/organizations that are Cooperating or Participating Agencies in the environmental review process for the I-11 Corridor Tier 1 EIS. The attendees were provided an overview of the alternatives selection process via PowerPoint and invited to submit comments or questions on the study.	
Key Discussion Points / Comments:	Commenter
1. Maricopa County now owns land within the Vulture Mountain Recreation Area. The County is glad to see the northern portion of alternative option V removed from further evaluation. [Response: The technical team has noted.]	Lauren Bromley, Maricopa County Parks and Recreation
2. The EIS for the Santa Cruz River Floodplain Study is underway, with a DEIS anticipated in 2019. The US Army Corps of Engineers study team is interested in GIS shapefiles of the alternatives. [Response: Once the Alternatives Selection phase is complete, GIS data will be shared with Cooperating and Participating Agencies.]	Jesse Rice, US Army Corps of Engineers
3. The Air Quality Department is most interested in options “M” and “K” that provide a bypass around metropolitan Phoenix, alleviating congestion through the center of the city and reducing air quality concerns. [Response: The technical team has noted.]	Richard Sumner, Maricopa County Air Quality
4. The Flood Control District manages several pieces of infrastructure east of the Hassayampa River, including an 8-mile dam north of I-10 that would conflict with alternative option W. [Response: The technical team has noted.]	Michael Duncan, Flood Control District of Maricopa County
5. Noted that the Flood Control District is also studying a levy on the north side of the Gila River (south of option “R”): El Rio Levy. The Sonoran Parkway EIS is expected to be final this year. This corridor generally overlays with alternative option “M”. Goodyear annexed Mobile	Ed Kender, BLM

Purpose:	
<p>The purpose of the Agency Coordination meeting was to meet with federal, state, regional, local, and tribal agencies/organizations that are Cooperating or Participating Agencies in the environmental review process for the I-11 Corridor Tier 1 EIS. The attendees were provided an overview of the alternatives selection process via PowerPoint and invited to submit comments or questions on the study.</p>	
Key Discussion Points / Comments:	Commenter
<p>and needs to provide services to the area. The City sees a need for both the parkway facility (local access) and I-11 (high capacity, longer distance travel). This document discusses wildlife crossings between Maricopa and Estrella Mountains related to options "M" and "L".</p> <p>[Response: The technical team has noted.]</p> <p>Technical team asked Mr. Kender if an RMP amendment would be needed if I-11 traverses BLM land in the central section. He indicated that an amendment may be needed, but would occur during Tier 2 activities.</p>	
<p>6. Follow up with the City of Goodyear on the Sonoran Parkway and relationship to I-11.</p> <p>[Response: Technical team has noted.]</p>	<p>Bill Olsen, Newland Communities</p>

c Document Control

Attachments: Meeting Sign-in Sheets

Meeting Purpose: Agency Coordination Meeting

Location: Estrella Mtn Community College, 3000 N. Dysart Rd., Avondale, AZ

Date: Tuesday, May 16, 2017 Time: 10:00 AM

SIGN-IN SHEET

Name	Organization	Phone	E-mail	Address
Jesse Rile	USACE	602-230-6854	jesse.m.rile@usace.army.mil	3634 N. Central Ave Ste 900 Phoenix 85012
Hether Krause	MCAQD	602-5066731	hkrause@mail.maricopa.gov	1001 N Central Ave Phoenix 85004
Carlos Lopez	ADOT	602-712-4786	clopez@azdot.gov	
Jay Van Edin	ADOT	520-400-6007	juanecho@azdot.gov	
ED KENDER	BLM	623-580-5616	ekender@blm.gov	21605 N 7th Ave PHOENIX AZ 85027
Joanie Cady	ADOT	602- 712 8633	jcady@azdot.gov	11011 W. Jackson, PHX
Kimberly Bodington	AECOM			
Jen Ryne	AECOM			
Karen Apple	HDR			
Jackie Kuechenmeister	CH2M			
Dan Anderson	CH2M			
Anjan Livange	FHWA			

Meeting Purpose: Agency Coordination Meeting

Location: Estrella Mtn Community College, 3000 N. Dysart Rd., Avondale, AZ

Date: Tuesday, May 16, 2017 Time: 10:00 AM

SIGN-IN SHEET

Name	Organization	Phone	E-mail	Address
Richard Sumner	Maricopa County Air Quality Dept.	602.506.1842	sumnerr@mail.maricopa.gov	1001 N. Central Ave. Phx AZ 85004
Michael Duncan	FLOOD CONTROL DISTRICT OF MAR. CO.	602-506-4732	mwd@mail.maricopa.gov	2801 W DURANGO ST., PHX, AZ 85009
William Olson	Newland - ESTRELLA	602 618 9700	wolson@newlandco.com	5090 N. 40 ST. Phx 85016
Lamen Bromley	MC Parks		Lamenbromley@mail.maricopa.gov	



Tier I EIS Cooperating Agency Meeting, August 2, 2017



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MEETING PURPOSE: Cooperating Agency Coordination Meeting #10
DATE & TIME: Wednesday, August 2, 2017, 1:00 PM (AZ Time)
LOCATION: ADOT Enforcement, 5th Floor Conference Room
 3838 North Central Avenue, Phoenix, AZ

ATTENDEES: (*Participated via teleconference)
 Rebecca Yedlin, Aryan Lirange: Federal Highway Administration (FHWA)
 Jay Van Echo, Katie Rodriguez, Greg Byres: Arizona Department of Transportation (ADOT)
 Bill Knowles*, Cheri Boucher*, Scott Sprague*, Julie Mikolajczyk*, Kristen Terpenig*: Arizona Game & Fish Department (AGFD)
 Scott Stonum*, Adam Springer*: National Park Service (NPS)
 Jared Raymond*: Federal Aviation Administration (FAA)
 Clifton Meek*: US Environmental Protection Agency (EPA)
 Jennifer Pyne, Kimberly Bodington, Anita Richardson Frijia: AECOM
 Tab Bommarito*: Bureau of Reclamation (BOR)
 Lane Cowger: Bureau of Land Management (BLM)

MEETING NOTES

Purpose:	
Monthly coordination meeting between the FHWA, ADOT, and Cooperating Agencies for the I-11 Corridor Alternatives Selection Report (ASR) and Tier 1 Environmental Impact Statement (EIS).	
Key Discussion Points/Action Items:	Responsible Party / Action Item
1. Introductions and Agenda Review Jay Van Echo, ADOT, welcomed the group to the meeting.	No Action
2. Update on Major Deliverables	No Action
<ul style="list-style-type: none"> a. The Tier 1 EIS Annotated Outline and Methodology Report was finalized by the project team, and sent to Cooperating and Participating Agencies on Monday, July 31, 2017. Comments are requested back by August 30, 2017. b. The Alternatives Selection Report is being reviewed by FHWA. The project team will address those comments and send to agencies for review. c. Data Collection for Tier 1 EIS is ongoing. Bill Knowles, AGFD, suggests collecting updated data on the Vulture Mountain Recreation Area. It was noted that, during recent public meetings in Wickenburg, it was discussed that the OHV race course is located within the multi-use corridor. 	<p>FHWA to provide comments to project team. Draft ASR will subsequently be delivered to agencies for review.</p> <p>ADOT/FHWA has upcoming meeting with BLM.</p>

Purpose:	
Monthly coordination meeting between the FHWA, ADOT, and Cooperating Agencies for the I-11 Corridor Alternatives Selection Report (ASR) and Tier 1 Environmental Impact Statement (EIS).	
Key Discussion Points/Action Items:	Responsible Party / Action Item
3. Alternatives to Carry into the Tier 1 EIS Jen Pyne and Jessica Rietz led a discussion of Corridor Options recommended for the Tier 1 EIS, as well as cross sections, and preliminary end-to-end alternatives. The following comments and observations were noted by the Cooperating Agencies: <ul style="list-style-type: none"> - Julie Mikolajczyk (AGFD):Would like to receive GIS Shapefiles of options and end-to-end alternatives. 	The project team is deciding how to best package GIS data to accompany the ASR deliverable.
4. Next Major Deliverable(s) <ul style="list-style-type: none"> a. The draft Alternatives Selection Report is being reviewed by FHWA. It is expected to be available for Cooperating Agencies review in August. b. The Agency and Public Information Meeting Summary Report is being reviewed by ADOT. It is expected to be delivered to the agencies concurrently with the Alternatives Selection Report. 	ASR review and revision in progress. Meeting Summary Report review and revision in progress.
5. Agency Coordination Plan Update: Aryan Lirange updated the group that changes affecting the original published Agency Coordination Plan (primarily dates and schedule) will be reflected in an addendum to the original report and will be available to the agencies prior to September's scheduled Cooperating Agency Meeting.	Project team to prepare addendum to current Agency Coordination Plan.
6. Other Issues or Items: Aryan Lirange asked the group if anyone had any other issues or items to discuss. There were none.	No Action
7. Next Meeting Date: Aryan Lirange confirmed the next Cooperating Agency Coordination Meeting will be held on Wednesday, September 13, 2017 at 1:00 PM at the ADOT Enforcement Office in Phoenix, and available via Conference Call.	ADOT will send out updated meeting invite.

cc: Document Control

Attachments:
(1) Sign-in Sheet

Meeting Purpose: Tier I EIS - Cooperating Agency Meeting
 Location: ADOT Enforcement
 Date: 8/2/17 Time: 1:00 pm

SIGN-IN SHEET

Name	Organization	Phone	E-mail	Address
<u>Jenlyne</u>				
<u>Kimberly Bodington</u>	<u>AECOM</u>	<u>602-648-2580</u>		
<u>Crista Richardson-Frjia</u>	<u>AECOM</u>	<u>602-648-2498</u>		
<u>Katie Rodriguez</u>	<u>ADOT</u>	<u>602-712-8858</u>	<u>KRodriguez@azdot.gov</u>	
<u>ARYAN LIRANGE</u>	<u>FHWA</u>	<u>602-382-8973</u>		
<u>Rebecca Yedlin</u>	<u>FHWA</u>	<u>602-382-8979</u>	<u>rebecca.yedlin@dot.gov</u>	
<u>Jay Van Echo</u>	<u>ADOT</u>	<u>520-400-6207</u>	<u>juvancho@azdot.gov</u>	
<u>Lane Couger</u>	<u>BLM</u>	<u>602-477-9612</u>	<u>lcouger@blm.gov</u>	
<u>GREG BYRES</u>	<u>ADOT</u>	<u>602-712-8140</u>	<u>gbyres@azdot.gov</u>	

SIGN-IN SHEET

Name	Organization	Phone	E-mail	Address
Phone Callers:				
✓ Tab Bowman	BOR			
✓ Cheri Benchei	AGFD			
✓ Clifton Meek	EPA			
✓ Scott Stonum	NPS			
✓ Scott ^{Adam} Spraggner	" "			
✓ Jaraa Raymond	FAH			
✓ Krista Terpening	AGFD			
Scott Sprague	NPS			
✓ Julie	AGFD			
✓ Bill Knowles	AGFD			



Letter to Cooperating and Participating Agencies, October 4, 2017



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U.S. Department
of Transportation
Federal Highway
Administration

ARIZONA DIVISION

4000 North Central Avenue
Suite 1500
Phoenix, Arizona 85012-3500
Phone: (602) 379-3646
Fax: (602) 382-8998
<http://www.fhwa.dot.gov/azdiv/index.htm>

October 4, 2017

In Reply Refer To:
999-M(161)S
I-11, I-19/SR 189 to US 93/SR 89
TRACS No. 999 SW 0 M5180 01P
Draft Alternatives Selection Report
I-11 Corridor Tier 1 EIS

Dear Cooperating and Participating Agencies,

The Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) have conducted an analysis of alternatives for the I-11 Corridor, and prepared an Alternatives Selection Report (ASR) to document this phase. The purpose of the ASR process is to determine the alternatives that will be carried forward into the Tier 1 Environmental Impact Statement (EIS) for programmatic-level environmental review in accordance with the National Environmental Policy Act (NEPA) and other regulatory requirements.

With this letter, we are submitting the draft ASR for your review and input. A number of previous documents have provided the foundation for the ASR. The premise for developing and screening alternatives is to meet the Purpose and Need for the project, as outlined in the February 2017 *Purpose and Need Memorandum*. At the onset of the NEPA process, the scoping process engaged public, agency, and tribal input on the Purpose and Need and the range of alternatives and issues to be considered, as documented in the January 2017 *Scoping Summary Report*. The ASR was prepared based on the *Alternatives Selection Report (ASR) Evaluation Methodology and Criteria Report*, which outlined the overall approach for developing, evaluating, and screening corridor alternatives for the I-11 Corridor during the ASR phase. All of these documents have been subject to prior reviews by the Cooperating and Participating Agencies and are available on the ADOT web site at www.i11study.com/Arizona/Documents.asp.

As part of the ASR process, meetings were conducted with the public, agencies, and tribes to solicit additional input on the alternatives in April through June, 2017. The draft *Agency and Public Meeting Summary Report* documents the input received during this period, and is also available for your information and review.

In your role as a Cooperating Agency or Participating Agency in this environmental review process, we would appreciate your review of the linked Reports and respectfully request that you provide any written comments to the points of contact below within 30 days of the date of this letter so that we may address any needed modifications.

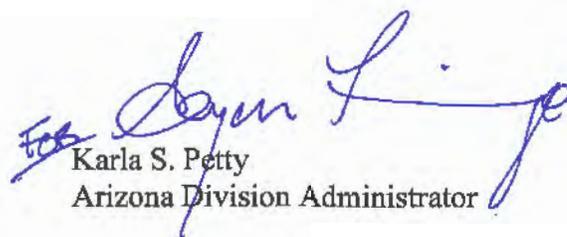
The electronic files are very large and cannot be transmitted via email. Please use this temporary link <https://we.tl/wpHtukl826> to download your own copy of the files; the link will only be active for a month. If you have trouble accessing the files, please alert the project team so we can provide you with alternative delivery options (alternate ftp location, or CD via mail).

Some agencies have shown interest or have a need for shapefiles. Please advise the project team if you would like for those to be provided directly to you via email.

The project team is also available to meet with individual Cooperating or Participating agencies regarding specific questions on the alternatives or ASR process.

If you have any questions or would like additional information, please contact Rebecca Yedlin at 602-382-8979 or Rebecca.yedlin@dot.gov or Jay Van Echo at 520-400-6207 or JVanEcho@azdot.gov. Thank you for your continued cooperation and interest in the I-11 Corridor Tier 1 EIS.

Sincerely,



Karla S. Petty
Arizona Division Administrator

ecc:

Rebecca Yedlin, FHWA Environmental Coordinator
Aryan Lirange, FHWA Senior Urban Engineer
Jay Van Echo, ADOT Project Manager, MD T100
Jennifer Pyne, AECOM Consultant Team Project Manager



Federal Agencies



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National Park Service



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Letter from National Park Service, March 14, 2016



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United States Department of the Interior

NATIONAL PARK SERVICE

Saguaro National Park
3693 South Old Spanish Trail
Tucson AZ 85730



IN REPLY REFER TO:

March 14, 2016

Interstate 11 Tier 1 EIS Study Team
c/o ADOT Communications
1655 W. Jackson St., Mail Drop 126F
Phoenix, AZ 85007

Dear Interstate 11 Tier 1 EIS Study Team,

Saguaro National Park has significant concerns about the Proposed Interstate 11 Corridor, specifically the potential alternative that would bring a new interstate corridor alignment adjacent to the western boundary of the park's Tucson Mountain District.

The park's Tucson Mountain District is 24,000 acres, over half of which is designated Wilderness. Encroachment from the expanding urbanization of Tucson, coupled with geographic isolation, is a considerable challenge for maintaining the park's native biodiversity. This district has already lost bighorn sheep and Mexican wolves, and park biologists are concerned that several meso-carnivores, including several skunk species, kit fox, badger, coatis and raccoons that were fairly common only a decade ago, may no longer be present. Wildlife corridors are becoming extremely scarce, and this proposed interstate project would further sever those important connections, especially to the district's west side, which is still fairly remote.

Other significant concerns include negative impacts to park resources and values that are typically affected by a large-scale linear development such as this, including Wilderness values, air quality, viewsheds, night skies, ambient noise, non-native invasive plant species, and many aspects of the overall visitor experience.

Early last year, several Saguaro staff and I met with ADOT planning and compliance staff, Dan Gabiou, Joani Kady and Mike Kies to begin dialogue and laying the groundwork for National Park Service (NPS) concerns regarding this project. Please contact Saguaro staff Scott (scott_stonum@nps.gov; 520.733.5170) or Natasha (natasha_kline@nps.gov; 520.733.5171) to schedule a meeting as soon as possible to ensure NPS concerns are understood and addressed in the I-11 Tier 1 EIS planning process.

Sincerely,

Darla Sidles
Superintendent



Pre-Scoping Meeting with National Park Service, April 8, 2016



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MEETING PURPOSE: Pre-Scoping Meeting with National Park Service
DATE & TIME: April 8, 2016, 10:00 AM
LOCATION: Conference Call

ATTENDEES: Jan Gordley (Gordley Group), Jennifer Pyne (AECOM), Lisa Ives (AECOM), Natasha Kline (NPS), Aryan Lirange (FHWA), Darla Sidles (NPS), Scott Stonum (NPS), Jay Van Echo (ADOT), Rebecca Yedlin (FHWA), Kimberly Bodington (AECOM)

MEETING NOTES

Purpose:	
Meet prior to formal scoping to present preliminary project information, answer questions, and discuss communication protocols going forward.	
Key Discussion Points/Action Items:	Responsible Party / Action Item
1. Rebecca Yedlin initiated the meeting and Jay van Echo provided a history of the I-11 Corridor.	N/A
2. The Notice of Intent (NOI) is expected to publish in May 2016, and public and agency scoping meetings will be scheduled. The Tier 1 EIS will build upon the prior studies and PEL.	N/A
3. ADOT received a phone call from NPS Denver regional office (David Heard) to request to be a cooperating agency.	FHWA/ADOT will send letter in May to invite NPS to be cooperating agency.
4. Lisa Ives and Jen Pyne discussed the approach to a Tier 1EIS and how it may be different than more typical NEPA processes; the purpose of Quantm; and how the team intends to combine FEIS with a ROD in accordance with MAP-21. The group discussed that the Tier 1 ROD would clear a 2000 foot corridor based on typical sections. The level of the analysis will match the level of project definition. A refined alignment within this corridor would be cleared as part of subsequent Tier 2 NEPA analysis. During the Tier 1, the goal is to avoid as many impacts as possible. Areas with more sensitive resources may warrant more detailed analysis as part of the Tier 1 effort.	N/A
5. The I-11 study team intends to disclose in the NOI that a combined FEIS and ROD will be pursued unless statutory or practicability considerations preclude this option pursuant to MAP-21 and FAST Act. Discussion noted that a preferred alternative would need to be identified in the DEIS to enable the combined FEIS/ROD.	N/A
6. Darla noted concern that any corridor encroaching on the western unit of Saguaro National Park might constitute impairment since it is designated wilderness and the corridor location could impact night sky, noise levels, wildlife corridors, and viewshed.	N/A

Purpose:	
Meet prior to formal scoping to present preliminary project information, answer questions, and discuss communication protocols going forward.	
Key Discussion Points/Action Items:	Responsible Party / Action Item
7. Scott noted concern if the corridor were to impact landscape connectivity to the west (to Ironwood NM). Landscape connectivity is important for wildlife mobility including for big-horn sheep, smaller-size mammals and carnivores. Further impacts on connectivity could affect long-term health of the species in the park associated with wilderness designation. This unit has been increasingly isolated due to incremental effects of development over time. Another concern is an increase in nitrogen deposition that would accelerate an ongoing shift to nonnative species such as buffel grass. Construction and other ground-disturbing activities could also promote the spread of invasive/nonnative species.	N/A
8. Aryan asked if a noise or light buffer has been identified to consider when analyzing corridor alternatives. NPS responded that their technical staff has some models for night sky impacts. Aryan also asked about mitigation opportunities such as wildlife crossings that could be implemented to inhibit the degradation of the landscape connectivity and wildlife areas. NPS responded that it depends on the species and noted that there are numerous linear facilities already in the area (e.g. CAP canal).	N/A
9. Darla said she would like to share standards for wildlife areas, noting that simple barrier and crossing structures are not necessarily adequate to retain wildlife movements and connectivity.	N/A
10. Darla asked what other agencies the Project Team has met with and asked for more details regarding the request from David Heard in Denver.	N/A
11. Scott stated that there is a perception that the I-11 route is predetermined due to the detailed Avra Valley route and analysis that Pima County has presented in the past. Jay Van Echo clarified that the Pima County analysis was completed independently of ADOT. ADOT is meeting with Pima County later in the month and will confirm with them that the Tier 1 alternatives development process is proceeding in accordance with NEPA.	N/A
12. NPS expects to participate as a cooperating agency. Lisa Ives identified several major milestones for cooperating agency input: during ASR phase to provide input on alternatives to carry into the Tier 1 EIS analysis; input on impact analysis methods; input on DEIS prior to public review. Individual agency meetings were suggested at each of these milestones. It was also discussed that there be monthly calls with the cooperating agencies to keep everyone up-to-date on study efforts regularly.	FHWA/ADOT to send letter in May to invite NPS as cooperating agency.
13. Darla asked that Jen hold the May 17 meeting in the calendar, and will decide closer to date if it needs to be cancelled	Jen Pyne

Purpose:	
Meet prior to formal scoping to present preliminary project information, answer questions, and discuss communication protocols going forward.	
Key Discussion Points/Action Items:	Responsible Party / Action Item
14. Jen asked NPS about available data the Project Team could or should be using for analysis. Scott and Jen will connect to follow up.	Jen Pyne and Scott Stonum
15. Jan Gordley asked if there are any stakeholder groups that would be important for them to be engaged with—Scott will send list to Jan.	Scott Stonum and Jan Gordley
16. Scott will be the designated POC for National Park Service.	N/A
Next Meeting Date: TBD	

c Document Control

Attachments: Agenda, Handout

PRE-SCOPING MEETING WITH NATIONAL PARK SERVICE

APRIL 8, 2016

11:00 AM

SAGUARO NATIONAL PARK
3693 SOUTH OLD SPANISH TRAIL, TUCSON

AND/OR

888-369-1427

CONFERENCE CODE 3520623#

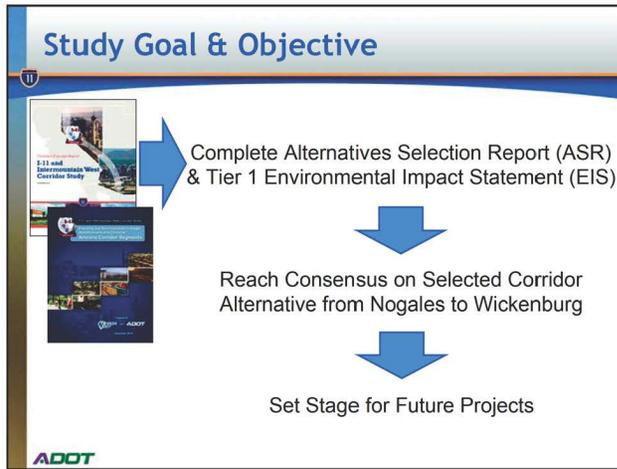
*** AGENDA ***

1. Introductions and Purpose of Meeting
2. History of I-11 Corridor
3. Overview of Environmental Review Process
 - a. Scoping
 - b. Alternatives Selection Report
 - c. Tier 1 Environmental Impact Statement
4. NPS Experience with Other Tier 1 EIS
5. Discussion of I-11 Corridor Issues Relevant to NPS
6. On-Going Communication Protocols and Outreach Efforts
 - a. FHWA/ADOT and NPS Coordination
 - b. Stakeholder Outreach and Involvement
7. Contact Information
 - a. Project E-Mail: I-11ADOTStudy@hdrinc.com
 - b. Toll Free Hotline: 1-844-544-8049 (Bilingual)
 - c. Website: <http://i11study.com/Arizona>
 - d. Mail: Interstate 11 Tier 1 EIS Study Team
c/o ADOT Communications
1655 W. Jackson St., MD 126F
Phoenix, AZ 85007
8. Other Issues or Items
9. Next Steps



Interstate 11 Corridor Tier 1 Environment Impact Statement

OVERVIEW OF STUDY PROCESS



1

I-11 Corridor

- 280-Mile Study Area from Nogales to Wickenburg
- Initially Studied in Sections during ASR
 - ▶ South (Nogales to Casa Grande)
 - ▶ Central (Casa Grande to Buckeye)
 - ▶ North (Buckeye to Wickenburg)

2

Corridor Alternatives Studied in ASR

I-11 Corridor

Study Area varies in width from approximately 5 to 25 miles

280 Miles

I-11 Corridor Study Area (Nogales to Wickenburg)

Corridor Alternatives Studied within I-11 Corridor in ASR

Corridor Alternatives within the I-11 Corridor represent the approximate area needed to build & operate a proposed transportation facility, including potential highway, rail, & utility components.

3

Identifying Corridor Alternatives

STUDY AREA

Conduct Free-to-Roam Analysis Looking for Routes

ROUTE ANALYSIS

Identify Route Trends for Corridor Alternatives

CORRIDOR ALTERNATIVE

Evaluate & Refine Corridor Alternatives

Quantm will map potential routes for a proposed transportation facility within the I-11 Corridor between Nogales & Wickenburg. The proposed transportation facility could include potential highway, rail, & utility components.

Route trends will emerge for potential Corridor Alternatives. They will be analyzed & screened to reduce the number of recommended corridor alternatives that will advance into the Tier 1 EIS.

4

Recommended Corridor Alternatives Advance into Tier 1 EIS

2,000-Foot Corridor in Tier 1 EIS to Assess Social, Economic, & Natural Environment (i.e., Study Area)

Build Alternative

Segments of Independent Utility (SIU)

Proposed Transportation Facility

Recommended Corridor Alternatives will advance into the Tier 1 EIS as "Build" Alternatives to compare against a "No Build" Alternative (i.e., do nothing alternative).

Build Alternatives will have smaller, individual projects (or SIUs).

5

What Questions will Tier 1 EIS Answer?

- Primary Goal is to Reach Consensus on a Selected Corridor Alternative for the I-11 Corridor, including:
 - ▶ Defined Corridor between Nogales & Wickenburg for Proposed Transportation Facility
 - ▶ Type of Transportation Facility, including Potential Highway, Rail, & Utility Components
 - ▶ Footprint to Accommodate Proposed Transportation Facility
 - ▶ Smaller, Individual Projects (or SIUs) for Future Implementation

The Tier 1 EIS will Provide a Roadmap for Advancing These Individual Projects in the Future.

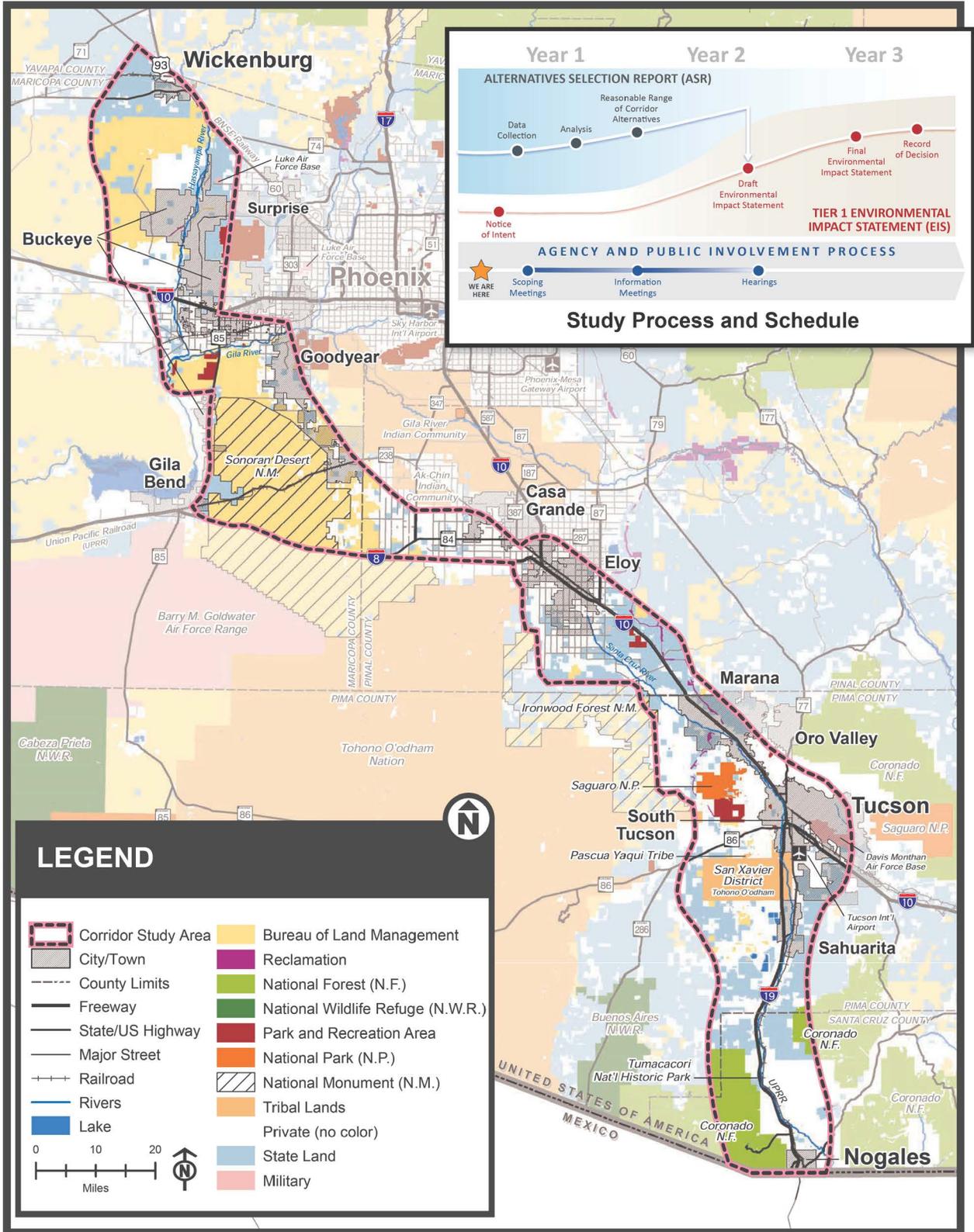
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Interstate 11 Corridor Tier 1 Environment Impact Statement

I-11 CORRIDOR STUDY AREA



Project No. M5180 01P / Federal Aid No. 999-M[161]S



Interstate 11 Tier 1 EIS Study Team
 c/o ADOT Communications
 1655 W. Jackson Street, Mail Drop 126F
 Phoenix, AZ 85007

FOR MORE INFORMATION:
 1-844-544-8049
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Letter from National Park Service, June 15, 2016



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JUN 20 2016



United States Department of the Interior



NATIONAL PARK SERVICE
INTERMOUNTAIN REGION
12795 West Alameda Parkway
P.O. Box 25287
Denver, Colorado 80225-0287

IN REPLY REFER TO:
IMRO-RSS-EQ (1248)

JUN 15 2016

Rebecca Yedlin
Arizona Department of Transportation
4000 North Central Avenue, Suite 1500
Phoenix, Arizona 85012-3500

Dear Ms. Yedlin:

The National Park Service (NPS) appreciates and accepts the opportunity to become a cooperating agency under the National Environmental Policy Act (NEPA) with the Arizona Department of Transportation (ADOT) for the Tier 1 Environmental Impact Statement (EIS) for the I-11 and Intermountain West Corridor Study project located between Nogales and Wickenburg in the counties of Santa Cruz, Pima, Pinal, Maricopa, and Yavapai, Arizona. NPS recognizes the need to ensure that such projects occur in an environmentally responsible manner. Accepting this invitation (May 23, 2016) the NPS demonstrates their commitment to work closely with ADOT to contribute valuable information to the environmental review process.

The NPS has concerns regarding the potential alternative that could bring a new interstate corridor alignment adjacent to the western boundary of Saguaro National Park, Casa Grande Ruins National Monument, and Tumacacori National Historical Park, Arizona. The Tucson Mountain District of Saguaro National Park is 24,000 acres, over half of which is designated Wilderness. Due to encroachment from the expanding urbanization of Tucson, coupled with geographic isolation, it is an ongoing challenge for the NPS to maintain the park's native biodiversity.

Through its Organic Act, NPS is charged with protecting park resources for the enjoyment of future generations. Therefore, the NPS has special expertise regarding the unique resources within and surrounding park units, including cultural and historic resources, biological resources, water quality and quantity, scenic vistas, night skies, soundscapes, and air quality. As such, NPS looks forward to working with ADOT as a cooperating agency on this project.

If you have any questions, please contact David Hurd, Environmental Protection Specialist at the Intermountain Regional Office at 303-987-6705 or by email at david_hurd@nps.gov.

Sincerely,

Sue E. Masica
Regional Director

cc: Sherry Plowman, Superintendent, Southern Arizona Office
Darla Sidles, Superintendent, Saguaro National Park
Bob Love, Superintendent, Tumacacori National Historical Park
Karl Pierce, Superintendent, Casa Grande Ruins National Monument
Melissa Trenchik, Environmental Quality Chief, IMR
David Hurd, Environmental Protection Specialist, IMR



Letter from National Park Service, July 11, 2016



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United States Department of the Interior

NATIONAL PARK SERVICE
INTERMOUNTAIN REGION
12795 West Alameda Parkway
P.O. Box 25287
Denver, Colorado 80225-0287



IN REPLY REFER TO:
IMDO-RSS-EQ (1248)

JUL 11 2016

Mr. Aryan Lirange
Senior Urban Engineer
Federal Highway Administration
4000 North Central Avenue, Suite 1500
Phoenix, AZ 85012

The National Park Service (NPS) has reviewed the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) Notice of Intent (NOI) to prepare a Tier 1 Environmental Impact Statement (EIS) for the Interstate 11 (I-11) Corridor between Nogales and Wickenburg. We appreciate having the opportunity to provide our initial thoughts and comments about how this project may affect units of the National Park System.

Saguaro National Park Comments

The FHWA and ADOT identified two potential routes for the I-11 Corridor which would lead to or through the city of Tucson from Nogales, AZ. One potential route would overlap with the section of I-10 that passes near downtown Tucson, and the other would be through the Avra Valley, a few miles west of the I-10 corridor and immediately adjacent to the west district of Saguaro National Park (Park). Part of this study includes evaluation of the potential for this transportation corridor to also include rail facilities and power transmission lines. The NPS is concerned that a multi-purpose corridor of this scale bisecting the Avra Valley would irreparably degrade areas near and within the park, potentially leading to impairment of the resource values which the park was established to protect for future generations.

The Park's West District is 24,000 acres and contains designated Wilderness that would be in close proximity to a potential route through the Avra valley. Although it is being increasingly encroached upon by expanding urbanization, the west side of the district is still quite remote. Wildlife species and their contribution to the biodiversity of the park are dependent on their access to a range of habitat values across a broad landscape. Fragmenting features, such as large road systems, can essentially deny them access to habitat and resources by severing movement corridors between and within required habitat. The Park's west district in recent years has lost bighorn sheep and Mexican wolves. Connectivity of the landscape is not only critical for wildlife populations currently; it will become more critical for wildlife over time due to the pressures of climate change and continuing localized development pressures. Recent studies have biologists concerned that some mesocarnivores, including several skunk species, kit fox, badger, coatis and raccoons that were fairly common only a decade ago, may no longer be present. Wildlife corridors are becoming extremely scarce, and this proposed interstate project would serve to further sever those important connectors.

Additional concerns for the NPS include resources that would be impacted by a large-scale corridor development project such as this, including wilderness values, air quality values, viewsheds, night skies, noise, vegetation management, and visitor use. The NPS requests additional analysis be conducted on these topics within the National Environmental Policy Act document.

Juan Bautista de Anza National Historic Trail

The current projected alignment proposed intersects with the Juan Bautista de Anza National Historic Trail historic corridor, adjacent to/contains the Anza recreation retracement route (recreation trail) and Auto Route. The Santa Cruz River valley offers high-quality recreation opportunities for visitors to experience landscape settings similar to that which the Anza expedition party encountered while they were travelling through southern Arizona. A new segment of highway could potentially impact established Anza Recreation Trail, the Anza Auto Tour Route, and the visual settings and landscape character of the Santa Cruz River valley and Sonoran Desert.

National Historic Landmarks

The NPS National Historic Landmarks (NHL) program has reviewed the NOI and would like to inform the FHWA and ADOT of 11 NHLs located near the proposed area of potential effect for the I-11 corridor. To the maximum extent possible, efforts should be made to minimize any potential direct and indirect impacts to the following NHLs located in counties impacted by the undertaking (i.e., Maricopa, Pima, Pinal, Santa Cruz, and Yavapai counties): Gatlin Site, Pueblo Grande Ruins and Irrigation Sites, Taliesin West, Ventana Cave, Desert Laboratory, San Xavier del Bac Mission, Snaketown, Mission Los Santos Angeles de Guevavi, Tumacacori Museum, San Cayetano de Calabazas, and Jerome Historic District. In accordance with Section 106 of the National Historic Preservation Act, please consider these sites in the scope of the EIS and feel free to contact our office with any questions or for further information on these sites.

The NPS has a continuing interest in working with all parties to ensure project impacts to NPS units are avoided. We appreciate the opportunity to provide input on this component of the proposed I-11 Corridor project. If you have any questions regarding these comments, please contact, Environmental Protection Specialist, David Hurd at (303) 987-6705 or by email at david_hurd@nps.gov.



Melissa R. Trenchik
Environmental Quality, Chief

Acoustic Environment and Soundscape

The acoustic environment is a resource with intrinsic value. It is important as a natural resource, a cultural resource, or both. It is a critical component of wilderness character and plays an important role in wildlife communication, behavior, and other ecological processes. Results from multiple surveys of the American public indicate that hearing the sounds of nature is an important reason for visiting national parks. Therefore, the value of acoustic environments and soundscapes is related to an array of park resources and has broad implications for environmental management.

Through synthesis of years of acoustic data collection and acoustic resource modeling, NPS has documented that sound levels in national parks can vary greatly, depending on location, topography, vegetation, biological activity, weather conditions and other factors. For example, the din of a typical suburban area fluctuates between 50 and 60 decibels (dBA), while the crater of Haleakala National Park is intensely quiet, with levels around 10 dBA. Below are some examples of sound pressure levels measured in national parks.

Decibel level (dBA)	Sound Source	Decibel level (dBA)	Sound Source
10	Volcano crater (Haleakala NP)	80	Snowcoach at 30 m (Yellowstone NP)
20	Leaves rustling (Canyonlands NP)	100	Thunder (Arches NP)
40	Crickets at 5 m (Zion NP)	120	Military jet, 100m above ground level (Yukon-Charley Rivers NP)
60	Conversational speech at 5 m (Whitman Mission NHS)	126	Cannon fire at 150m (Vicksburg NMP)

Acoustic Resources at Saguaro National Park

At Saguaro National Park, the acoustic conditions are described based on a geospatial sound model and on-the-ground data collected at the park. Parameters useful for assessing a park's acoustic environment include the understanding of a) *natural* conditions without the influence of human-caused sounds, b) *existing* acoustic conditions including both natural and human-caused sounds, and c) the *impact* of human-caused sound sources in relation to natural conditions. The *impact* demonstrates the influence of human activities to the acoustic environment - often described by determining the difference between natural and existing sound levels. Further, acoustic conditions can be compared to specific sound levels that correlate with human health and speech functionality. At 35 dBA, human and wildlife sleep can be interrupted (Haralabidis, et. al., 2008). The World Health Organization's recommends that noise levels inside bedrooms remain below 45 dBA (Berglund, et. al., 1999). At 52 dBA, a listener wouldn't clearly hear another person speaking in a raised voice at 10 meters (Environmental Protection Agency, 1974). At 60 dBA, normal voice communications can be interrupted at 1 meter. Visitors in the park would likely be conducting such conversations.

Sound model

The NPS Natural Sounds and Night Skies Division (NSNSD) evaluates these acoustic conditions using predictions from a geospatial sound model (Mennitt, et al., 2013.) For the model, sound pressure levels for the continental United States were predicted using actual acoustical measurements combined with a multitude of explanatory variables such as location, climate, landcover, hydrology, wind speed, and proximity to noise sources (roads, railroads, and airports). The model predicts daytime sound levels during midsummer. The maps are generated using 270 meter resolution - meaning that each square of color on the map represents 270 square meters. It should be noted that while the model excels at predicting acoustic conditions over large landscapes, it may not reflect recent localized changes such as new access roads or development. The park-specific maps (Figures 1-3) are a subset of a national model and show predicted sound pressure levels for the park unit. An inset map is included in each park-specific map to provide a better sense of context, and major roads and highways are labeled for reference. Figure 1 shows the *natural* sound pressure levels which are the sound levels NPS works to preserve in most cases. Figure 2 shows *existing* sound pressure levels for the park unit demonstrating the current conditions with all sound sources.

Figure 3 shows the *impact* between natural and existing acoustic conditions. This provides a condition assessment because it tells us how much the area is influenced by human-caused sounds. To determine impact, NSNSD examines the difference between the natural ambient sounds levels (without the influence of human-made sound) and the existing sound levels (including human-caused sound) as predicted by the model (Figure 3). At Saguaro NP, the mean *impact* is predicted to be 4.2 decibels (dBA). That is, the average existing sound level (with the influence of human-caused sounds) is predicted to be 4.2 dBA above natural conditions.

A one decibel change is not readily perceivable by the human ear, but any addition to this difference could begin to impact listening ability. An increase of 4.2 dBA would reduce the listening area for wildlife and visitors by 62 %. For example, if a predator can hear a potential prey animal in an area of 100 square feet in a setting with natural ambient sounds, that animal’s ability to hear would be reduced to 38 square feet if the sound levels were increased by 4.2 dBA. Similar reduction would occur for visitors and their ability to hear natural sounds or interpretive programs.

Acoustic conditions can also be compared to certain decibel (dBA) values that relate to human health and speech. At 35 dBA, human and wildlife sleep can be interrupted (Haralabidis, et. al., 2008). The World Health Organization’s recommends that noise levels inside bedrooms remain below 45 dBA (Berglund, et. al., 1999). At 52 dBA, a listener wouldn’t clearly hear another person speaking in a raised voice at 10 meters (Environmental Protection Agency, 1974). At 60 dBA, normal voice communications can be interrupted at 1 meter. Visitors in the park would likely be conducting such conversations.

The mean existing sound level at Saguaro NP is estimated to be 32.8 dBA (decibels). At this sound level, campers and wildlife would begin to be interrupted during sleep but personal and interpretive speech could be heard by a listener. Since 32.8 dBA is the mean, there may be periods when noise exceeds the listening thresholds described above. The mean existing sound levels at the park are lower than the sound levels in nearby developed areas (Figure 2). The natural ambient sound level, averaged across the park, and modeled for summer conditions, is 28.6 dBA. This is the condition to which the park service tries to protect. This demonstrates that sounds intrinsic to the park are a resource important to protect in the park environment.

Table 1. Sound pressure levels from sound model, all park

Modeled sound level	Mean (dBA)	Min (dBA)	Max (dBA)
Natural	28.6	25.7	32.6
Existing	32.8	30.0	46.3

For just the western portion of the park, the mean impact is predicted to be 6.5 dBA; the existing sound level is 33.0 dBA and the natural ambient sound level is 26.2 dBA.

Table 1. Sound pressure levels from sound model, western

Modeled sound level	Mean (dBA)	Min (dBA)	Max (dBA)
Natural	26.2	25.7	28.4
Existing	33.0	30.0	45.5

Acoustic Data

A baseline acoustic inventory was conducted for Saguaro NP in 2004-2005. Sound levels were measured at three locations - two locations in the western Tucson Mountain District, and one was in the eastern Rincon Mountain District. The SAGU001 site was near Picture Rocks Road, SAGU002 was near Golden Gate Road, and SAGU003 was near the old Madrona Ranger Station. From these measurements, several acoustic metrics are derived. Acoustic metrics commonly calculated include L_{eq} , L_{50} , and L_{90} . The L_{eq} is useful for quantifying intruding sounds because its magnitude depends heavily on the loudest periods of a time-varying sound. Exceedence values (L_x)

are commonly used to describe ambient sound conditions. The L_{50} value represents the sound level exceeded 50 percent of the measurement period (L_{50} is the same as the median). The L_{90} value represents the sound level exceeded 90 percent of the time during the measurement period. L_{50} and L_{90} are useful measures for describing ambient sound conditions. The L_{50} is a good descriptor of the “existing ambient” sound level at a given place. The “existing ambient sound level” consists of all sounds in a given area, and includes all natural and non-natural sounds. The L_{90} is often used to estimate the “natural ambient sound level,” which consists of all natural sounds in a given area, excluding all mechanical and electrical sounds.

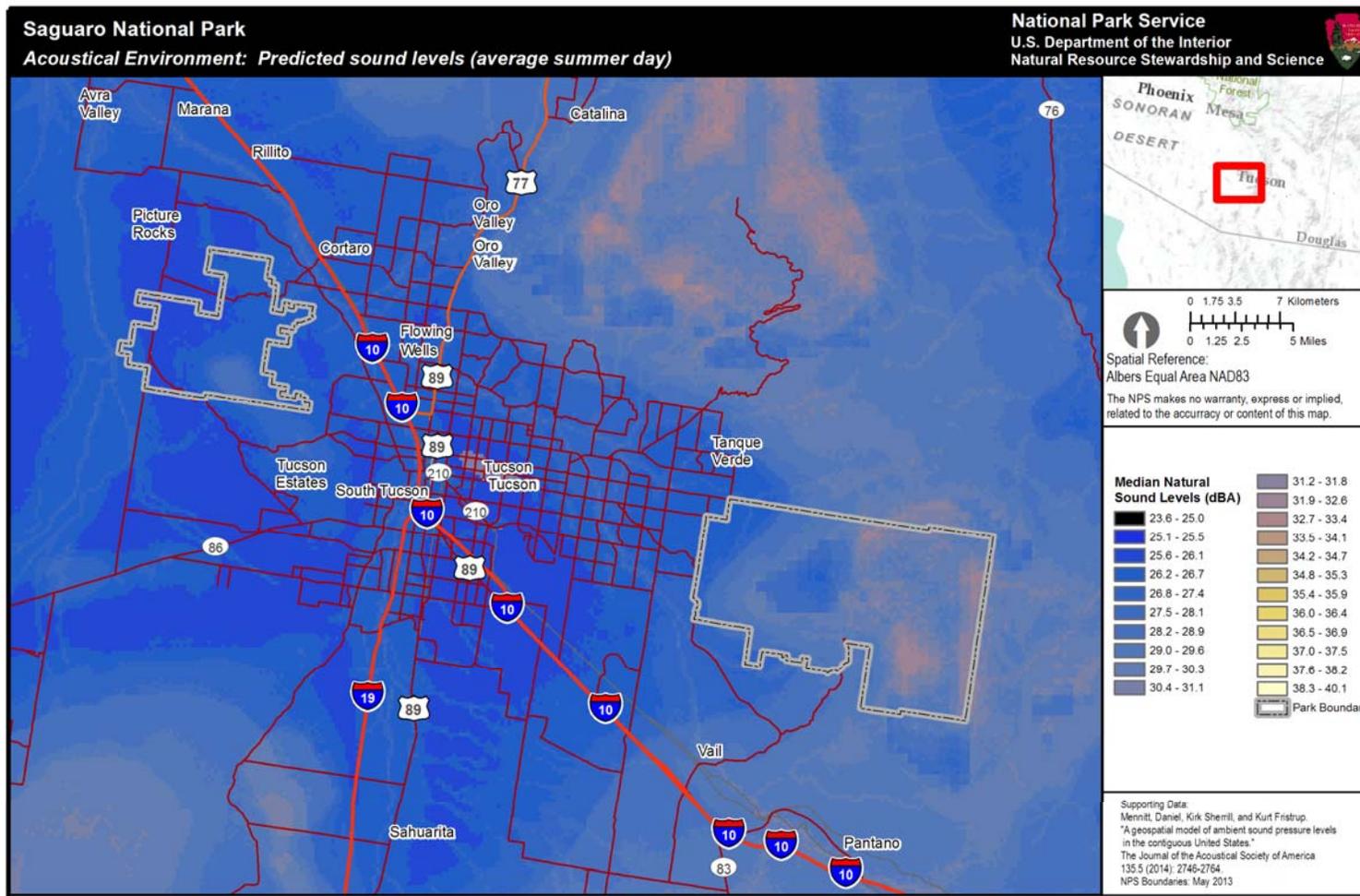
When L_{50} and L_{90} values are reasonably close (<3 dBA), this suggests that sound levels were relatively stable. When the Leq value is much greater than either the L_{50} or L_{90} value, this suggests that events much greater in amplitude than the “ambient” conditions occurred during the measurement period. Because acoustic data are logarithmic, a single, very loud event can have a large influence on the Leq value, but could have little or no influence on the L_{50} or L_{90} value (because Leq is an energy equivalent level and Lx are simple ranked values). The values for Leq , L_{50} , and L_{90} at the three data collection site in Saguaro NP are in Table 2.

Table 2. Summary acoustic measurements for three locations, Saguaro NP, 2004-2005

	Location	Mean (dBA)	Min (dBA)	Max (dBA)
Leq	SAGU001	55.3	47.8	58.7
	SAGU002	39.8	34.4	44.7
	SAGU003	30.2	19.6	38.9
L50	SAGU001	45.4	30.5	53.5
	SAGU002	34.7	28.8	39.5
	SAGU003	25.4	19.5	31.1
L90	SAGU001	35.2	27.6	40.4
	SAGU002	31.4	24.1	35.1
	SAGU003	22.6	18.9	26.7

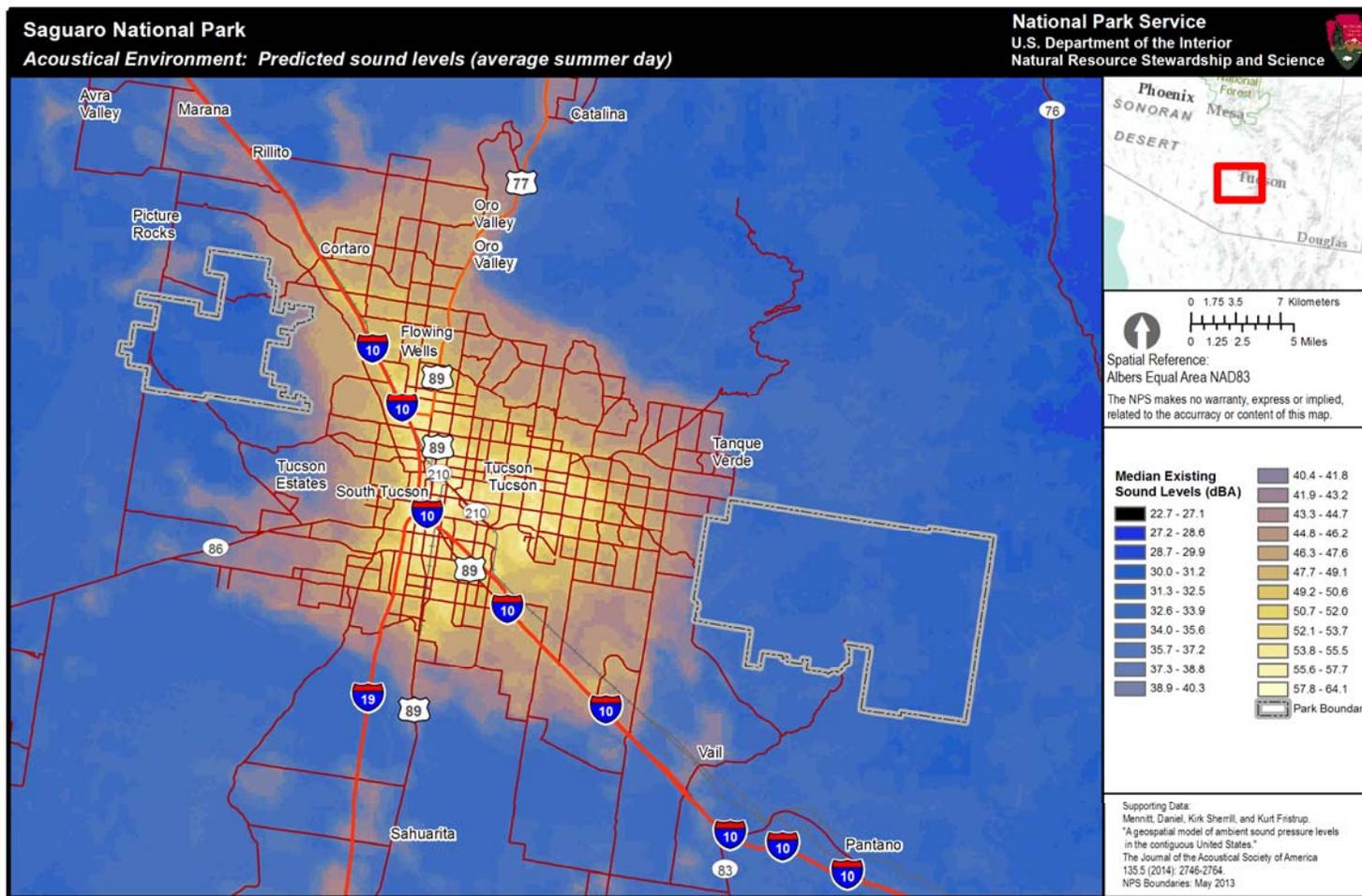
The SAGU001 location, 100 feet from Picture Rocks Road, was greatly influenced by vehicle traffic, and the SAGU002 location, about 0.9 miles from Picture Rocks Road, was also, but to a lesser degree, influenced by vehicle sounds on Picture Rocks Road. The SAGU003 location, in the eastern district near the old Madrona Ranger Station, was the farthest away from non-natural sound sources such as highways and airports. Acoustic metrics for this location were the lowest of all three locations, and likely are the most representative of natural sound levels in a saguaro cactus vegetation type.

Field measurements attribute the higher sound levels along Picture Rocks Road to traffic sounds from the road. The extent of the influence of sounds from vehicles on Picture Rocks Road on natural ambient sound levels in areas away from the road is difficult to ascertain. However, based on data collected during this study, it appears that traffic sounds attenuate at the rate of roughly 10 dB per mile in this vegetation type and terrain. Assuming natural ambient conditions in the Tucson District would be similar to natural ambient conditions in the Rincon District (absent non-natural sounds), it appears that sounds from traffic on Picture Rocks Road influence sound levels up to approximately 2 miles from the road.



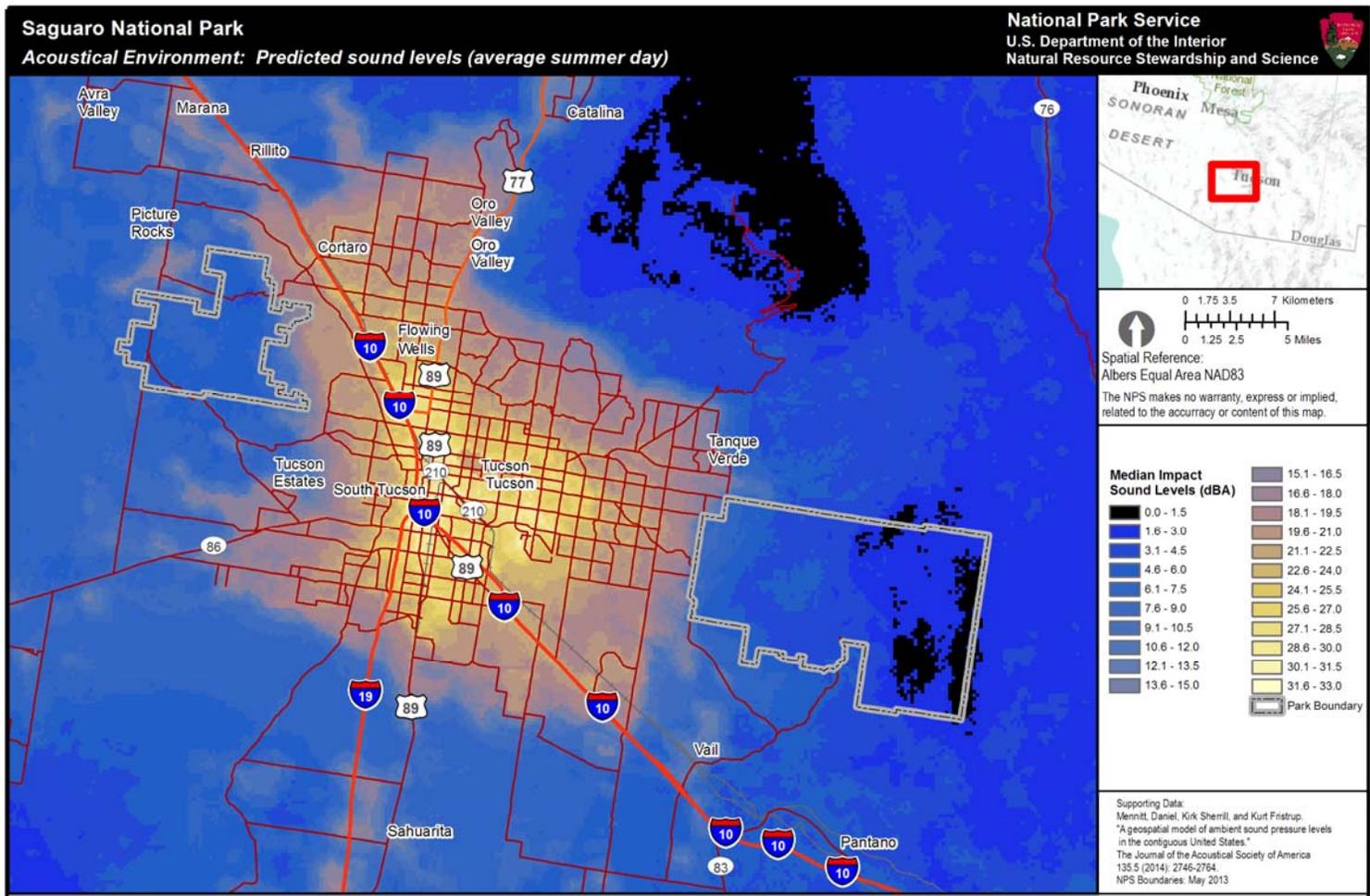
NPS Natural Sounds & Night Skies Division and NPS Inventory and Monitoring Program MAS Group 20150512

Figure 1. Median *natural* sound pressure levels for Saguaro National Park. This park-specific natural sound level map is generated by version 3.0 of the geospatial model. The color scale indicates the decibel level that is predicted in the park based only on natural sound sources. Sound level is measured in A-weighted decibels, or dBA, with 270 meter resolution. Black and dark blue colors indicate low decibel impact levels while yellow or white colors indicate higher decibel impact levels. Note that due to the national scale of the model inputs, this graphic may not reflect recent localized changes (such as new access roads or development). (note: although the color ramps are similar, each figure has different legend values)



NPS Natural Sounds & Night Skies Division and NPS Inventory and Monitoring Program MAS Group 20150512

Figure 2. Median *existing* sound pressure levels for Saguaro National Park. This park-specific existing sound level map is generated by version 3.0 of the geospatial model. The color scale indicates the decibel level that is predicted in the park based only on both human-caused and natural sound sources. Sound level is measured in A-weighted decibels, or dBA, with 270 meter resolution. Black and dark blue colors indicate low existing decibel levels while yellow or white colors indicate higher existing decibel levels. Sound levels in national parks can vary greatly, depending on location, topography, vegetation, biological activity, weather conditions and other factors. For example, the din of a typical suburban area fluctuates between 50 and 60 decibels (dBA), while the crater of Haleakala National Park is intensely quiet, with levels around 10 dBA. Note that due to the national scale of the model inputs, this graphic may not reflect recent localized changes (such as new access roads or development). (note: although the color ramps are similar, each figure has different legend values)



NPS Natural Sounds & Night Skies Division and NPS Inventory and Monitoring Program MAS Group 20150512

Figure 3 a. *Median sound level impact map for Saguaro National Park.* This park-specific acoustic impact map as generated by version 3.0 of the geospatial model. The color scale indicates how much human-caused noise raises the existing sound pressure levels in a given location (measured in A-weighted decibels, or dBA), with 270 meter resolution. Black and dark blue colors indicate low impacts while yellow or white colors indicate greater impacts. Note that due to the national scale of the model inputs, this graphic may not reflect recent localized changes such as new access roads or development. (note: although the color ramps are similar, each figure has different legend values)

Acoustic analysis

Because a large development such as a new interstate highway would increase noise at Saguaro NP, a thorough acoustic analysis should be included in any forthcoming environmental evaluation. NPS recommends that the forthcoming studies include assessment of impacts to the acoustic environment through an acoustical analyses that:

- Determines the natural ambient acoustic condition that exists at park units in close proximity to proposed development;
- Addresses the cumulative noise output of all of the equipment and activity for the project (site preparation, construction, as-built project);
- Determines the distance at which noise from the project will attenuate to natural ambient levels, including attenuation maps;
- Calculates noise levels at the park unit;
- Identifies the areas of the park in which the noise associated with the project would be above natural ambient levels;
- Assesses the effects that these noise levels would have on wildlife, visitors, and other sensitive receptors; and
- Identifies appropriate mitigation actions that can reduce or eliminate the impacts on park resources.

Noise from ground transportation is one of the most pervasive noise sources in national parks. Increases in such noise should be avoided when possible. Mitigation for noise can be accomplished through a variety of means, including but not limited to, intentional location of noise emitting activities away from park resources and noise sensitive resources, purchase of quiet alternatives for vehicles and equipment, muffling, baffling, and acoustic barriers.

Significance of acoustic resources in national parks

Wildlife and Natural Resources

The acoustic environment is a natural resource that is integral to wildlife communication, behavior, and many other ecological processes. Exposure to relatively high noise levels that typically occur close to a source can produce potentially harmful physiological responses in humans and other animals including hearing loss, elevated stress hormone levels and hypertension. Even low levels of noise can interfere with ecological processes in surprising and complex ways.

For example, some groups of animals (especially in social species) benefit by producing alarm calls to warn of approaching predators and contact calls to maintain group cohesion. A reduction in communication distance created by noise might decrease the effectiveness of these social networks. Furthermore, many animals are known to eavesdrop on vocalizations from different species. Gray squirrels listen in on the communication calls of blue jays to assess site-specific risks of cache pilfering; and nocturnally migrating songbirds and newts use the richness and complexity of biological sounds produced in local environments to make habitat decisions. Animals also use accidental produced by potential prey to locate their next meal; while prey animals use sound to avoid predation.

Human Health and Visitor Experience

Visitors can be positively or negatively affected by the quality of the acoustic environment. In relation to health and wellness, exposure to loud and continuous noises is known to cause hearing impairment, sleep disturbance, cognitive interruption, hypertension and other health detriments. Alternatively, hearing natural sounds is beneficial to human health and wellness by improving mood, cognitive performance, sleep quality and other benefits.

As was reported to the U.S. Congress in the *Report on the Effects of Aircraft Overflights on the National Park System* (NPS, 1994), a system-wide survey of park visitors revealed that nearly as many visitors come to national parks to enjoy the natural soundscape (91 percent) as come to view the scenery (93 percent). In addition, birding is one of the most popular outdoor recreational activities in the US with 48 million people participating in it each year (US Fish & Wildlife service, 2013). Most visitors identify a bird by hearing its call before the bird is ever seen. National Parks are uniquely poised to preserve natural soundscapes in proactive ways that protect this resource for the American public.

Wilderness Character

Saguaro NP contains areas that are designated and managed as wilderness. Preserving the acoustic environment and natural sounds of such areas are critical to effective wilderness management and can have important effects on wilderness character. Natural soundscapes and the absence of anthropogenic noise are crucial components of the wilderness qualities of solitude, naturalness, untrammeled, and undeveloped character. Noise, often from distant roads, park operations and maintenance activities, or aircraft overflights is one of the most common and pervasive human influence on the primeval character of wilderness.

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Air Resources Analyses for Proposed Interstate 11 Corridor Alternatives Related to Impacts at Saguaro National Park

The National Park Service is requesting that the Arizona DOT in the NEPA process for the proposed Interstate 11 Corridor conduct a two phase air quality impact analysis for impacts to the Saguaro National Park (SAGU) at both its west and east units. The first phase of the impact analysis will assess the impacts during construction for all of the Interstate 11 Corridor Route's alternatives proposed in the NEPA process. This should include assessment of construction impacts on Saguaro National Park air quality for whatever is intended for the Corridor like the highway, electrical transmission line(s), the rail line(s), and even energy pipeline(s). The second phase of the NEPA air quality impact analysis will examine the impacts to air quality at Saguaro National Park for the operations of all elements of the corridor for all the Interstate 11 Corridor Route's alternatives proposed.

The air quality analyses for both of the phases need to address impacts to the National Ambient Air Quality Standards (NAAQS) for the criteria pollutants (NO_x, SO₂, PM₁₀ PM 2.5 Ozone, carbon monoxide and lead) for all the averaging periods. The air quality analyses for both of the phases also need to address impacts to Air Quality Related Values (AQRVs) specifically acid deposition and visibility at Saguaro National Park.

Emission Inventories

Arizona DOT ought to develop emission inventory estimates for all sources of criteria air pollutants including particulate matter, oxides of nitrogen, volatile organic carbons, sulfur dioxide, lead, carbon monoxide and carbon dioxide.

For the construction phase air quality analysis, air pollutant emissions to be incorporated in the analysis should include but not be limited to emissions from all sources of air pollutant generating activities such as land preparation, concrete and asphalt plants, storage piles of materials, construction equipment, and tail pipe emissions.

For the operations phase air quality analysis, air pollutant emissions to be incorporated in the analysis would include all sources of air pollutants. Interstate 11 highway emissions would include tailpipe and fugitive dust emissions associated with the vehicle traffic. The Interstate 11 tailpipe emissions ought to reflect the wide variety of vehicle types associated with international highway traffic and a range of vehicle miles traveled would be considered. Air pollution emissions associated with the proposed rail line ought to include emissions for the

locomotives as well as potential fugitive emissions from the different types of freight being transported. We would suggest that a range of usage levels should also be assessed for rail.

Air Quality Modeling

For the NEPA air quality impact analysis to assess impacts to Saguaro National Park specific air quality impact methodologies and air quality dispersion models should reflect the most current EPA/FLM modeling guidance. Current modeling guidance requires that the near field impacts to the NAAQS for both the construction and operational at the park should be calculated with the EPA AERMOD model for the criteria pollutants (NO_x, SO₂, PM₁₀ PM_{2.5} and lead). Near field impacts to the CO NAAQS should follow the most current EPA guidance which at this time recommends the EPA CAL3QHC model.

Assessment of ozone concentrations in the park can make use of the modeling analysis that would demonstrate compliance with the ozone NAAQs in the Tucson area. NPS can provide information for Saguaro National Park relative to interpreting ozone modeling results.

Impacts to Air Quality Related Values (AQRVs) specifically acid deposition of total nitrogen and total sulfur would be calculated and compared to the Deposition Analysis Thresholds per the Federal Land Managers Air Quality Related Values Workgroup (FLAG) guidance from 2010. Acid deposition impacts may be calculated with either the CAMx or CMAQ photochemical grid model or with the EPA / FLM recommended long range transport model, CALPUFF. The impacts to visibility from the two phases of the project, both in the near field and far field ought to follow the recommendations in the FLAG document. The near field visibility impacts (less than 50 km from the source to the boundary of the Park) ought to be assessed with the EPA VISCREEN model (a screening model) or in the case of very significant predicted coherent plume impacts predicted by the VISCREEN analysis, the EPA PLUVUE model would be employed, as well. For visible haze impacts from sources areas greater than 50 km from an area within the Park, the visibility impacts would be estimated either with the CAMx photochemical grid model, or the EPA / FLM recommended long range transport model, CALPUFF.

Finally, we would recommend that National Park Service (NPS) air quality modelers be given the opportunity to review and provide input on emission inventory and modeling protocols prior to Arizona DOT contractors undertaking the air quality analyses. NPS can provide help on interpreting the modeling results in the context of AQRV impacts.

Night Skies and Photic Environment

Photic resources and lightscapes can be important as a natural feature, a cultural feature, or both. Natural lighting conditions are also important to wilderness character and have been identified under the Clean Air Act Amendments as an air quality related value. The importance of lightscapes and photic environments is related to an array of park resources and values such as wildlife, wilderness character, visitor experience, cultural landscapes and historic preservation.

One way the Natural Sounds & Night Sky Division (NSNSD) scientists measure the quality of the photic environment is by measuring total sky brightness averaged across the entire sky and comparing that value to natural nighttime light levels. This measure, called the Anthropogenic Light Ratio (ALR), can be directly measured or modeled when observational data are unavailable. Lower ALR levels reflect higher quality night sky conditions.

Night sky data has been collected for several sites over several years (2007, 2011) at Saguaro NP. The full set of reports, data, and images can be accessed at <http://www.nature.nps.gov/night/skymap.cfm> for use with GoogleEarth. To demonstrate the condition for this report, geospatial modeling and the latest ground-based data (2011) are used.

Figure 1 provides modeled ALR levels for the contiguous U.S. This figure illustrates the quality of the night skies found throughout the country and across the national park system. Figure 2 provides modeled night sky quality for the local area surrounding the park. These images provide an important landscape scale context for considering night sky quality at the park. From the modeled data, the ALR at Saguaro NP is estimated to range between 1.3 and 9.5. The range of condition is a result of some areas being in closer proximity to the City of Tucson and other developments. See Figure 2.

Ground-based night sky data collected at Wasson Peak in 2011 indicates an average ALR level of 5.9. This is a wilderness location in the center of the western portion of the park. Similar data collected at Rincon Peak on the eastern edge of the eastern portion of the park indicated an ALR of 1.55. An anthropogenic light ratio of 0.0 would indicate pristine natural conditions, while a ratio of 1.0 would indicate that anthropogenic light was 100% brighter than the average natural light from the night sky.

In the parts of the park where ALR is lower (closer to 1.3), most observers feel they are in a natural environment. The Milky Way is visible from horizon to horizon and may show great detail, with fine details such as the Prancing Horse; Zodiacal light (or “false dawn” which is faint glow at the horizon just before dawn or just after dusk) can be seen under favorable conditions; and there is negligible impact to dark adaptation looking in any direction. In areas that are more affected by human-caused light, the Milky Way has typically lost most of its detail and is not visible near horizon; Zodiacal light is rarely seen; and anthropogenic light likely dominates natural celestial features and some shadows from distant lights may be seen.

Figure 3 is a 360-degree panorama captured at the park that depicts sky brightness in false colors, and is intended provide information on nearby light domes and other sources of anthropogenic light. This image demonstrates the direction of light sources in relationship to the park. The brightest lights are from the east (left side of image) while less light is seen to the west (right side of image). Thus, the any new light

sources to the west of Wasson Peak would alter the photic conditions by increasing the ALR in that direction.

These images reflect the influence from artificial light as experienced on the ground. Artificial light can also be seen from space via satellite images. Figure 4 shows upward radiance of light at night in the Tucson area. This data is from the VIIRS satellite day/night band (DNB) and can be downloaded and viewed from the [NPS Night Skies Program](#). It shows how much light is reflected up to space at night. Figure 4 demonstrates that the light sources influencing Saguaro NP currently come from urban areas and along highways.

Night Sky analysis and mitigation

When Saguaro NP sky quality is compared to the nearby developed areas, the park conditions provide a stunning view for visitors, a refuge for nocturnal wildlife, and an important attraction for astronomers. The lighting associated with this project has the potential to adversely impact the natural light conditions of Saguaro NP. Artificial light causes light pollution in two forms: *sky glow* (also known as artificial sky glow, light domes, or fugitive light) is the overall brightening of the night sky from human-caused light scattered by small particles in the atmosphere; and *direct light* which illuminates the localized landscape to produce light trespass or glare.

The introduction of artificial light in either of these forms to the natural environment has two important consequences. First, it alters the quality of the night sky which hinders the view of a starry sky, limits the opportunity to dark-adapt one's eyes, reduces the ability for scientific discovery through astronomy, and diminishes the human perception of the night time scene. Second, it alters that part of the physical environment that affects wildlife species and natural ecological processes. Artificial lighting affects wildlife by altering the natural light regimes that have evolved over millennia (Longcore and Rich 2014, Gaston et al. 2014). The condition of the photic environment can affect wildlife interactions and other vital ecological processes including predator/prey relationships, reproduction, navigation and migration. The disorienting nature of artificial light is exemplified in the migration of passerine birds that fly at night, using the stars as reference, and have been shown to be disoriented by lights from nearby cities and towers (Gehring 2009). When attracted to lighted structures, wildlife may be either diverted which causes additional energy expenditures, or may collide with the lighted structure, causing mortality.

The disorienting and disruptive impacts of artificial light on wildlife are well documented, but more subtle ecological impacts such as changes in community structure, or wildlife behavior must also be recognized. For instance, when insect species are drawn to light sources, it increases abundance of prey in the surrounding area, and this has been shown to alter community structure by increasing the number of predatory and scavenger species present during both day and night (Davies et al. 2012). These changes on community structure can have wide ranging effects, particularly for insectivores like bats. In some cases, artificial light may have the opposite effect: habitat avoidance, due to increased predation risk (Patriarca and Debernardi 2010).

The NPS recommends a baseline light pollution study, the development of a lighting mitigation plan for each phase of operations, and continued monitoring. Mitigation of nighttime lighting can be effective in reducing ecological concerns and impacts to scenery. The project would likely be improved if mitigation is applied at the construction, operation and decommissioning phases. NPS recommends the incorporation of the following general lighting principles as general mitigation for lighting from this project.

General Lighting Principles:

- Light only WHERE you need it
- Light only WHEN you need it
- SHIELD lights and direct them downward
- Select lamps with WARMER COLORS
- Use the MINIMUM AMOUNT of light necessary
- Select the most ENERGY EFFICIENT lamp and fixture

References

Davies, Thomas W., Jonathan Bennie, and Kevin J. Gaston. "Street lighting changes the composition of invertebrate communities." *Biology letters* (2012): rsbl20120216.

Gaston, Kevin J., et al. "Human alteration of natural light cycles: causes and ecological consequences." *Oecologia* 176.4 (2014): 917-931.

Gehring, Joelle, Paul Kerlinger, and Albert M. Manville. "Communication towers, lights, and birds: successful methods of reducing the frequency of avian collisions." *Ecological Applications* 19.2 (2009): 505-514.

Longcore, Travis, and Catherine Rich. "Ecological light pollution." *Front Ecol Environ* 2.4 (2004): 191-198.

Patriarca, Elena, and Paolo Debernardi. "Bats and light pollution." *Centro Regionale Chiropteri, Turin* (2010): 5-6.

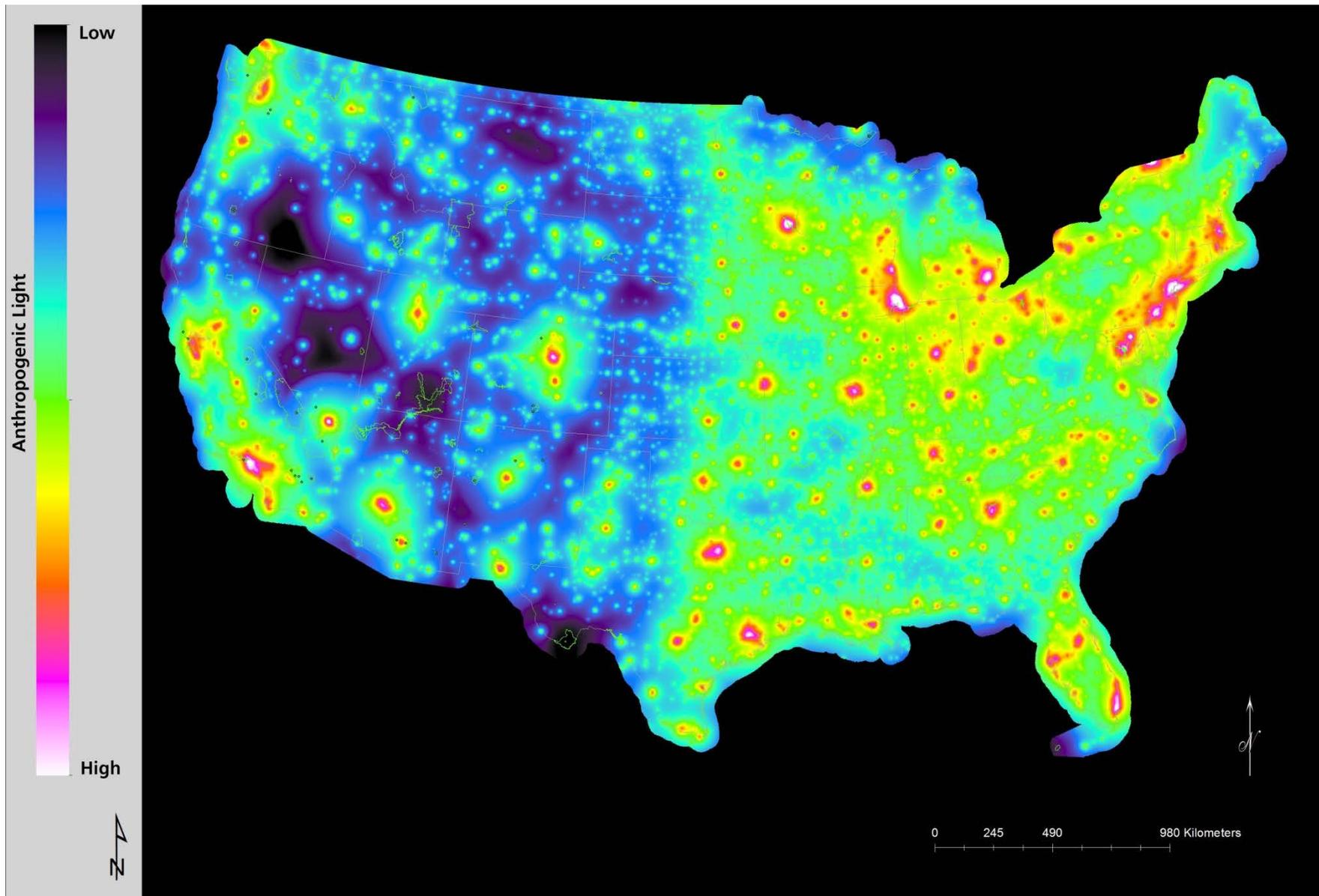


Figure 1. *Anthropogenic Light Ratios (ALRs) for the Contiguous US.* White and red represents more environmental influence from artificial lights while blues and black represent less artificial light.

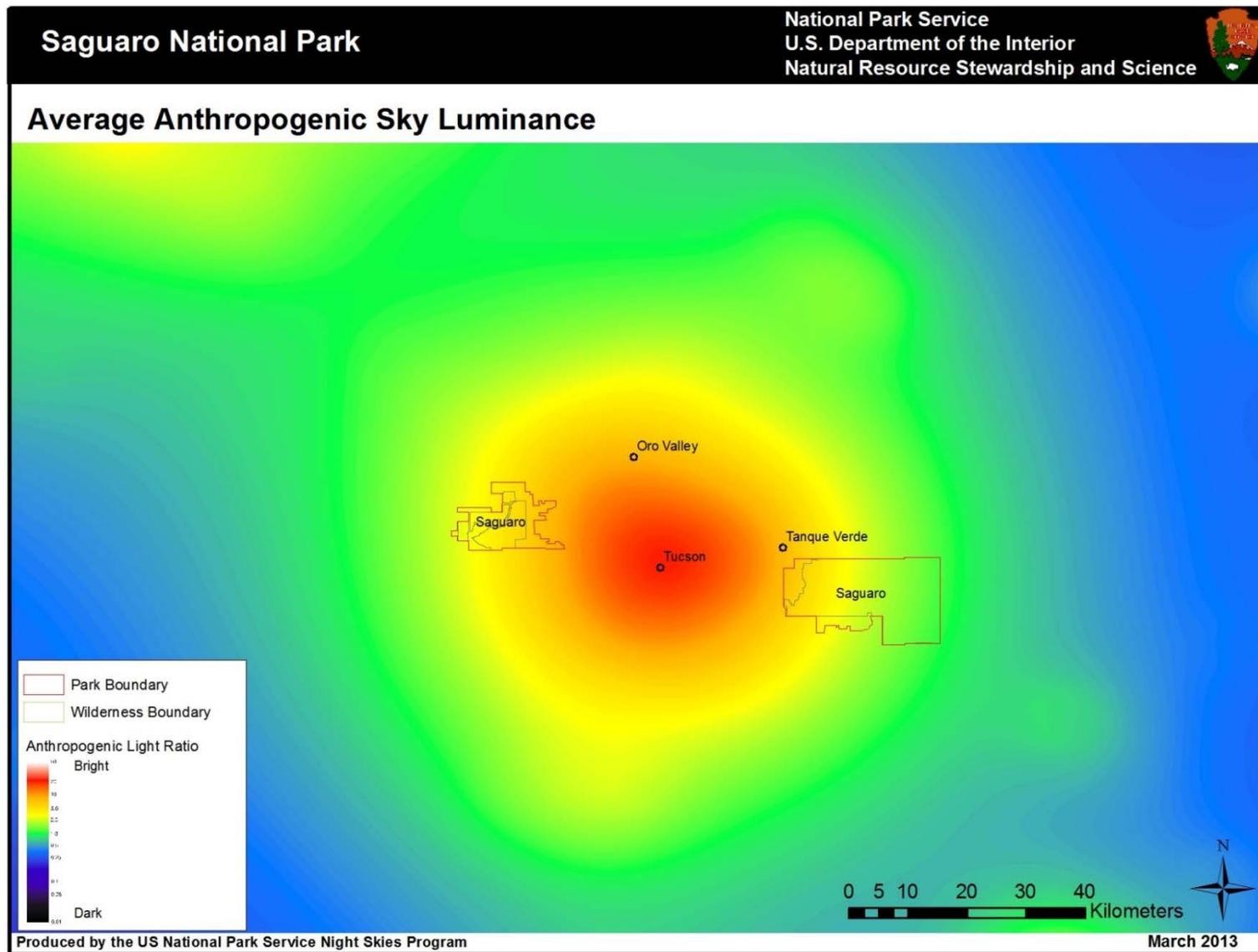


Figure 2. *Regional view of anthropogenic light near Saguaro NP.* White and red represents more environmental influence from artificial lights while blues and black represent less artificial light. The scale is small in order to show regional context and to show how far reaching the impacts of artificial lighting can be. While Saguaro NP may be influenced by artificial light it still maintains more naturalness than surrounding areas and serves as a harbor of dark skies.

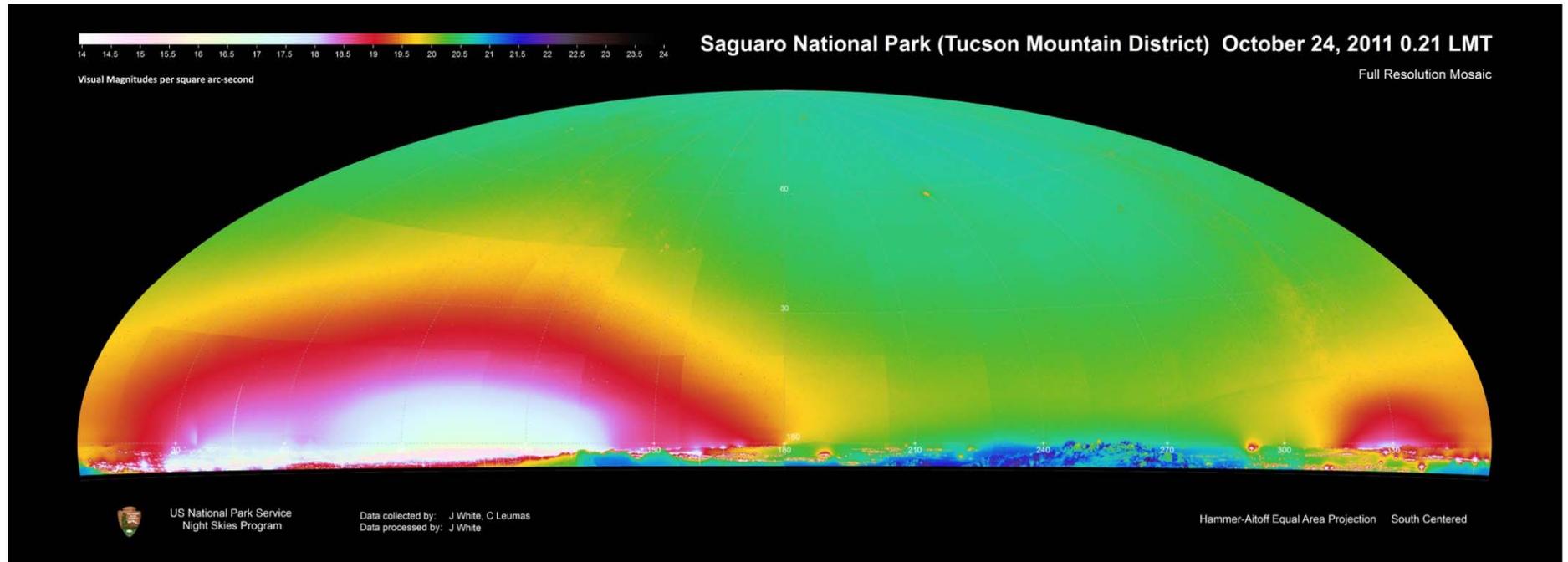


Figure 3. *Panoramic image of all (natural and anthropogenic) sources of light as observed at Saguaro NP in 2011.* This image was captured with highly sensitive photographic equipment in order to demonstrate the extent of sky glow from human light sources. White and red represents more environmental influence from artificial lights while blues and black represent less influence. Images with less anthropogenic light may display celestial objects like stars or the span of the Milky Way.

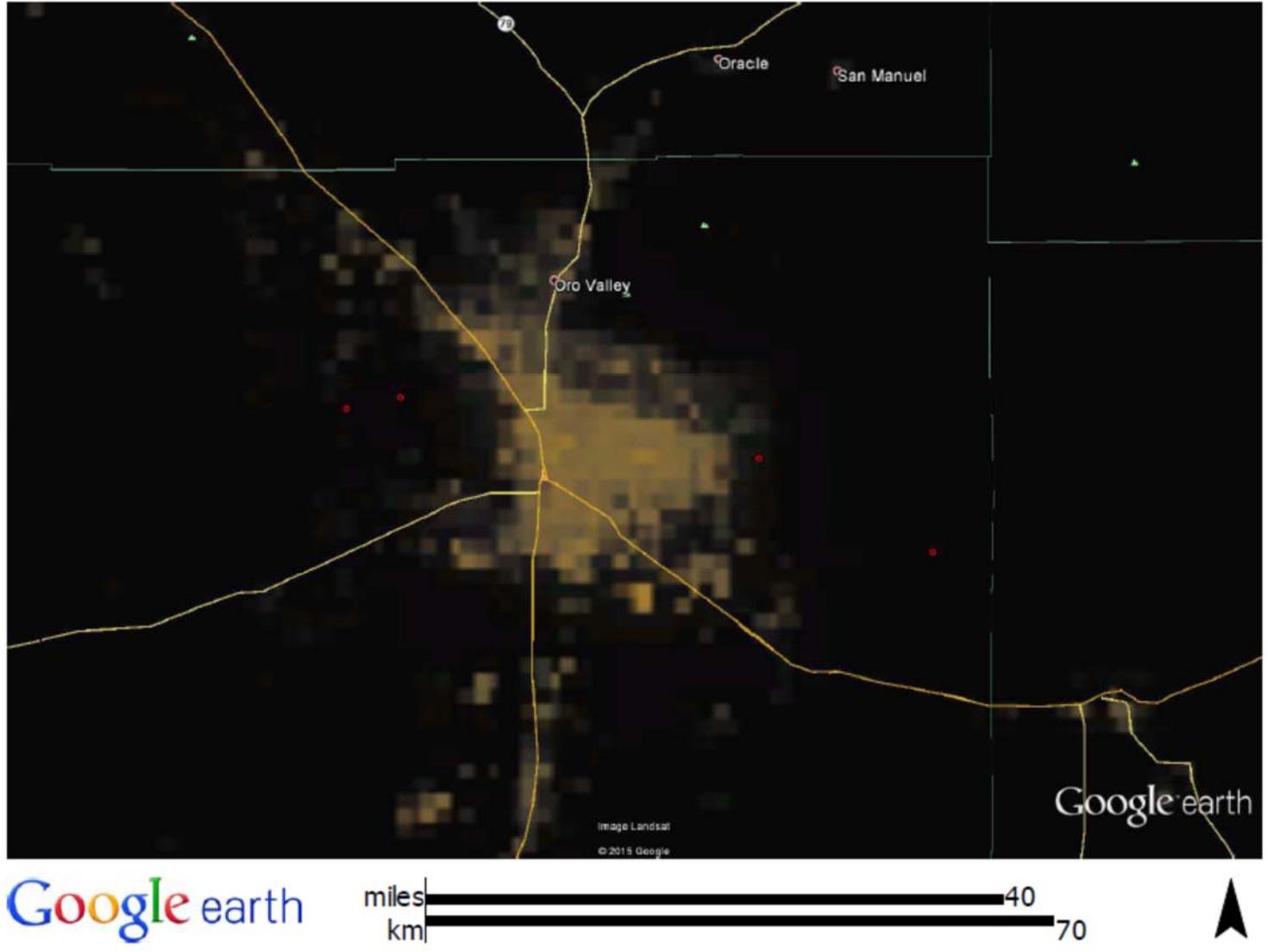


Figure 4. VIIRS day/night band (DNB) satellite image in vicinity of Saguaro NP showing upward radiance at night. Image from GoogleEarth.

GENERALIZED STATEMENT OF WORK

Potential Effects Analysis

Visual Simulations

Photographic simulations should be prepared for selected, key observation points (KOP) within Saguaro National Park (SAGU), to depict a range of potential visual effects, and to illustrate the effectiveness of various mitigation measures at selected sites, on a case by case basis. KOPs will be identified where the view of the project area will be most revealing (representative KOP) or where there is high viewer sensitivity (critical KOP).

Identification of KOPs or viewing locations will be done in coordination with the NPS; the criteria to select KOPs will be based on issues or concerns raised by NPS staff, and where visitors could be visually sensitive about (i.e. trails, interpretive stops, etc.). KOP selection should also be based on the review of visually exposed areas within the landscape as revealed with the viewshed modeling and the rationale for the selection of the sensitive viewing platforms will be documented. A map of the location of the KOPs should be included, along with geo-referencing data, in a Visual Simulation Report or Visual Resource Technical Report, that documents the methodology of the field work and simulation development.

Once KOPs have been approved, visual resource specialists will complete all fieldwork necessary to photograph the project area from the identified KOPs. Digital photos from each KOP will be taken using a 50 millimeter equivalent digital camera. Following fieldwork, the contractor will prepare color photographic simulations of the proposed highway as it would appear from the selected KOPs. Simulations will combine digital images of existing environmental conditions with computer illustrations of the proposed highway. Images and simulations should span the 124° horizontal and 55° vertical human field of view, which will require stitching multiple images together and making adjustments to remove any distortion. The simulation should be a 2-stage (on separate sheets) simulation with the full field of view supplemented with a zoom in view focused on the project elements. Other content to be displayed within simulations include KOP reference, scale, date of image, range of distance, KOP location (graphic and coordinates), orientation of view, elevation of KOP, height of camera above ground elevation, and instructions on viewing simulation for accurate visual representation.

The location of each of the KOPs identified to assess impacts to NPS lands will be mapped and geo-referenced. Based on field observations and the simulations the visual resource specialists will identify a general contrast rating for KOP based on environmental factors including distance, angle of observation, length of time project is in view, relative size or scale, season of high visitor use, light conditions, spatial relationship to the surrounding landscape and atmospheric conditions. Contrast should be described in terms of the primary design elements of form, line color and texture.

Effects Analysis

Visual or scenic impacts are defined as the change to the visual environment resulting from the introduction of modifications to the landscape. The methodology used to analyze the impacts to visual resources from the construction and maintenance of the proposed project will assess the magnitude of change to the landscape character and visual quality and effects to park visitors from the sensitive viewing platforms.

GENERALIZED STATEMENT OF WORK

Short term (less than 5 years), long-term (equal to or greater than 5 years), and cumulative visual effects are anticipated as a result of construction and operation of the proposed highway and ancillary facilities. To analyze these effects and discern the difference between impacts amongst alternatives, the basic design elements of form, line, color, and texture should be used to describe and rate the degree of visual contrast or change to the 4 elements of the characteristic landscape - landform, water, vegetation, and structures.

A standardized approach should be developed and approved by ADOT and be used to evaluate the visual contrast created between the proposed project and the existing landscape for those KOPs that were identified for assessment of potential visual resource impacts. The degree to which a project affects the visual quality of a landscape is largely dependent on the visual contrast created between a proposed project and the existing landscape. The contrast can be measured by comparing the project features or components with the major features in the landscape. The basic visual elements of form, line, color, and texture are used to make this comparison in addition to consideration of environmental factors incorporating the angle of observation and length of time the project is in view.

Effects to Sensitive Viewers

The effects to sensitive viewers from the identified KOPs will be determined using the environmental factors such as, the amount of visual contrast, dominance, and level of attraction introduced by project components, including, but not limited to the visibility conditions, the angle of observation (looking down on or at the same level as the project or parallel perpendicular) to the project, the length of time the project would be in view, and the scale of the proposed project and associated components.

Potential impacts to the views/viewshed of SAGU by the proposed project should be evaluated. Impacts should be evaluated by the following procedures: in terms of the environmental and design factors outlined above for the KOPs and the following:

1. Use the viewshed modeling and maps to identify areas potentially exposed to visual contrasts created by the highway, and include the following information:
 - a. Affected area within the park (acreage/percent of area).
 - b. Distance from the highway to the affected areas within the park.
 - c. The type of recreation, interpretive and other activities within the affected areas.
 - d. The frequency of use by park visitors.
 - e. The role the affected areas play in the management objectives the park.
 - f. Other forms of cultural modifications within the viewshed.
 - g. The full context of the observer's horizontal field of view, the amount of potential highway development that could occupy the view, and the orientation of the pipeline development within the field of view.

GENERALIZED STATEMENT OF WORK

2. For the analysis, prepare maps that label the locations of key observation points, show the full context of the park, and illustrate the affected viewshed within the SMAs exposed to the pipeline construction and facilities.
3. Provide the rationale for selecting the key observation points.
4. Prepare visual simulations as described in the previous section to determine potential effects.
5. Document how people access the key observation points (motorized travel on road, trail hike, etc.).
6. Explain how the environmental factors influence the degree of noticeability when the park visitor is within the visually exposed areas.
7. Provide an assessment of park visitor use within the area and how exposure to the highway project and facilities could affect the visitor experience.
8. Prepare a an assessment of the visual contrast of the project based on the standardized approach developed for the project.
9. Summarize the level of visual exposure based on the contrast rating results and summarize the impact to the park visitor, taking environmental factors, the field of view, and other site conditions into consideration.

Evaluation and Significance Criteria

The thresholds of the visual resources impacts in terms of none, negligible, low, moderate, and high will be defined based on the conditions within the visual APE and type of activities/ground disturbance related to the proposed project and provided in table format.

An analysis of visual dominance, scale, continuity, and contrast should be used in determining to what degree the proposed project would attract attention and to assess the relative change in character and scenic quality as compared to the existing characteristic landscape. Consideration of the amount of visual contrast created is directly related to the amount of attention that is drawn to an element in the landscape. For this analysis, the contrast should be assessed by comparing the proposed project and the associated facilities with the major features in the existing landscape. The analysis should also include an assessment of cumulative effects, including an assessment of whether and to what extent the project would promote additional development in the area visible from the KOPs.

Impacts from the proposed project should also be evaluated in terms of the impacts over time. For this assessment, short-term impacts are defined as effects that would be less than 5 years in duration and long-term impacts are considered to be impacts that would persist more than 5 years

Identification of Design Features

The design features that are assumed to part of the project design and include standard Best Management Practices that would be executed during the construction and maintenance of the proposed project will be identified. These design features should be considered as being implemented during construction for the evaluation of environmental consequences.

GENERALIZED STATEMENT OF WORK

Identification of Mitigation

Appropriate mitigation measures should be recommended to further reduce residual impacts from the proposed action.

Contrast ratings conducted at each KOP will identify any special impact mitigation measures outside of standard mitigation measures for the entire Project. NPS should be provided an opportunity to review mitigation and propose or identify additional reasonable mitigation measures. This may require an updated set of simulations that reflect implementation of mitigation measures and its effectiveness.

Visual Resource Study Plan and Technical Resource Report

If a Visual Resource Study Plan will be submitted to ADOT for review and comment NPS should have the opportunity to review and comment. A Study Plan should provide the specific steps in the analysis of the visual resource impacts, sample tables and figures and their suggested content, and preliminary threshold definitions.

NPS would receive the draft and final Technical Visual Resource Reports submitted to ADOT for review and comment. The Report will be used to inform the Draft and Final EIS. The Technical Report will also include a photographic documentation of site conditions, 2-D photographic simulations of the proposed project in the existing environment (if not provided as a separate Visual Simulation Report); the visual resources inventory (baseline conditions) and the analysis of the effected environment (environmental impacts).



Letter from National Park Service, dated November 3, 2016



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Letter from National Park Service, received December 16, 2016



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United States Department of the Interior

NATIONAL PARK SERVICE
IMDE-HPP
PO Box 25287
Denver, Colorado 80225-0287



IN REPLY REFER TO:
H(34) (IMDE-HPP)

Aryan Lirange, PE
Senior Urban Engineer
FHWA Arizona Division
4000 North Central Avenue, Suite 1500

RE: I-11 Purpose and Need Memorandum, I-11 Corridor from Nogales to Wickenburg, Arizona

Dear Mr. Lirange,

Thank you for providing the National Park Service (NPS) with the opportunity to comment on the proposed Interstate 11 (I-11) Corridor project from Nogales to Wickenburg, Arizona. There are seven National Historic Landmarks (NHLs) within or proximate to the project corridor as shown in the Purpose and Need Memorandum for the I-11 Corridor Alternatives Selection Report and Tier 1 Environmental Impact Statement. NHLs are nationally significant places that illustrate important themes, persons, or events in American history.

The NHLs within the project area include the Gatlin Site, Desert Laboratory, San Xavier del Bac Mission, Air Force Facility Missile Site 8 (Titan II ICBM Site 571-7), Tumacacori Museum, San Cayetano de Calabazas, and Mission Los Santos Angeles de Guevavi (see attached map). To the maximum extent possible, efforts must be made throughout the project to minimize harm to NHLs in accordance with Section 106 of the National Historic Preservation Act. Section 110(f) of the National Historic Preservation Act of 1966 (as amended) specifically identifies this requirement stating: "Prior to the approval of any Federal undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible Federal agency official shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such National Historic Landmark." Further information about the special requirement for protecting NHLs can be found in the accompanying regulations at 36 C.F.R. § 800.10.

Adverse effects are not limited to direct impacts and include visual effects. Our primary concern is visual intrusions, views from the NHL, and whether there will be direct impacts to the nationally significant sites listed above. As it proceeds with the development of this project, we encourage the Federal Highway Administration consider the potential impacts to these resources when assessing alternative routes.

If you have any questions, please feel free to contact Skylar Bauer at (303) 969-2842 and Skylar_Bauer@nps.gov.

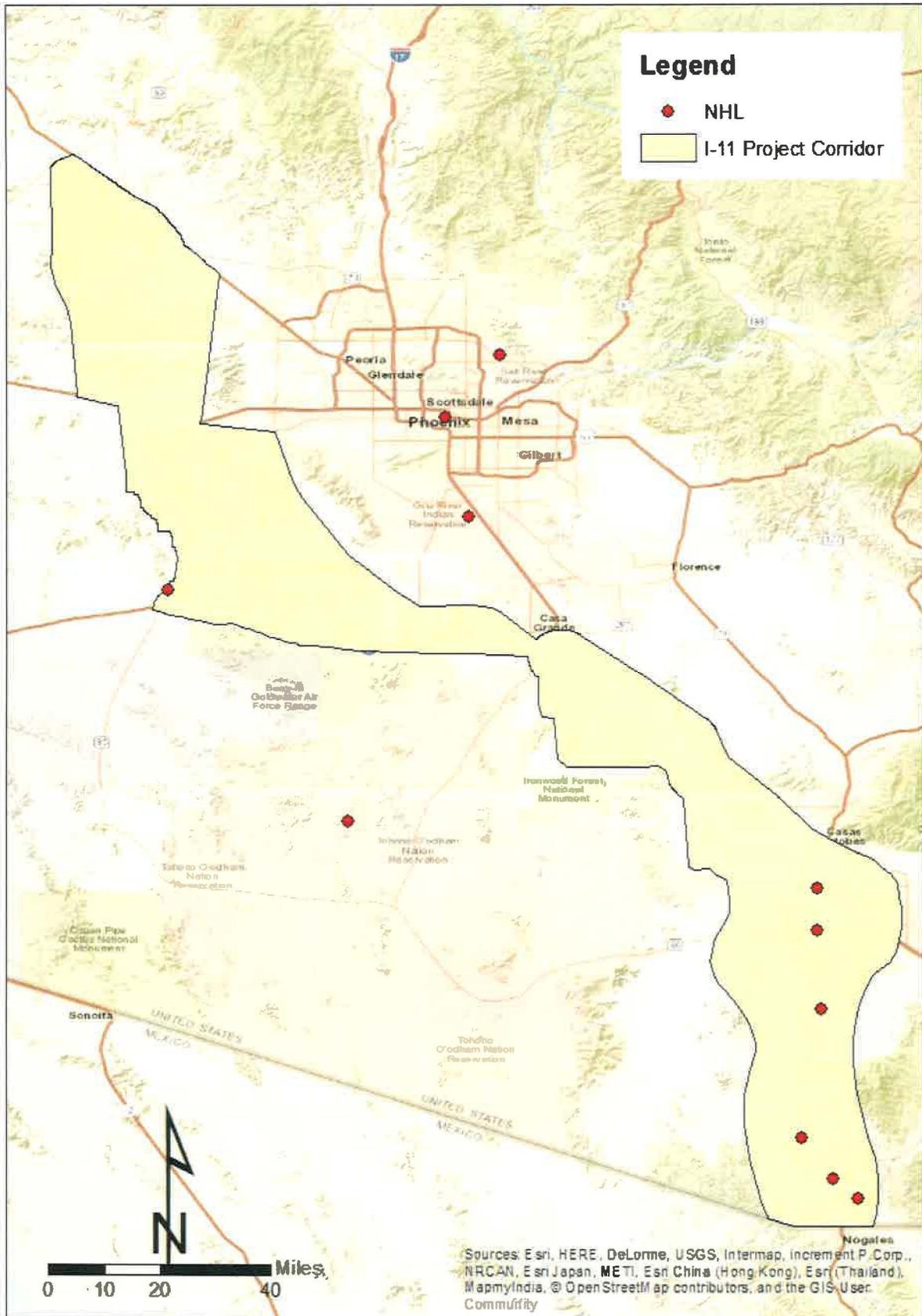
Sincerely,

Amy Cole

Program Manager

NPS Intermountain Region, Heritage Partnerships Program

Cc: Kathryn Leonard, Arizona State Historic Preservation Office,
23751 N. 23rd Ave., #190
Phoenix, AZ 85085





Letter from National Park Service, March 17, 2017



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United States Department of the Interior



NATIONAL PARK SERVICE

Saguaro National Park
3693 South Old Spanish Trail
Tucson AZ 85730

IN REPLY REFER TO:

March 17, 2017

Rebecca Yedlin
Environmental Coordinator
FHWA – Arizona Division
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Dear Rebecca:

Saguaro National Park has reviewed the Alternatives Selection Report Evaluation Methodology and Criteria Report for the Interstate 11 Tier 1 Environmental Impact Statement and feel it is worth noting that as we move towards identifying potential routes to carry forward for further analysis, our biggest concern continues to lie with the proximity of the corridor to the Tucson Mountain District of Saguaro National Park, especially given the 24,000 acres of designated Wilderness within our boundaries. We will be focused on potential direct and indirect influences the chosen alternatives would have on wilderness values and impacts to air quality, natural sound, viewsheds, night skies, plant communities, and wildlife.

Specific comments include:

- **Page 7. Figure 2-3.** Understanding that it is not feasible to pull forward all details from previous reports, this figure could be somewhat misleading when taken out of the context of specific agency comments found in the Scoping Summary Report. It might be more representative of what is trying to be captured by changing the title to read, “Agency Scoping Corridor Alternative Options, 2016”, and remove the word “feedback” from the legend box in the top right. Another suggestion would be to move the figure description from the bottom of page 5 to fit on the page with the map or overlay the map.
- **Page 13. Figure 2-6.** It would be worth noting in this figure that the 2000’ corridor is using engineering inputs (p.10) that would also allow for the footprint of the corridor to be used for freight rail, passenger rail, and a utility corridor in the future.
- **Page 14. Figure 2-7.** Thank you for including the Saguaro Wilderness in this figure and we appreciate recognition of this resource value in maps as we move forward. Additionally, would it be possible, specific to this figure, to also indicate the Class 1 Airshed designation which encompasses the entire park boundary. The Saguaro Wilderness, Class 1 Airshed, and National Park Service boundary are three discrete layers because of their unique designations and concerns.

- **Page 18, Table 2-1. Special Designated Lands.** Consider adding, "...designated lands, *their character and their values*", to the Description. Specify direct "*and indirect*" impacts under the Evaluation Measure and list as three discrete designations: Saguaro National Park, Saguaro Wilderness, and Class I Airshed.

As a Cooperating Agency, we value our opportunity to comment on this document. Thank you for addressing our comments.

Sincerely,



Leah McGinnis
Superintendent



Letter from National Park Service, June 2, 2017



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IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Saguaro National Park
3693 South Old Spanish Trail
Tucson AZ 85730



June 2, 2017

Rebecca Yedlin
Environmental Coordinator
FHWA – Arizona Division
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Dear Ms. Yedlin:

The National Park Service (NPS) attended the public scoping meeting at the Arizona Riverpark Inn in Tucson on May 2, 2017, for the preparation of an Environmental Impact Statement (EIS) for the Interstate I-11 Corridor Project. We appreciate the opportunity to submit additional thoughts and comments in regards to how this project may affect Saguaro National Park (Park).

Our specific comments on the meeting materials and presentation follows:

- **Symbology for Sensitive Environmental Resources.** The page entitled “South Section: Screening Results”, shows Alternative C as “*Reasonably meets criteria*” and Alternative D as “*Least meets criteria*” for Sensitive Environmental Resources. The NPS requests that both alternatives be identified as “*Least meets criteria*”. While Alternative D is located slightly farther from Saguaro National Park than Alternative C, it is still ½ mile from the park and ¾ mile from federally-designated Saguaro Wilderness. The NPS suggests that any route bisecting the Avra Valley would have similar impacts to environmental resources such as wildlife corridors, and therefore would warrant the same rating for each alternative.
- **Communication of potential multi-modal use.** The NPS requests additional information be provided regarding the uses for the corridor to include freight rail, passenger rail and a utility corridor. This would help to better understand the environmental impacts to Park resources. We understand that impacts of these additional uses will be assessed in-depth at a later time, however the NPS requests that an analysis of impacts from the additional facilities be utilized as part of the current process in determining route selection.

In order to better understand the full implications of the proposed development on Saguaro National Park, it would be beneficial to holistically evaluate the potential impacts rather than utilizing a fragmented analysis that may not directly address impacts to the Park. We would also recommend that the EIS give attention to any mitigation options necessary to avoid adverse

impacts on these resources, and identify follow-up monitoring necessary to evaluate the efficacy of any mitigation measures.

Finally, we wish to reiterate our assessment that if this project is to move forward, we would strongly prefer the alternative that utilizes the current Interstate 10 corridor. Even with mitigations, the two western alignment alternatives would have severe and widespread impacts to Saguaro National Park, federally-designated Saguaro Wilderness, associated Class I Airshed, natural sounds, viewsheds, night skies, plant communities and wildlife.

Thank you again for the opportunity to provide these comments. We appreciate your attention to our concerns. The NPS is committed to working collaboratively with our state, federal, and tribal partners to develop and implement a cooperative framework for sound science-based management of the I-11 corridor. If you have any questions about these comments, please contact me at 520-733-5101 or Scott Stonum at 520-733-5170.

Sincerely,



Leah McGinnis
Superintendent



Letter from National Park Service, August 31, 2017



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IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Saguaro National Park
3693 South Old Spanish Trail
Tucson AZ 85730



August 31, 2017

Rebecca Yedlin
Environmental Coordinator
FHWA – Arizona Division
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Dear Rebecca:

Thank you for the opportunity to review the Annotated Outline and Methodology Report for the Interstate 11 Tier 1 Environmental Impact Statement. We have a few comments for consideration. Under Section 3, Affected Environments and Environmental Consequences we would request that you consider adding dark skies and wilderness as impact topics. Saguaro National Park has popular night sky viewing programs for amateur and professional astronomers, along with general night sky viewing opportunities available to the general public. Significant sky viewing infrastructure also exists within a distance that could potentially be impacted by lighting from the project (Whipple Observatory, Mount Lemmon Observatory, Steward Observatory, and Kitt Peak National Observatory). Due to the proximity of this project to the Saguaro Wilderness we will be exploring potential impacts on qualities protected under the Wilderness Act such as, untrammeled, undeveloped, natural, and outstanding opportunities for solitude or a primitive and unconfined type of recreation.

We also ask that you consider adding impacts to ethnographic resources on non-tribal lands as an impact topic under Section 3. The Tohono O'odham Nation has used the lands now comprising Saguaro National Park for traditional practices prior to the establishment of the park and has continued to use these lands for these practices each year since its establishment. Potential alignments through Avra Valley are directly adjacent to these ethnographic use areas.

On page 15 we noticed that the Juan Bautista de Anza National Historic Trail is not on the list as a standalone, National Park Service unit within the study area, although it is shown on project maps. Additional sites that are also within the study area and may meet the 4(f) criteria for consideration: the Arizona-Sonora Desert Museum, Mission San Xavier del Bac, and the Titan Missile National Historic Landmark.

In section 3.14.1, p. 25, please consider listing the spread of invasive plant species as a topic to be considered within this section, as construction activities and transportation infrastructure are primary vectors for invasive, non-native plant species. As a Cooperating Agency, we value our opportunity to comment on this document. Thank you for addressing our comments.

Sincerely,

A handwritten signature in blue ink that reads "Leah McGinnis". The signature is written in a cursive style with a large initial "L" and "M".

Leah McGinnis
Superintendent



Letter from National Park Service, November 3, 2017



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United States Department of the Interior
NATIONAL PARK SERVICE
Saguaro National Park
3693 South Old Spanish Trail
Tucson, Arizona 85730



IN REPLY REFER TO:

November 3, 2017

Rebecca Yedlin
Environmental Coordinator
FHWA – Arizona Division
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Dear Rebecca:

Saguaro National Park has reviewed the Alternatives Selection Report for the Interstate 11 Tier 1 Environmental Impact Statement. Our comments are as follows:

- **Table 4-1. Special Designated Lands** (p. 18). We suggest adding the following words (shown here in italics) to this sentence: “Minimize the potential for loss *or impairment* of special designated lands”.
- **Section 6.5.1.3. System Linkages and Interstate Mobility** (p. 36). Are estimates available for the freight traffic that would be re-routed by this project (i.e. how much freight traffic otherwise travelling on west coast infrastructure would be diverted through the Port of Guaymas and onto the I-11 corridor)?
- **Appendix B** (p. B-3). In previous comments we have disagreed with the conclusion in this table that Options B, C, and D equally “Best Meets Criteria” for Special Designated Lands. It could be our understanding of how the term “impacts” is used throughout the report and what is meant when referring to ‘direct’, ‘indirect’ or ‘cumulative’ impacts. For example, is a direct impact only those impacts that have a direct overlap with a property’s boundaries? It might be useful to clarify and standardize these terms.

As a Cooperating Agency, we value our opportunity to comment on this document. Thank you for addressing our comments.

Sincerely,

Leah McGinnis
Superintendent



ADOT I-11 Coordination Meeting with Saguaro National Park, December 19, 2017



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MEETING PURPOSE: ADOT I-11 Coordination Meeting with Saguaro National Park

DATE & TIME: December 19, 2017

LOCATION: Meeting at Saguaro National Park and Conference Call

ATTENDEES: Rebecca Yedlin, FHWA; Aryan Lirange, FHWA; Jay Van Echo, ADOT; Scott Stonum, NPS; Ray O'Neil, NPS; Don Swann, NPS; Leah McGinnis, NPS; Adam Springer, NPS; Jennifer Pyne, AECOM; Anita Richardson Frijia, AECOM; Don Weeks*, NPS ; Melissa Trenchick*, NPS; Katie Rodriguez*, ADOT; Randy Stanly*, NPS; John Notar*, NPS; Mark Myer*, NPS; Debbie Miller*, NPS; Joshua Fife*, ADOT
 *Participated via conference call

MEETING SUMMARY

Key Discussion Points/Action Items:	Responsible Party / Action Item
1. The group discussed methodology and approach for visual resources analysis, including consideration of Park Service values such as the potential impact on setting and the visitor experience. The ADOT study team has identified key observation points (KOPs) for the analysis and acknowledged the Class I airshed in Saguaro National Park.	AECOM to provide shapefile of KOPs identified to date. NPS to provide information on preferred KOPs.
2. Landscape connectivity is a key issue, particularly between Ironwood National Forest Monument and Saguaro NP. NPS noted that some species are already experiencing losses due to cumulative analysis. There is some camera data on smaller carnivore species populations, primarily from west unit of the park.	NPS to provide species data as available.
3. The group discussed preparation on representative renderings or simulations for the project.	ADOT/FHWA to discuss further.
4. NPS provided input on air quality analyses. The group discussed that conformity and hot-spot analyses would not be part of the Tier 1 level, programmatic analysis. NPS expressed additional concern about emissions from vehicles; visibility impacts related to NO ₂ , PM ₁₀ and PM _{2.5} ; and deposition of nitrogen.	Input to be considered in EIS analysis.
5. Night skies will be addressed in Tier 1 EIS, may be more of a cumulative impact. The group discussed that some baseline data is available but generally this is an emerging area.	Input to be considered in EIS analysis.
6. The group discussed noise and soundscape. NPS asked whether quiet pavement could be used. The noise analysis cannot assume this; materials decisions would probably occur in Tier 2.	Input to be considered in EIS analysis.

Key Discussion Points/Action Items:	Responsible Party / Action Item
7. Some areas may be managed for wilderness character, which includes 5 qualities that should be assessed for potential impacts.	Input to be considered in EIS analysis.
8. FHWA raised the idea of a tunnel to potentially avoid impacts on the Tucson Mitigation Corridor. NPS questioned whether vibration would be an issue and indicated that solution would be less beneficial to the park.	N/A
9. The group agreed to continue discussions in the monthly Cooperating Agency meetings.	N/A

cc: Document Control



Letter from National Park Service, August 6, 2018



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United States Department of the Interior



NATIONAL PARK SERVICE
INTERMOUNTAIN REGION
12795 West Alameda Parkway
P.O. Box 25287
Denver, Colorado 80225-0287

IN REPLY REFER TO:
IMRO-RSS-EQ (1248)

AUG 06 2018

VIA ELECTRONIC MAIL: NO HARD COPY TO FOLLOW

Aryan Lirange
FHWA Senior Urban Engineer
Federal Highway Administration
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Dear Ms. Yedlin,

The National Park Service has completed its review of the Interstate 11 Administrative Draft Tier 1 Environmental Impact Statement. We appreciate the opportunity to provide you with our thoughts and comments about how this project may affect units of the National Park Service system, specifically Saguaro National Park. Please see our attached comments located in Appendix A (Cooperating Agency Review Comments). Within Appendix A, you will also find NPS Wilderness shape files and numerous references identified as pertinent to the analysis. Additionally, enclosed are previous comment letters on this proposed action in Appendix B (Previous NPS Letters).

Through the Organic Act, the NPS is charged with protecting park resources for the enjoyment of future generations. We hope our special expertise regarding the unique resources within and surrounding Saguaro National Park proves beneficial to the Federal Highway Administration and Arizona Department of Transportation in analyzing the environmental impacts associated with this project.

If you have questions about our response please contact Scott Stonum, Chief Science and Resource Management, at 520-733-5170.

Sincerely,

Sue E. Masica
Regional Director

Attachment:

- 1) Appendix A Cooperating Agency Review Comments
- 2) Appendix B Previous NPS Letters

**cc: Jay Van Echo, Project Manager, Arizona Department of Transportation
Leah McGinnis, Superintendent Saguaro National Park
Melissa Trenchik, Environmental Quality, Chief**

I-11 Administrative Draft Tier 1 Environmental Impact Statement (EIS)

Cooperating Agency Review Comments

Administrative Draft Date: July 2, 2018

#	Section	Page	Paragraph/ Bullet/ Figure	Line(s)	Reviewer	Comments	Disposition
1	General Comment				NPS-SAGU-AS/NPS-IMRO-EQ	<p>NPS remains concerned about wilderness or impacts to wilderness character. We appreciate the discussion regarding impacts to the viewshed of the Saguaro Wilderness (page 3.9-13), However, there is little discussion about the language of the Wilderness Act and impacts to specific wilderness characteristics of value to Saguaro National Park such as "solitude or a primitive and unconfined recreation", or "which generally appears to have been affected primarily by the forces of nature the impact of man's work substantially unnoticeable".</p> <p>Please ensure that the Saguaro Wilderness and wilderness issues are properly acknowledged in future maps and materials, especially those that will be presented during the next round of public meetings. Map files are included</p>	
2	General Comment				NPS-SAGU-AS	<p>Please clarify the Green Alternative as the "Recommended Alternative" throughout the text. With several letters and colors being discussed, readers' analysis and interpretation will benefit by making clear when the Recommended Alternative is being discussed in the text.</p>	
3	General Comment for Executive Summary				NPS-SAGU-AS	<p>Page 3.10-17, lines 22-25 cite that new roadway construction represents 5% of the overall emissions of a 20 year lifetime. We suggest adding a section in the Executive Summary that broadly discusses the environmental impacts of construction through resource extraction, transport of construction materials, and emissions for constructing new roadways and associated infrastructure versus utilizing existing corridors. Depending on the nature of the projects there could be additional direct impacts to park resources.</p>	
4	ES1.2	ES-2	1	7	NPS-SAGU-AS	<p>We suggest including an additional paragraph after line 7 to explain the recommended corridor has been identified to also include future multimodal use; the present analysis only examines highway-related impacts; and that cumulative impacts from additional future multimodal uses in the corridor would come later through a separate environmental review.</p> <p>We suggest that greater clarity be provided about the future possibility of other uses within the Recommended Alternative.</p>	
5	ES 1.5	ES-6	1	12	NPS-SAGU-AS	<p>We suggest adding "rail and utility" after "multimodal".</p>	
6	ES	ES-9	Fig. ES-3, 4, 5, etc.		NPS-DES	<p>Please identify NPS wilderness areas as "NPS Designated Wilderness" on all maps.</p>	
7	ES	ES-11	Table ES1.7		NPS-DES	<p>Please include "Wilderness values" on this list, and in subsequent chapters. Saguaro National Park has a significant interest in preserving wilderness character for our visitors.</p>	
8	ES	ES-20	Para 5	Line 33	NPS-DES	<p>In addition to a concern for wilderness values, Saguaro National Park has a interest in the success of the CAP mitigations and the TMC because they were created to protect wildlife in Saguaro National Park.</p> <p>Please add the following text after the sentence about the Pima pineapple cactus: "The new corridor would also significantly affect environmental values in Saguaro National Park. It would degrade wilderness character by adding noise, light, and air pollution, and would also significantly affect scenic views and wildlife connectivity, with the potential to lead to adverse impacts wildlife in the park. "</p>	

9	ES 1.9.3	ES-20	2	38	NPS-SAGU-AS	<p>This paragraph is misleading. The UA Tech Park is directly adjacent to the current I-10 alignment and all five of the Sonoran Corridor alternatives are closer to the current I-19 alignment (Orange Alternative) than any of the other alternatives. The Green (Preferred Alternative) is 4.7 miles south of the closest Sonoran Corridor Alternative (intersection of I-19 and Pima Mine Road).</p> <p>Additionally, including discussion of the Sonoran Corridor does not align with the previously stated criteria of including projects that are programmed and funded by 2022 (p. ES-11) as the alternatives are still under development. If the Sonoran Corridor is a factor in selecting an I-11 alternative, the Arizona Passenger Rail Corridor Study (which is further along in the environmental review with a completed Tier I EIS and Record of Decision) should also be included as a factor in the selection of an alternative. Furthermore, this project's estimated 20,000 passengers by 2035 should be used to decrease the traffic load and LOS projections for I-11.</p>
10	ES 1.9.3	ES-20	1	33	NPS-SAGU-AS	We suggest modifying the sentence to "endangered Pima pineapple cactus" and "several protected species" to reflect the larger list of listed species provided later in Table 3.14-3, p. 3.14-13.
11	ES	ES-21	Para 2	Line 20	NPS-DES	Please clarify how actions described here would effectively mitigate the significant wildlife impacts created in Saguaro National Park by construction a highway in this sensitive area.
12	ES1.9.3	ES-20-21	1, 2, 3	27-42, 1-20	NPS-SAGU-SS	Option D, which would create a new hwy through the Avra Valley and within a .3 miles of Saguaro National Park and within .6 miles of designated Wilderness within the park, could have impacts to wildlife populations the park was established to protect and could impact Wilderness Character. These potential impacts should be listed in each section that describes a potential new hwy through the Avra Valley. There are specific descriptions concerning the Tucson Mitigation Corridor (TMC) and potential impacts to it. The TMC was set aside as a mitigation for impacts to wildlife movement by the CAP canal, however, the TMC alone will not possibly serve as a similar mitigation to a new hwy
13	ES 1.9.3	ES-21	3	17-20	NPS-SAGU-AS	Please describe how the mitigations would be sufficient to have an "overall beneficial effect on the functionality of the TMC as a wildlife corridor".
14	1.5.2	1-12	Table 1-2	N/A	NPS-SAGU-AS	Does Level of Service projected for 2040 include programmed and funded road projects that would lessen the traffic load? We suggest clarifying this in the table description or as a footnote.
15	1.5.2	1-15	Table 1-3	N/A	NPS-SAGU-AS	Do 2040 values include the traffic burden of additional freight that will be attracted to the route which would otherwise be traveling on the west coast or do these values only reflect vehicle loads from the current regional population trends without I-11 built? We suggest clarifying this in the table description or as a footnote.
16	2.2.1	2-4	2	31	NPS-SAGU-AS	We suggest changing "regional parks" to "public lands". Regional parks may suggest county parks to some readers instead of the mixture of jurisdictions and agencies that exist.
17		2-4	Para 4	Line 34	NPS-DES	The language in this paragraph references Figure 2-3, but it is not possible to understand Figure 2-3 based on it. Below are comments suggesting revision to Figure 2-3. Suggest revising the text of this section once the figure is revised.
18	2.2.1	2-5	Figure 2-2	N/A	NPS-SAGU-AS	This figure could be interpreted to mean that Cooperating Agencies agreed upon the "New Route". We suggest combining the category of "Existing Facility" with "New Route" into a single symbology and label as "Suggested Routes". As is, the map could suggest that agencies did not favor existing infrastructure and held different views than the public's preference shown on the following page
19	2	2-5	Figure 2-3		NPS-DES	Figure 2-3 needs to be re-drawn, as it is difficult to interpret. The colors are labelled as "Density of Proposed Routes", which is not defined in the Table in a way that is clearly understood. It is also not defined in the text that references this figure.
20	2	2-9	Table 2-1	Key Environ. Impacts	NPS-DES	p. 2-9. Under Key Environmental Inputs, change "Avoid specifically designated lands..." to "avoid adversely <i>impacting</i> designated lands...", which would include Saguaro National Park.
21	2.2.2	2-14	Table 2-3	N/A	NPS-SAGU-SS	In table 2-3, Under criteria for Sensitive Environmental Resources, both corridor options C and D seem to fall within the " least meets criteria ". These routes are nearly identical and would both segregate the Tucson Mountains and Saguaro National Park and Wilderness from the protected mountain ranges to the west leading to a severely fragmented landscape.

22	2	2-14	Table 2-3	Sensitive Environ. Resources	NPS-DES	In Table 2-3 under Sensitive Environmental Resources, Corridor Option C has a rating of “moderately favorable.” Perhaps “Least meets criteria” is more appropriate. The statement on p. 3.4-8 that the Purple Alternative in the South Section would “result in permanent impacts to several federal designated recreation areas of national significance,” which includes SNP seems to support this classification.
23	2.2.2	2-16	Figure 2-7	N/A	NPS-SAGU-SS	The map legend for “Screening Outcomes” for identified “Environmentally Sensitive Areas” should also include Saguaro National Park and Tucson Mountain County Park. Land ownership is indicated on the legend on the bottom left of the map, but the actual parks should also be indicated on the legend to the top right of the map under “Environmentally Sensitive Areas”, just as the Bureau of Reclamation and TMC are.
24	2.2.3	2-21	4	36-38	NPS-SAGU-AS	Were the approximately 20,000 estimated daily riders projected by the Arizona Passenger Rail Corridor Study (p. ROD-41) used to reduce the 2040 traffic modeling projections and congestion scenarios for I-11? We suggest citing those potential vehicle reduction statistics
25	3.14.3.3	3.14-17	N/A	N/A	NPS-SAGU-AS	A recent study published in April 2018 (citation below) projected that growth by 2050 would lead to an 80% loss of structural connectivity for Saguaro National Park. This study shows overlapping areas of connectivity as presented in this section, supporting the previous work by AGFD and the AWLWG, and also models impacts from growth on specific species. Perkl, R., L.M. Norman, D. Mitchell, M. Feller, G. Smith, & N.R. Wilson. 2018. Urban growth and landscape connectivity threats assessment at Saguaro National Park, Arizona, USA, Journal of Land Use Science, DOI: 10.1080/1747423X.2018.1455905)
26	3.3	3.3-7 and 3.3-9			NPS-RO	The section concerning land management and special designated lands should include a robust discussion about the laws and regulations governing those lands, including the NPS Organic Act (54 USC 100101(a), 100301 et seq.), the Wilderness Act (16 USC 1131). The EIS should include an analysis of how the proposed route will affect the ability of Saguaro National Park to manage park resources and values in accordance with these laws.
27	3.3.1.3	3.3-10	Figure 3.3-4	N/A	NPS-SAGU-SS	Add “Wilderness Area (NPS)” to “Land Management and Special Designated Lands” legend and label the Saguaro Wilderness to correspond as has been done for other Federally Designated Wilderness areas. Additionally, request that this map be segmented out to show the South, Middle, and North sections in larger detail (same as the Planned Land Uses maps on following pages) so that these lands will be distinguishable to readers.
28	3.3.1.4	3.3-11	N/A	N/A	NPS-SAGU-AS	We suggest adding text about Pima County’s Buffer Overlay Zone in this section to discuss the county’s commitment to protecting lands within one mile of Saguaro National Park and Tucson Mountain Park to “ <i>promote a continued economic benefit to the region by protecting the public preserves for the enjoyment of residents and visitors alike</i> ” (Pima County Code of Ordinances § 18.67). The Recommended Alternative could introduce 4.4 linear miles of interstate roadway and overlap with 916 acres of the Buffer Overlay Zone immediately surrounding Saguaro National Park (with potentially additional future multimodal uses). Additional sections of the Buffer Overlay Zone surrounding Tucson Mountain Park would also be impacted with the overall result of increased environmental impacts throughout the Tucson Mountains and decreased wildlife connectivity between the Tucson Mountains and neighboring protected open space.
29	3.3.1.4	3.3-18	Figure 3.3-8		NPS-SAGU-SS	Add “Wilderness Area (NPS)” to “Land Management and Special Designated Lands” map legend and label the Saguaro Wilderness to correspond as has been done for other Federally Designated Wilderness areas. Additionally, request that this map be segmented out to show the South, Middle, and North sections in larger detail (same as the Planned Land Uses maps on preceding pages) so that these lands will be distinguishable to readers.
30	3.3.1.4	3.3-19	Table 3.3-2	N/A	NPS-SAGU-SS	This table for Purple Option does not account for direct and indirect impacts that will likely occur to National Park Service lands and Designated Wilderness within Saguaro National Park. Impacts could occur to wildlife due to fragmentation of corridor, natural quiet, night sky, viewshed and more.

						<p>Acreage for NPS lands should be indicated under Corridor Option C to reflect these potential impacts. The built highway would not have to directly cross NPS lands in order to have impacts to those lands as this table indicates.</p> <p>Also on this table, under Special Designated Lands, please indicate Wilderness Area (NPS) as noted in previous comment for Figure 3.3-18, and indicate the acres that may be impacted in relation to Wilderness Character for Corridor Option C (lands on west side of the Tucson Mountains).</p>
31	3.3.1.4	3.3-27	Table 3.3-4	N/A	NPS-SAGU-SS	<p>This table for Green Alternative does not account for direct and indirect impacts that will likely occur to National Parks Service lands and Designated Wilderness within Saguaro National Park. Impacts could occur to wildlife due to fragmentation of corridor, natural quiet, night sky, viewshed and more.</p> <p>Acreage for NPS lands should be indicated under Corridor Option C to reflect these potential impacts. The built highway would not have to directly cross NPS lands in order to have impacts to those lands as this table indicates.</p> <p>Also on this table, under Special Designated Lands, please indicate Wilderness Area (NPS) as noted in previous comment for Figure 3.3-18, and indicate the acres that may be impacted in relation to Wilderness Character for Corridor Option D (lands on west side of the Tucson Mountains).</p>
32	3.3	3.3-28	Figure 3.3-12	N/A	NPS-SAGU-AS	The figure shows wilderness areas for BLM and USFS, but NPS wilderness has been omitted. Please ensure that the Saguaro Wilderness is reflected in future maps and materials.
33	3-4	3.4-2	Table 3.4-1	N/A	NPS-RO	The table lists laws which mandate how recreation is managed on federal lands. The NPS section should include the National Park Service 1916 Organic Act and the sections for the NPS, BLM, and USFS should include the 1964 Wilderness Act.
34	3.4.3.1	3.4-3	1	5	NPS-SAGU-AS	We suggest adding text similar to this following line 5..." <i>Additionally, multiple wilderness areas are located throughout the project area which were protected through Congressional legislation to provide the public with 'outstanding opportunities for solitude' and areas 'where the earth and its community of life are untrammelled by man' (Wilderness Act, 1964).</i> "
35	3	3.4-8	Para. 2	Line 15	NPS-DES	P. 3.4-8. Please add the following bullet to "Permanent impacts...could include:" "Impacts to recreation benefits associated with federally-designated Wilderness, which includes increased noise, air pollution, light pollution, and impacts to scenic views."
36	3	3.4-8	Para 2	Line 15	NPS-DES	Also, add to bullet about "Alteration of the recreation setting to a more developed setting...visible or audible." Add after "audible," ...thereby impacting visitor experiences such as wildlife and scenic viewing."
37	3.4.4.1	3.4-8		21-38	NPS-SAGU-SS	This section states "The Purple Alternative has potential impacts to six federal recreation resources, including.... It would potentially impact recreation within four other federal recreation areas..." Request that this section also describe what the potential impacts may be, the scope of those impacts, and the extent of those impacts. This should also include potential impacts to the Saguaro Wilderness located within Saguaro National Park as those impacts relate to Wilderness Character.
38	3.4.4.1	3.4-9	Table 3.4-2	N/A	NPS-SAGU-SS	This table only lists acres that may be impacted that are located in the 2,000-foot-wide corridor for this option. By only listing these acres it is implied that recreational resources outside of the 2,000-foot-wide corridor will not be impacted. For example, Wilderness Character, which is related to visitor experience and recreation within Wilderness areas could be impacted well outside the 2,000-foot-wide corridor and should be accounted for in this section. Request more specificity to what the impacts could be, and to include areas that may be impacted outside the 2,000-foot-wide corridor.
39	3.4.4.1	3.4-9		2-16	NPS-SAGU-SS	This section states "The Green Alternative has potential impacts to eight federal recreation resources, including.... It would potentially impact recreation within four other federal recreation areas..." Request that this section also describe what the potential impacts may be, the scope of those impacts, and the extent of those impacts. This should also include potential impacts to the Saguaro Wilderness located within Saguaro National park as those impacts relate to Wilderness Character.
40	3.4.4.1	3.4-9	Table 3.4-3	N/A	NPS-SAGU-SS	This table only lists acres that may be impacted that are located in the 2,000-foot-wide corridor for this option. By only listing these acres it is implied that impacts to recreational resources outside of the 2,000-foot-wide corridor will not be impacted. As an example, Wilderness Character, which is related to visitor experience and recreation within Wilderness areas could be impacted well outside the 2,000-foot-wide corridor and should be accounted for in this section. Request more specificity to what the impacts could be, and to include areas that may be impacted outside the 2,000-foot-wide corridor.

41	3.4.4.6	3.4-11	Table 3.4-5	N/A	NPS-SAGU-SS	The summary table does not acknowledge that Federal Lands near the 2,000-foot-wide corridor and not just within the corridor could experience impacts to recreation due to the proximity of a new Interstate. As stated in previous comments, impacts could occur to recreational users of Saguaro National Park and Saguaro Wilderness, impacting visitor's recreational experiences including impacts to Wilderness character, scenic views, wildlife viewing, natural quiet and other recreational values.
42	3.4.5	3.4-13,14		9-38, 1-4	NPS-SAGU-SS	Since this section has only identified potential impacts to recreational resources that are within the 2,000-foot-wide corridor, the list of potential mitigations does not include any potential mitigations for sites that could have recreational impacts outside of the corridor. Examples could be, reduced wildlife viewing opportunities, broad viewshed impacts, decreased night sky viewing opportunities and potential mitigations for these.
43	3.5	3.5-1	N/A	N/A	NPS-SAGU-AS	We suggest including in this section that Saguaro National Park and other locations within the project area have ethnographic resources.
44	3	3.6-1			NPS-DES	Section 3.6. Please add information to this section analyzing the potential change in economic impacts of the purple and green alternatives related to the potential loss to the Tucson economy in potential visitors to Saguaro National Park (and potentially Old Tucson Studios, and the Arizona Sonora Desert Museum) due to loss of the rural character surrounding this popular tourist site. Please cite the recent study on the economic value of Saguaro National Park to the Tucson economy (https://pubs.er.usgs.gov/publication/70197532 , https://pubs.er.usgs.gov/publication/70191350). It is estimated that the park contributes >\$74 million to the Tucson economy in 2016 and there could be a potential loss if visitor experiences to the park are diminished. In general, it would be valuable to include a more detailed analysis of both the potential short-term and long-term economic losses to the sector of the southern Arizona economy that depends on ecotourism.
45	3.6.3	3.6-3	2	17-27	NPS-SAGU-AS	A new NPS report found that nearly one million people visited Saguaro National Park in 2017, contributing \$88.7 million to the local economy (https://www.nps.gov/sagu/learn/news/tourism-to-saguaro-national-park-creates-88-682-500-in-economic-benefits-in-2017.htm). As lines 19-22 indicate, tourism has a significant economic impact across Arizona. While the Recommended Alternative could facilitate more people visiting the region, visitation and economic contributions could be impacted by the degraded quality of experience due to the proximity and impacts of I-11 Pima County's Buffer Overlay Zone (Pima County Code of Ordinances § 18.67) has further helped protect these qualities by "promot[ing] a continued economic benefit to the region by protecting the public preserves for the enjoyment of residents and visitors alike". The Recommended Alternative would encroach on the one mile buffer area, degrading many of the qualities of Saguaro National Park sought by tourists and cherished by area residents.
46	3.8	3.8-1	2	6-15	NPS-SAGU-AS/NPS-IMRO-RS	We suggest adding a paragraph in the introductory section to discuss noise impacts for park visitors in rural settings without elevated levels of ambient background noise, similar to the text in Appendix P, Attachment 4. For example, within the exceptionally quiet environment of the Saguaro Wilderness, backup alarms from utility vehicles can be heard for well over a mile within the park. Train whistles and emergency vehicle sirens can be heard even farther within the park's interior. Since "serious problem for people who live..." (line 8) appears to refer to residents and not park users, we respectfully suggest revision to read "serious problem for residents who live..."
47	3	3.8-1	Para 1	Line 7-8	NPS-DES	The statement, "noise is not usually a serious problem for people who live more than 500 feet from heavily travelled freeways" is not supported. For example, please add the word "health" before "problem", and add to the end of the sentence, "although it may create significant economic problems in terms of loss in property values and environmental values." Noise created near a Wilderness area does create problems for many visitors to our park. Similarly, please add the word "health" after the word "acceptable" in the sentence about noise barriers.
48	3.8.1	3.8-1		26-34	NPS-SAGU-SS	Add 1964 Wilderness Act (Public Law 88-577), Natural Sound and visitor's ability to experience it is a defined component of Wilderness character for the nearby Saguaro Wilderness area (less than .6 miles from the identified corridor).
49	3.8.2	3.8-1		36-38	NPS-SAGU-SS	While the analysis area for potential noise impacts limited to 1,000 feet, however, impacts could occur at a much greater distance. Sounds, particularly sounds carrying upslope can and do have impacts to natural quiet beyond 1,000 feet. Noise-sensitive land uses within Saguaro National Park and Saguaro Wilderness areas of the park are very sensitive to human

						<p>created sounds such as heavily travelled roadways. Additionally, some species of wildlife are very sensitive to these disruptive sounds and may avoid habitat in proximity to them.</p> <p>Request that the distance used in the analyses go as far as needed to ensure that any impacts to the resources mentioned above are understood and disclosed.</p>
50	3.8.3	3.8-4		6-9	NPS-SAGU-SS	Since noise impacts could occur outside of the 2,000-foot-wide-corridor, noise sensitive lands in proximity to the corridor should also be listed in this section. Add Saguaro National Park and the Saguaro Wilderness within the park.
51	3	3.8-4	"Affected environment"	Line 7	NPS-DES	Please add the word "and Wilderness areas" after the word "park/trails," in the first sentence.
52	3.8.3.1	3.8-6	Table 3.8-2		NPS-SAGU-SS	Noise Monitoring Site # 34 is described as being located in Saguaro National Park; however the address provided places the site outside of the park near residential homes. This site also appears to be multiple miles from the proposed I-11 corridor. Baseline sound noise levels for the park should be measured in a location within the park and within the park Wilderness in areas most likely to be impacted by noise from the described I-11 corridors, and these sites should be selected in coordination with staff from the park.
53	3.8.4.1	3.8-8	2	9-11	NPS-SAGU-AS	By only discussing noise abatement for the Orange Alternative, the text suggests that noise impacts would be more impactful in urbanized areas with elevated ambient baseline noise levels rather than in the relatively rural and quiet Avra Valley. We suggest also adding abatement text to the Recommended Alternative and Purple Alternative.
54	3.8.4.1	3.8-9		12	NPS-SAGU-SS	Table listed as 3.5-6 should be changed to Table 3.8-6
55	3	3.8-9		Line 12	NPS-DES	p. 3.8-9. The table should be "Table 3.8-6" not "Table 3.5-6."
56	3	3.8-10	Table 3.8-6		NPS-DES	Saguaro National Forest should be Saguaro National Park. Green/D is not listed for Saguaro National Park. It is likely the sound impact from the Orange alternative would be different then the sound impact from the Purple alternative because this alternative is so much closer to the park and wilderness. We respectfully request that you re-do this analysis, or provide a more detailed explanation of how it could be possible.
57	3.8.4.1	3.8-10	Table 3.8-6		NPS-SAGU-SS	<p>In the first line of this table, please change "Saguaro National Forest" to "Saguaro National Park".</p> <p>Additionally for this table: Please add Saguaro Wilderness and the minimum distance to the Wilderness boundary as well as the dBA for this location.</p> <p>Additionally for this table: The dBA's are said to be estimated, however there is no description for how these estimates were obtained. Due to the sensitivity of visitors to National Parks and Wilderness areas where natural sound is an integral part of their visit, it is preferred that actual measurements are used for this evaluation.</p>
58	3.8.4.1	3.8-10		1-14	NPS-SAGU-SS/NPS-IMRO-RS	<p>This section and the text on the preceding page, is not clear. The text refers to "the park", but the table lists a number of land types, parks, monuments, and recreation areas. The text should be revised for clarity. The last few lines (10-14) appear to be referring to Saguaro National Park, but the text is not clear.</p> <p>Additionally: The text states that noise levels beyond 2,000 feet of the highway are not likely to exceed 60 dBA. However, as stated in a previous comment, please note that sound levels inside the park are likely lower than 39 to 40 dBA, and the resultant increase could be greater than the 15 dBA substantial noise increase threshold in ADOT's Noise Abatement Requirements (2017). Please also note that since the park contains elevated locations, e.g. Sus Hill and Signal Hill, sounds could carry farther than they would on flat terrain, producing impacts at greater distances.</p>

59	3.8	3.8-10	Table 3.8-6	N/A	NPS-RO	The table indicates that Saguaro National Park is 7884 feet from the edge of the orange corridor and 2058 feet from the edge of the purple corridor. Based on the provided maps, the park boundary and the wilderness boundary appear to be much closer to the corridors than indicated. Please revise the table to include the correct distances.
60	3	3.8-11		Line 15	NPS-DES	p. 3.8-11. After “noise impacts could extend out to 500 feet” add “and, under the Purple Alternative, a significantly greater distance into national park, national monument, and designated Wilderness areas.”
61	3	3.8-12	Table 3.8-8		NPS-DES	Under Purple and Green Alternatives, add, “and additional impacts into nearby national park, national monument, and designated federal Wilderness areas.”
62	3.9.3.1	3.9-8		30-36	NPS-SAGU-SS	This summary of the South Section appears appropriate for the existing I-19 and I10 corridor; however it is not accurate for the corridor alternatives (including the proposed selected alternative) that run through the Avra Valley. This area is characterized as a rural, relatively undeveloped area that contains and is bordered by protected natural areas to the West and to the East. Please change this description accordingly.
63	3.9.3.5	3.9-13	N/A	N/A	NPS-RO	The acreages where the viewshed of the park and the wilderness area affected are not accurate. A larger percentage of the park is wilderness than reflected by the table. Please revise the table to include the correct percentage.
64	3.9.3.5	3.9-14	Figure 3.9-5		NPS-SAGU-SS	The map and the map legend do not accurately represent designated Wilderness areas for Saguaro National Park and other sites such as Forest Service Wilderness. The symbol for Wilderness (BLM) is overlaid on Saguaro Wilderness at the West unit of the park and is missing for the East park unit and should be titled as either Wilderness (NPS) or all Federal Wilderness areas should be labeled as Wilderness, not Wilderness (BLM). We will be happy to provide GIS data for NPS lands.
65	3.9.3.6	3.9-18	N/A	N/A	NPS-RO	Please include a discussion of impacts to the night skies of Saguaro National Park or the Saguaro Wilderness.
66	3.9.3.6	3.9-18, 3.9-19	Figure 3.9-9	9-40	NPS-SAGU-SS	Request that in addition to identifying the Dark-Sky Association’s “dark sky places” that sites where the public places a higher sensitivity to night sky viewing also be identified or where public events are routinely held to view the night sky. This would include the Saguaro National Park Red Hills Visitor Center at 2700 N Kinney Rd where the NPS in partnership with the Kitt Peak Observatory hosts Star Parties that allow park visitors to learn about the night sky as part of an education program.
67	3	3.9-21	Table 3.9-2		NPS-DES	The designation of Saguaro National Park under “Visual Contrast Level” as “Co-Dominant” seems incorrect; it is better characterized as “Dominant.” The designation seems to be subjective, and based on the definitions provided on p. 3.9-6. The designation of “Dominant” is more appropriate, as the change will cause a lasting impression on the landscape. In addition, “Neighbor” and “Recreational” should be reversed under Typical Viewer Type, as the park is focused on recreational use.
68	3.9.4.5	3.9-32		6-13	NPS-SAGU-SS	For the KOP’s located in Saguaro National Park it is appreciated that the analysis acknowledges that viewers from within the park would have a higher sensitivity, but we request that the reason for this higher sensitivity be described and put in context. Visitors to National Parks and Wilderness areas expect high quality experiences related to solitude, natural quiet, viewsheds and more. The visual and noise intrusions related to a new hwy could impact these valuable and irreplaceable resources and therefore result in unsatisfactory visitors experiences.
69	3	3.9-32		Line 2	NPS-DES	Saguaro National Park is an important night sky resource for recreational star-gazing. Add to the end of sentence 1: “However, these additional lights are expected to impact night sky viewing in nearby Saguaro National Park, an important night sky resource for recreational star-gazing.”
70	3	3.9-32		Line 8	NPS-DES	Change “Co-Dominant” to “Dominant”, to be consistent with revised table.
71	3.9.4.6	3.9-32	1	26	NPS-SAGU-AS	Recommend adding text regarding impacts of light pollution on dark sky recreation activities (e.g. Saguaro National Park’s popular full moon hikes and stargazing programs) and effects on wildlife behavior.
72	3	3.9--34		Line 9	NPS-DES	Add to paragraph: “However, it is recognized that it may not be possible to mitigate major visual impacts on Saguaro National Park’s designated Wilderness areas and other natural areas.”
73	3.9.5	3.9-36	Table 3.9-7		NPS-SAGU-SS	The descriptions of potential impacts to Saguaro National Park for visual and aesthetics are too vague and do not adequately communicate the level of these impacts. This table is titled “Summary of Potential Impacts on Visual and Aesthetics”, however there are no descriptions at all of what the impacts are, only simple statements such as “the Purple Alternative...and the Green Alternative... are anticipated to have the most impact on the visual resources of the west side of the park”. These impacts should be fully described not just listed as most, or least.

						“Saguaro West” should be relabeled as “Saguaro National Park –West”. Some readers may only have time to read summaries and not entire chapters, so sites should not be abbreviated in summary sections.
74	3.10.1.1	3.10-1	N/A	N/A	NPS-SAGU-AS	We suggest including explanatory text about Mexico’s air quality standards as they relate to vehicle emission controls and whether vehicles entering the U.S. via I-11 would impact air quality differently than U.S. carriers.
75	3.10.1.5	3.10-7	3	17-18	NPS-SAGU-AS	We suggest clarifying that the Class I Airshed (and long-term monitoring station) is 0.3 miles from the Recommended Alternative.
76	3.10.3	3.10-9	4	28-30	NPS-SAGU-AS	Distance from the Class I Airshed to Option D (Recommended Alternative) is less than half of what is reported here. Please check and correct these statistics.
77	3.10.4	3.10-12	1	12-13	NPS-SAGU-AS	This section notes the benefits to air quality by this project, but not the negative impacts of bringing new, external freight traffic that would otherwise be travelling on the west coast if not facilitated by I-11. Additionally, if trucks originating from Mexico have lower emissions standards this would also degrade air quality and should be considered. This issue should also be clarified within this section (3.10.4 Environmental Consequences) for each of the alternatives.
78	3.10.4	3.10-12	Table 3.10-2		NPS-SAGU-SS	This table indicates that there are negligible beneficial effects for travel patterns in the alternatives that create a new highway through the Avra Valley and negligible positive benefits for travel patterns by collocating with I-10. Elsewhere in the document, travel benefits are touted for creating new sections of highway as opposed to collocating on existing routes. This should indicate preference for collocating on I-10 in the southern section since they are the same and collocation would minimize many other impacts.
79	3.10.4.1	3.10-15			NPS-SAGU-SS	Saguaro National Park is a Class 1 Airshed and any potential impacts to AQ related values from a proposed interstate that is located .3 miles from the park boundary should include a complete analysis and we do not agree with the conclusion that potential impacts to the park’s Class 1 Airshed “are not likely to be substantial as this is a regional air quality issue that is not driven by relatively small localized impacts”.
80	3.10.4.1	3.10-17	2 7-14	22-25	NPS-SAGU-AS	This is a helpful statistic for analyzing emissions impacts from construction, but it should also be shared in the introductory text for the section or for all alternatives, not just the Purple Alternative, as construction emissions are relevant to analyzing all of the alternatives. Most helpful, would be to include a table that has side-by-side comparisons of emissions estimates for construction, annual traffic, and roadway maintenance.
81	3.10.4.1, 3.10.4.2				NPS-SAGU-SS	The sections discussing potential AQ impacts in the south section neglect to acknowledge that a new section of highway through the Avra Valley would create new localized AQ pollutants and only discuss the potential benefits “regionally” by dispersing traffic. The primary intent of a new I-11 is to allow for increased traffic due to a projected increase in freight traffic and other factors. Adding a new section of highway .3 miles upwind of a Class 1 Airshed at Saguaro National Park will add new sources of pollution, PM, and other potentially AQ degrading inputs where they are not occurring now. These new AQ degrading inputs should be disclosed and analyzed in the Tier I EIS, specifically for how they may degrade the AQ within this Class 1 Airshed. Waiting until the Tier II would eliminate a majority of the mitigation options which could lead to degradation of this Class 1 Airshed.
82	3.10.4.2	3.10-19	1	1-7	NPS-SAGU-AS	The Recommended Alternative may decrease the percent of travel time, but would also decrease baseline air quality by the greatest percent of the options because of the relatively undeveloped and currently better air quality conditions in the Avra Valley. Please provide this information in addition to the benefits.
83	3.10.5	3.10-21	1	27-31	NPS-SAGU-AS	We suggest adding discussion to this section to summarize differences in construction emissions, traffic emissions, and maintenance emissions. If construction emissions represent 5% of the 20 year project life (p. 3.10-17), there are significant distinctions between the alternatives.

84	3.14.1.1	3.14-1	1	12	NPS-RO	The section lists laws which regulate management of biological resources and should include the NPS Organic Act and the Wilderness Act
85	3	3.14-9		Line 6	NPS-DES	The biotic communities section focuses only on plants, whereas many other life forms are essential elements of these communities. All of the community descriptions should be updated to include this. Please add the following sentence to the Sonoran Desert Lower Colorado River Valley Subdivision: "In the Sonoran Desert areas on the west side of the Tucson Mountains, this community contains a number of sensitive animals species at the edge of either their global or local range, including birds such as caracara, reptiles such as sidewinders and desert iguanas, and mammals such as kit fox."
86	3	3.14-17		Line 8	NPS-DES	Add sentence after "habitat areas." "In addition, loss of connectivity can isolate habitat-specific species into patches that are too small to maintain a viable population of that species, resulting in local extirpation."
87	3	3.14-24		Line 39	NPS-DES	The discussion of the TMC and additional desert purchases by Pima County could greatly benefit by a more detailed map of this area, especially given the significance of this section in the EIS.
88	3	3.14-24		Line 27-38	NPS-DES	Please add the following sentences at the end of this paragraph. "In addition, Saguaro National Park is a national park with significant federally designated Wilderness area. The NPS Organic Act and Wilderness Act create a commitment to protect wildlife and biological diversity within the park for future generations.
89	3.14.3.3.	3.14-24	4	19-26	NPS-SAGU-AS	Because of the regional significance of the Central Arizona Project and commitments made through that EIS to mitigate wildlife impacts through the Tucson Mitigation Corridor, we suggest that this paragraph also be included in the Executive Summary.
90	3	3.14-26		Line 34	NPS-DES	Please add the following sentence: "Potential impacts to the Lower Colorado River Desertscrub community include potential to jeopardize specialized desert species, such as kit fox and desert iguanas, in small habitat areas that may be isolated to the east of the Green and Purple Alternative."
91	3	3.14-31		Line 21	NPS-DES	Please revise this sentence for clarity and accuracy. . Suggest, "Impacts to these sensitive species would occur at the same locations and would be similar to those impacting ESA-listed species. Some species could be protected by similar mitigations, while others would require different mitigations. For example, none of the ESA-listed species are small, desert animals that are expected to be impacted by the Green and Purple Alternatives west of the Tucson Mountains."
92	3	3.14-33		Line 17	NPS-DES	Please change sentence, "...guardrails, steep shoulders, traffic and the loss of native habitat, which are..."
93	3	3.14-35		Line 17	NPS-DES	Add to end of paragraph, "These problems can be of societal significance when protected natural areas such as national parks experience loss of species due to habitat fragmentation (e.g., Newmark 1995)."
94	3	3.14-35		Line 15	NPS-DES	Change sentence: "...population dying out (local extinction, or extirpation), or a decrease..."
95	3	3.14-35		Line 29	NPS-DES	Please add to end of sentence, "although it is unknown whether this would be effective in mitigating the loss of connectivity in the Coyote-Ironwood-Tucson linkage that would be expected by the construction of a highway as described above."
96	3	3.14-35		Line 15	NPS-DES	Again, please add to end of sentence, "again, although it is whether this would be effective in mitigating the major loss of connectivity in the Coyote-Ironwood-Tucson linkage."
97	3.14.4.3	3.14-38	Table 3.14-9		NPS-SAGU-SS	Request that National Park Lands and Wilderness Lands be added as "Topics" to this table, including affected acreage and potential impacts listed, and that description of these lands and their purpose are added to the previous pages. These Federally designated lands hold National significance related to the purposes they were established, including the protection of native wildlife species of the Sonoran Desert. The placement of a new highway adjacent to these lands and all along their western extent will severely fragment the landscape that will greatly inhibit wildlife connectivity and potentially lead to damage of Saguaro National Park resources.
98	3.14.5	3.14-41	Table 3.14-10	N/A	NPS-SAGU-AS	We appreciate the commitments outlined in this table, and would also appreciate a similar table of mitigation commitments for the other impact areas (e.g. air quality, light pollution, etc.)

99	3	3.14-41		Line 1, Table 3.14-10	NPS-DES	<p>The inclusion of Potential Mitigation Strategies in this chapter is misleading and improper. We respectfully request that you remove the table.. My reasoning is:</p> <p>The section implies that the negative effects that the Purple and Green alternatives have on wildlife connectivity <i>can</i> be mitigated...including a review of the scientific literature on wildlife crossings would help support this. The literature suggests that in some cases wildlife crossings can reduce roadkills in some situations (but not others). For example, recent studies at Banff National Park (where crossings have been studied for >25 years) indicate that fencing and crossings have no effect on bear mortality.</p> <p>The scientific literature is mixed at best on whether crossings or other mitigations can be effective in maintaining connectivity – while there is overwhelming evidence that highways have significant, even devastating effects on wildlife (see p. 3.14-35). The mitigations proposed are not specific so it's difficult to confirm the benefit of the mitigation. For example, under the Coyote-Ironwood-Tucson linkage, the language includes “Avoid or minimize impacts to linkages. Assess whether recommendations provided in the specific or county linkage reports can be used to improve and construct wildlife crossings in these linkages (etc.)” These assessments should be made in this EIS so that it can be determined if they would be effective in any way in mitigating the significant impacts of a major interstate highway. Both Saguaro National Park and AGFD requested that these studies be made of part of Tier I.</p>
100	3.14.5	3.14-41	Table 3.14-10, 3.14-11 (options related to Avra Valley)		NPS-SAGU-SS	<p>Under the “Wildlife Connectivity” section of this table, suggest adding “acquiring land to support additional wildlife connectivity corridors” to mitigate fragmentation of the Tucson Mountains from all of the mountains and protected lands to the west. Specifically, an area north of the existing TMC and directly west of Saguaro National Park leading over to the Ironwood National Monument, as this is the currently least disturbed and most natural connectivity corridor (Perkl et al. 2018. Urban growth and landscape connectivity threats assessment at Saguaro National Park, Arizona, USA, Journal of Land Use Science, DOI: 10.1080/1747423X.2018.1455905).</p>
101	3.17.2.1	3.17-4	Figure 3.17-1	N/A	NPS-SAGU-AS	<p>Recommend providing additional discussion of access control on page 3.17-2, under “Where would new access occur?”.</p>
102	3.7.2.1	3.17-4	Figure 3.17-1		NPS-SAGU-SS	<p>This map indicates a future Interchange in an area north of the existing TMC and directly west of Saguaro National Park. This location would further fragment existing wildlife linkages between the Park and Ironwood National Monument and tribal lands to the west that are critical for wildlife movement and conservation (see previous comment). Additionally, placing an interchange at this location would increase impacts to the Park (AQ, viewshed, natural sound, night sky, and more). Future development and possibly additional impacts would also be facilitated by this Interchange.</p>
103	3.17.3	3.17-8	5	34-46	NPS-SAGU-AS	<p>The Central Arizona Project has been omitted from this section. Please insure the mitigation commitment made to the public under this agreement would not be violated by the Recommended Alternative, the CAP and its disruption to wildlife connectivity deserves in-depth discussion. The original agreement documents are included as Appendices A and B of the Tucson Mountain Park Management Plan (Nov 2007).</p> <p>These documents state that management will: <i>“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 Reclamation, Arizona Game and Fish Department (AGFD), Fish and Wildlife Service (FWS), and Pima County. This will preserve this fragile desert habitat from urbanization and maintain an open wildlife movement corridor.”</i></p>
104	4	4-1		15	NPS-DES	<p>Saguaro National Park has a significant interest in the success of the CAP mitigations and the TMC because they were created to protect wildlife in Saguaro National Park, as stated in the letters from the Arizona Game and Fish Department and Bureau of Reclamation in Appendix R.</p> <p>The statement, “...would result in a net benefit to the TMC...” is not supported by the analysis provided in this chapter. The EIS should either provide a comprehensive analysis or drop this statement and similar statements from this chapter. The reasoning is similar to that described in comments for page p. 3.14-41.</p>

105	4	4-76		Line 21	NPS-DES	Add "not follow the Orange Alternative and" in the first sentence after the word "would" and before the word "achieve."
106	4.4.3.3	4-76	1	39-42	NPS-SAGU-AS	Please clarify rational for ruling out an alignment west of Sandario Road.
107	4.4.3.3	4-77	2	7-11	NPS-SAGU-AS	While the Tucson Mitigation Corridor is owned by the federal government, historic documents related to the EIS completed for the Central Arizona Project show that wildlife connectivity within the TMC was critical to the acceptance of this alignment of the CAP by the public.
107	4	4-78	"Alignment" paragraph and bullets	Lines 1-23	NPS-DES	Please clarify the evidence that co-alignment of the highway and the other CAP infrastructure would achieve the purpose outlined in the original value of the TMC and other CAP mitigations. More specific analysis seems warranted.,
109	4	4-78		Lines 11-13	NPS-DES	Please indicate the length of the proposed new crossings in line with the current siphons.
110	4	4-78			NPS-DES	This section should include a more detailed analysis of the use of these longer corridors and siphons focused on the species that were identified in the original CAP mitigations which include (but are not limited to) mule deer, javelina, desert tortoise, kit fox, coyotes, Gila monsters, small mammals, raptors, songbirds, gamebirds, and reptiles and amphibians.
111	4.4.3.3	4-78	1	4-10	NPS-SAGU-AS	Please describe the process and associated compliance of the potential connected action of relocating Sandario Road.?
112	4.4.3.3	4-78	1	29-39	NPS-SAGU-AS	Because animal movement throughout the Tucson Mountains would be impacted, we suggest that additional stakeholders should be involved in these studies and the design to include Saguaro National Park; Arizona Game and Fish Department; and Pima County Natural Resources, Parks and Recreation.
113	4.6	4-89	1	17-19	NPS-SAGU-AS	Other alternatives also connect with the Sonoran Corridor and these employment areas. The UA Tech Park is located directly next to current I-10 and all five of the Sonoran Corridor alternatives link to current I-19. Current infrastructure (Orange Alternative) is 4.7 miles closer to these locations. .
114	4.7	4-92	1	9-29	NPS-SAGU-AS	Commitments were also made to further discuss access control and securing additional wildlife corridors for any alignments through the Avra Valley. Please analyze as a connected action.
115	4.8	4-95	N/A	N/A	NPS-SAGU-AS	Adequate discussion has been provided for why the TMC meets 4(f) criteria, but we suggest adding a section to describe why each of the other properties identified as "Section 4(f) Properties" in the title of Table 4-9 have not been identified for mitigation as the TMC has been.
116	6.1	6-1	10		NPS-SAGU-SS	This section describes the "Key Factors to Determine a Recommended Alternative" and it lists "Can the impacts be avoided, minimized, or mitigated" as a Key Factor. Regarding designated Wilderness within Saguaro National Park, it is not clear if descriptions of potential impacts, analysis of impacts, or strategies for impact avoidance, minimization, or mitigation are included in this document.
117	6.3.1.5	6-7	1-7		NPS-SAGU-SS	Homeland Security and National Defense are listed as a Key Metric and therefore used as a selection weighting criteria for selection of the Recommended Alternative. This Metric was not identified in the primary study that identifies and defines the purpose and need for an I-11 corridor which is the "I-11 and Intermountain West Corridor Study". This Metric was added in to the "AZ Alternative Selection Report" that was an early part of the EIS process. We request that this selection criteria be removed, or that an "Environmentally Sensitive Criteria" be added, as it was also mentioned in the "Alternatives Selection Report" but was not carried forward as a selection criterion.
118	6.3.2	6-10, 6-13	Table 6-3		NPS-SAGU-SS	For the Purple and Green Alternatives, second bullet under Option C, "Crosses wildlife linkage area associated with the TMC...." The TMC was established to mitigate impacts from the CAP project, however, it is not the only wildlife linkage that is important in the Avra Valley and that would be impacted by an I-11 corridor bisecting the valley. Predominantly undisturbed and functioning wildlife linkages exist to the north of the TMC and serve as important linkages for wildlife between the Tucson

						Mountains and the mountain ranges on the west side of the valley. These areas are important for the long-term viability of wildlife populations within Saguaro National Park and should also be listed as Key Environmental Factors.
119	6.3.2	6-12, 6-14	Table 6-3		NPS-SAGU-SS	In the Purple and Green Alternatives Columns, please replace "Saguaro West-..." with "Saguaro National Park West-..." Also, add potential to impact Saguaro Wilderness area in relation to Wilderness Character of solitude, natural quiet, and undeveloped.
120	6.3.2	6-15	Table 6-3		NPS-SAGU-SS	Please substantiate the rationale behind the statement "Relocation of Sandario Road would eliminate this barrier to wildlife movement on the TMC, alignment of wildlife structures with I-11 would avoid greater fragmentation of wildlife crossing areas". Removal of a rural 2-lane road and replacing it with a multi-lane Interstate could lead to increased fragmentation and elimination of wildlife crossing areas.
121	6.4.2	6-32		1-13	NPS-SAGU-SS	Largely intact and highly functioning east-west wildlife habitat connectivity also occurs north of the TMC, along the western boundary of Saguaro National Park and should be identified, analyzed, and considered in the selection process as well. (Perkl et al. 2018. Urban growth and landscape connectivity threats assessment at Saguaro National Park, Arizona, USA, Journal of Land Use Science, DOI: 10.1080/1747423X.2018.1455905).
122	6	6-32	Para 1-2	1-24		Change language based on comments about wildlife connectivity.
123	6.4.2	6-31	1	21-31	NPS-SAGU-AS	The extensive and long-term impacts to Saguaro National Park and the Saguaro Wilderness due to the proximity (0.3 miles and 0.6 miles, respectively) of the Recommended Alternative deserves be included as a key environmental impact in this summary paragraph.
124	6.5	6-34			NPS-SAGU-SS	There is little analysis of potential impacts to Saguaro Wilderness or other Wilderness areas in Chapter 3 as is stated in the opening paragraph of this section. The NPS has requested this analysis and offers to provide information on wilderness character and analysis of impacts to NPS wilderness. Since this analysis is not included, there are also no "key strategies to avoid, minimize, and mitigate potential impacts" listed in this section for potential impacts to Wilderness Character and Values.
125	6.6	6-38	Table 6-4		NPS-SAGU-SS	Under the Resource Area "Noise", we are concerned that the use of ADOT's Noise Abatement requirement to analyze the cost effectiveness of noise abatement measures would be adequate to address impacts to National Park and Wilderness areas due to the increased sensitivity of wildlife and visitors who are in these areas since the ADOT's Noise Abatement requirements are not sensitive to these values and concerns.
126	6	3-35 through 6-28	Table 6-4		NPS-DES	This table should be revised to reflect the comments about mitigations throughout the document.
127	6.6	6-44	Table 6-4		NPS-SAGU-SS	Under the Resource Area "Biological Resources: Noxious and Invasive Species" it is stated that "ADOT will participate, support and commit to long-term noxious weed management efforts." Transportation infrastructure within Pima County serves as one of the major dispersing corridors for invasive weeds such as buffelgrass. This table should list specific control and eradication measures that would take place, and how assistance from ADOT would be provided to neighboring land owners if and when destructive invasive weeds spread from the highway corridor to these surrounding areas, including Saguaro National Park.
128	3.8.3.1	3.8-4		11-12	IMR-NR (RS)	The document states that previous noise studies were used for measurements characterizing the existing noise environment, but we do not find publicly available NPS noise study data. We request that you use NPS published acoustic monitoring data for the 2016 Site ID SAGU002 at the following link: https://irma.nps.gov/DataStore/Reference/Profile/2237307 as well as the 2004-2005 Site ID SAGU001 and SAGU002 in report, Ambrose and Florian, 2006. <i>Sound Levels in Saguaro National Park, Arizona, 2004-2005</i> (attached). Please note the sites in the two reports are not the same.
129	3.8.3.1	3.8-6	Table 3.8-2, Mon 34, 35		IMR-NR (RS)	It is difficult to assess the Ambient Noise Monitoring Data and existing noise measurement locations, finding no area map or GPS coordinates, as required in the ADOT Noise Abatement Requirements (May 2017), Section 2.8.1. We respectfully request GPS coordinates be added to Section 3.8 or Appendix P.
130	3.8.3.1	3.8-6	Table 3.8-2, Mon 34, 35		IMR-NR (RS)	The Existing Noise Levels at Sites # Mon 34 and 35 appear inflated by residential noise and, as such, may be inadequate to assess whether the Purple/C or Green/D option will produce a substantial noise increase on NPS land, pursuant to 23 CFR 772.5 and ADOT Noise Abatement Requirements (May 2017). Nearby NPS ambient sound measurements at the 2016 Site ID

						<p>SAGU002 Desert Discovery Nature Trail found median existing sound levels as follows: daytime L50 = 25.8 dBA, nighttime L50 = 20.4 dBA, daytime L10 = 33.2 dBA, and nighttime L10 = 26.2 dBA (from https://irma.nps.gov/DataStore/Reference/Profile/2237307). The geospatial mean of the predicted median ambient sound levels (L50) across the entire western Tucson Mountain District of Saguaro National Park (from https://irma.nps.gov/DataStore/Reference/Profile/2217356) is also lower than Sites # Mon 34 and 35, reinforcing the view that these noise levels are too high. NPS measured and predicted sound levels suggest that the Purple/C or Green/D option may produce a substantial noise increase on nearby NPS land.</p> <p>We request new ambient sound measurements on western Saguaro National Park land areas, if possible, and use of existing NPS data to better assess potential for substantial noise increase on NPS lands. This is particularly important given that in Public Law 103-364, the enabling legislation for Saguaro National Park, Congress specifically identified threats to the integrity of the Tucson Mountain unit, including opportunities for solitude within the designated wilderness areas, as a purpose for designating it a National Park.</p>
131	3.8.4.1	3.8-7 and 3.8-13			IMR-NR (RS)	<p>23 CFR 772.5 requires that highway agencies define a substantial noise increase criterion between 5 to 15 dB(A) for the design year over the existing noise level. Given Congress' focus on threats to the Tucson Mountain unit and its stated intent to preserve opportunities for public enjoyment and opportunities for wilderness solitude, it is arguable that a blanket ADOT substantial noise increase criteria of 15 dB(A) is not protective enough for sensitive areas, e.g. to meet Congress' stated intent in Public Law 103-364. We suggest that the EIS include a 5 dB(A) increase as a supplemental metric for analysis of impacted receptors on Saguaro National Park wilderness areas, pursuant to 23 CFR 772.5.</p>
132	3.8.4.1	3.8-10	Table 3.8-6		IMR-NR (RS)	<p>Due to presence of the existing I-10 corridor and other noise sources in the Tucson area, we do not anticipate that the Orange/B option would produce a substantial noise increase in the eastern portion of the Saguaro National Park, Tucson Mountain District, as defined in the ADOT Noise Abatement Requirements (May 2017). However, we respectfully suggest existing noise monitoring data from 2004-2005 Site ID SAGU001 and SAGU002 and the report, Ambrose and Florian, 2006. <i>Sound Levels in Saguaro National Park, Arizona, 2004-2005</i> (attached) as a potentially useful reference.</p>
133	3.8.4.1	3.8-10	Table 3.8-6		IMR-NR (RS)	<p>We appreciate the inclusion of Saguaro National Park (not Forest) for assessment of the Orange/B and Purple/C options. The Green/D option is excluded. However, it appears that the Purple/C and Green/D options are equal in distance to the closest Saguaro National Park, Tucson Mountain District, and wilderness boundary. In order to assess whether the Purple/C or Green/D option will produce a substantial noise increase on the Saguaro Wilderness, we respectfully suggest predicted design year traffic noise levels at the following site (potentially impacted receptors) for both options:</p> <p>Saguaro Wilderness Area (Lat 32.2627 Long -111.23525 suggested)</p> <p>If new ambient sound measurements cannot be made, we suggest use of existing NPS ambient sound data from Site ID SAGU002 Desert Discovery Nature Trail (NPS can provide Leq data upon request; see https://irma.nps.gov/DataStore/Reference/Profile/2237307)</p>
134	3.9.3.6	3.9-18		5-6	IMR-NR (RS)	<p>To make the definition more comprehensive, please consider revising the Skyglow definition to include "brightening of the night sky over inhabited areas, reducing visibility of stars, celestial objects, and other aspects of the night sky."</p>
135	3.9.3.6	3.9-18		22-24	SAGU (SS) and IMR-NR (RS)	<p>In addition to text identifying the Dark-Sky Association's "dark sky places," please add text to address sites where the public places a higher sensitivity to night sky viewing and where public events are routinely held to view the night sky. We request identification of the Saguaro National Park - Red Hills Visitor Center at 2700 N Kinney Rd, where the NPS, in partnership with the Kitt Peak Observatory, hosts Star Parties that allow park visitors to learn about the night sky as part of an education program.</p>
136	3.9.3.6	3.9-19	Figure 3.9-9		SAGU (SS) and IMR-NR (RS)	<p>Please add sites where the public places a higher sensitivity to night sky viewing and where public events are routinely held to view the night sky. We request addition of the Saguaro National Park - Red Hills Visitor Center at 2700 N Kinney Rd, as a night sky observation site.</p>

137	4.4.4	4-80		1-7	IMR-NR (RS)	Given the potential for a substantial noise increase on NPS land and Congress' expressed intent in Public Law 103-364 to protect opportunities for wilderness solitude in the Saguaro National Park, Tucson Mountain unit, a constructive use determination for Section 4(f) should be appropriately analyzed and considered.
138	6.3.2	6-12 and 6-14	Table 6-3		IMR-NR (RS)	Table 6-3 correctly notes that both the Purple/C and Green/D option have the potential for a substantial noise increase, according to the ADOT Noise Abatement Requirements (2017). Although the noise impacts for the Purple/C would likely be greater, both alternatives would produce impacts, as the Purple/C and Green/D options are equal in distance to the closest wilderness area boundary.
139	6.6	6-38	Table 6-4		IMR-NR (RS)	As is mentioned in Appendix P Attachment 4, the most likely mitigation strategy to reduce noise impacts on sensitive Saguaro National Park receptors is a change in the horizontal alignment that moves it away from the park. Please add change to horizontal or vertical alignment to the potential noise mitigations, pursuant to the ADOT Noise Abatement Requirements (2017), Section 4.1.
140	6.6	6-40	Table 6-4		IMR-NR (RS)	In addition to mitigation to address fugitive light from nighttime construction, we request best practice mitigation to reduce skyglow and other night sky impacts from permanent lighting associated with the project. We suggest the following best practices: <ul style="list-style-type: none"> • Light only where it is needed, e.g. key interchanges. Where feasible, consider alternatives such as retro-reflective or luminescent markers in lieu of permanent lighting • Light only when it is needed, i.e. traffic is present • Use lights of proper design, shielded and placed to eliminate uplight and reduce glare for drivers (see IES TM-15-11 Addendum A - BUG ratings, including U0 for uplight) • Select lamps with warmer colors (less blue light that can increase skyglow and disability glare for drivers) Use minimum amount of light needed for the task
141	Appendix P Attachment 4				IMR-NR (RS)	We appreciate the discussion of Saguaro National Park noise effects, including natural soundscape resources, noise effects on wildlife, mitigation strategies, and construction noise mitigation. Where possible, we appreciate consideration of the mitigation strategy: a Change to Horizontal (shifting highway away from the park) or Vertical Alignment (breaking line of sight). If a change to horizontal or vertical alignment reduces potential for a substantial noise increase in the park, we respectfully request its consideration.
142	Appendix P Attachment 4				IMR-NR (RS)	Although 60 dBA is identified as a key NPS noise threshold (identified in 36 CFR 2.12), it is not the only noise threshold utilized by NPS. An important, accepted threshold for NPS is 52 dBA for raised voice (park ranger interpretive program) speech interference at 10 meters. Reference: EPA 1974. "Information on Levels of Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety," Report No. 550/9-74-004. Prepared by the U.S. EPA Office of Noise Abatement and Control, Washington, D.C., March, 1974.
133	Air Quality				NPS-IMRO-AQ	The National Park Service is requesting that the Arizona DOT in the NEPA process for the proposed Interstate 11 Corridor conduct an air quality impact analysis for impacts to the Saguaro National Park (SAGU) at its west unit for the Green and Purple Alternatives and at its east and west units for the Orange Alternative.
144	Air Quality				NPS-IMRO-AQ	The air quality analyses needs to address impacts to the National Ambient Air Quality Standards (NAAQS) for the criteria pollutants (NO2, PM10, PM 2.5, and carbon monoxide) for all the appropriate averaging periods for each pollutant. The air quality analyses for both of the phases also need to address impacts to Air Quality Related Values (AQRVs), specifically deposition and near field visibility.
145	Air Quality				NPS-IMRO-AQ	We would recommend that National Park Service (NPS) air quality modelers be given the opportunity to review and provide input on emission inventory and modeling protocols prior to Arizona Department of Transportation (DOT) contractors

						undertaking the air quality analyses. NPS can provide help on interpreting the modeling results in the context of AQRV impacts to NPS resources.
146	Air Quality				NPS-IMRO-AQ	AZ DOT should develop emission inventory estimates for all sources of criteria air pollutants including particulates matter and oxides of nitrogen, volatile organic carbons, carbon monoxide and carbon dioxide for the three build Alternatives and no-build Alternative with a range of projected highway vehicle mix, vehicle speeds and miles travelled.
147	Air Quality				NPS-IMRO-AQ	For the operations phase air quality analysis, air pollutant emissions to be incorporated in the analysis should include but not be limited to emissions from all sources of air pollutants including fugitive type emissions from the Interstate 11 highway. The Interstate 11 tailpipe emissions should reflect the wide variety vehicle mix associated with international highway traffic.
148	Air Quality				NPS-IMRO-AQ	Suggest air quality impact analysis to assess impacts to SAGU NP Specific air quality impact methodologies and air quality dispersion models should reflect the most current EPA/FLM modeling guidance.
149	Air Quality				NPS-IMRO-AQ	Current modeling guidance requires that the near field impacts to the NAAQS for both the construction and operational at the park should be calculated with the EPA AERMOD model for the criteria pollutants (NO2, PM10 PM2.5 and CO). Near field impacts to the CO NAAQS should follow the most current EPA guidance, which at this time recommends the EPA AERMOD model.
150	Air Quality				NPS-IMRO-AQ	Impacts to AQRVs, specifically deposition of total nitrogen and total sulfur, should be calculated and compared to the Deposition Analysis Threshold of 0.005 kilograms per hectare year (kg/ha/yr) as per the Federal Land Managers Air Quality Related Values Workgroup (FLAG) guidance from 2010. Deposition impacts may be calculated with AERMOD in the near field, or with the CAMx or CMAQ photochemical grid model in the far field. The impacts to visibility in the near field should follow the recommendations in the FLAG document. The near field visibility impacts (less than 50 km from the source to the boundary of the Park) should be assessed with the EPA VISCREEN model (a screening model), or in the case of very significant predicted coherent plume impacts predicted by the VISCREEN analysis, the EPA PLUVUE model should be employed.
151	Air Quality				NPS-IMRO-AQ	Air quality impacts of ozone to SAGU resources should refer to the information on individual NPS's web sites rather than in the FLAG 2010 report.
152	Reference Documents					 Ambrose_and_Florian_2006_SAGU_Acoustic_Urban growth & land use impacts on SAGU NP.pdf Perkl et al. 2018. Pima County, AZ Code of Ordinances E Corridor Study.pdf ROD Passenger Rail Corridor Study.pdf SAGU_Acoustic_Monitoring_Report_NRR-2018.pdf Sonoran Corridor Alternative Analysis.pdf TMP Mngmt Plan. 2007. App A-Cooperated Management Plan TMP Mngmt Plan. 2007. App B-TMC Management Plan
153	Wilderness Shape files					 SAGU_WildernessBoundary.cpg SAGU_WildernessBoundary.dbf SAGU_WildernessBoundary.prj SAGU_WildernessBoundary.sbn SAGU_WildernessBoundary.sbn SAGU_WildernessBoundary.sbx SAGU_WildernessBoundary.shp.xml SAGU_WildernessBoundary.shx



Letter from Department of the Interior with National Park Service DEIS Comments, July 8, 2019



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United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
333 Bush Street, Suite 515
San Francisco, California, 94104

July 8, 2019

In Reply Refer To:
19/0143
Filed Electronically

Ms. Karla Petty
Division Administrator
Federal Highway Administration
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Subject: Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona, dated March 2019.

Dear Ms. Petty:

The Department of the Interior (Department) has reviewed the *Draft Tier 1 Environmental Impact Statement (EIS) and Preliminary Section 4(f) Evaluation for the Interstate 11 Corridor in Santa Cruz, Pima, Pinal, Maricopa, and Yavapai Counties, Arizona*, dated March 2019 and provides the following comments on behalf of its bureaus; the U.S. Bureau of Reclamation (Reclamation), the U.S. Fish and Wildlife Service (FWS), the U.S. Bureau of Land Management (BLM), and the U.S. National Park Service (NPS).

General Section 4(f) Comments

The Tucson Mitigation Corridor (TMC) is a 2,514-acre 4(f) designated property purchased in 1990 for approximately \$15 million. The land was purchased to partially mitigate biological impacts from the Central Arizona Project (CAP) Tucson Aqueduct-Phase B. Additionally, the CAP was modified to accommodate the TMC. In the Final EIS for the CAP Tucson Aqueduct-Phase B, Reclamation identified specific environmental commitments and mitigation measures to reduce project impacts. In accordance with the Fish and Wildlife Coordination Act of 1958 (PL 85-624, 16 U.S.C. 661 et seq.), Reclamation, Arizona Game and Fish Department (AGFD), FWS, and several public conservation groups agreed on a specific parcel (i.e., TMC) for mitigation. In 1990, Reclamation, FWS, AGFD, and Pima County signed a Cooperative Agreement. The Cooperative Agreement states:

"WHEREAS, 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)]".

[Type here]

The Master Management Plan (attached to Cooperative Agreement) prohibits any future development within the area other than existing wildlife habitat improvements or developments agreed to by Reclamation, AGFD, FWS, and Pima County.

In an effort to work with the Federal Highways (FHWA) and to accommodate FHWA's Programmatic EIS schedule, Reclamation identified preliminary conditions for a potential path to a programmatic Net Benefit determination for the TMC in a letter dated June 8, 2018. This letter stated that, "*Based on the proposed process to identify, evaluate, and implement potential mitigation measures, Reclamation believes that a net benefit could be achieved, and Reclamation would concur with the application of the Net Benefit Programmatic Evaluation to the TMC.*" Our understanding is that FHWA is requesting a higher level of commitment than what was provided in the June 8, 2018 letter prior to the Tier 1 EIS Record of Decision. Based on the lack of specificity and qualitative analysis inherent in a Programmatic EIS, Reclamation would not be able to provide a higher level of commitment on our concurrence for a 4(f) net benefit determination for the TMC.

After continued consultation with our TMC partners, the Department is requesting FHWA prepare an Individual Section 4(f) Evaluation for the TMC. Based on discussions with FHWA, it is our understanding that this change will not affect the overall EIS schedule.

The true value of the TMC is the functional and critical role the property plays in maintaining the primary wildlife movement corridor between the Roskrige Mountains, Ironwood Forest National Monument and west across Avra Valley to the Tucson Mountains and Saguaro National Park (SNP). The corridor supports multiple biological processes that are critical to the ecological health of SNP and Tucson Mountain Park, both Section 4(f) properties found within the Tucson Mountains that total approximately 44,818-acres. As a result of this role, Reclamation has viewed and managed the TMC as a Section 4(f) property of unique significance and critical importance.

General EIS Comments

Recommended Alternative

The Department continues to be concerned that the analysis at the Tier 1 level is insufficient to determine a Recommended Alternative or a Preferred Alternative in the Final EIS. The Recommended Alternative, which is 0.3 miles from SNP and 0.6 miles from Wilderness, should include the necessary studies to illustrate and further quantify the impacts the highway and cumulative effects of future multi-modal transportation and reasonably foreseeable subsequent development would have to park resources and visitors; specifically to wildlife movement and park wilderness values; impacting the view shed, diminishing natural sounds; diminishing night sky darkness and increasing air pollution.

The Tucson Mountain District of SNP was established to protect its natural resources, scenic beauty, and habitat from various threats associated with the growth of metropolitan Tucson. Because many wildlife species rely on the ability to move in and out of SNP to meet their water needs throughout the year, SNP works closely with adjacent land managers and neighbors to assist in providing habitat (and water sources) that maintain healthy wildlife populations.

These needs have been recognized and formalized through federal and local efforts. As mentioned above, Reclamation established the TMC to protect a critical wildlife corridor. Additionally, Pima County established the Pima County Buffer Overlay Zone, in part to: “3. Establish mechanisms that will protect the public preserves and result in an ecologically sound transition between the preserves and more urbanized development; 4. Assure the continued existence of adequate wildlife habitat and foster the unimpeded movement of wildlife in the vicinity of Pima County's public preserves...” (Pima County Code of Ordinances § 18.67). Finally, the Sonoran Desert Conservation Plan has identified critical wildlife corridors within the project study area which connect the park to other adjacent conservation lands.

The Recommended Alternative directly impacts all three of these properties: it bisects the TMC, it overlaps 916 acres of the Buffer Overlay Zone, and “most of the corridor (94%) impacts one or more categories of the Conservation Land System” identified in the Sonoran Desert Conservation Plan (Pima County DOT Report, Appendix F, p. 267).

Based on the potential for significant adverse impacts to SNP, TMC, Ironwood National Monument, and Pima Pineapple Cactus (PPC), the Department recommends the Orange Alternative for the southern section of the corridor. Additionally, the Orange Alternative better serves planned growth areas, freight industry focus areas, and economic activity centers while still reducing travel time over the no build alternative. Our determination is based on an analysis of the potential impacts and the EIS which states the Orange alternative best responds to continued population and employment growth in the South Section; provides the most access to economic activity centers; reduced impact to wildlife corridors and linkages; and, would have fewer impact to PPC and its habitat.”

Overall the environmental impact under Segment B is less severe to wildlife connectivity and the federally endangered PPC. Therefore, as identified above, Segment B is the ideal selection for the southern end of the study area.

Pima Pineapple Cactus

The Department recommends that FHWA develops a preliminary effects analysis and mitigation strategy for the federally endangered PPC (*Coryphantha scheeri* var. *robustispina*) before Option D of the recommended alternative is finalized in the Record of Decision. If the effects analysis and mitigation strategy are deferred until Tier II, we recommend that all options for aligning I-11 through Pima County remain open.

Of all listed species that may be affected by the I-11 project, FWS is most concerned about effects to the PPC. Unlike other listed species that occur in the I-11 study area—which tend to occur in small numbers in restricted or relatively inaccessible habitats—the PPC occurs in significant numbers within all three of the I-11 build corridor alternatives. The recommended alignment for I-11 will bisect the PPC’s entire known range from south to north and will affect possibly hundreds of individual cactus plants. The proportion (percent) of the known range-wide population that will be affected is unknown but is likely to be significant.

FWS is currently aware of fewer than 8,000 extant PPC individuals across the range of the taxon. In addition, 1,837 are known to no longer exist, primarily due to development and mining.

A primary concern is to assure that a path to avoid Endangered Species Act Section 7(a)(2) prohibitions against jeopardy is available before formal section 7 consultation on the cactus occurs during or after Tier II. That assurance can be provided only if PPC numbers and distribution within the build corridor alternatives, or at least the recommended alternative, have been assessed in advance, and only if I-11 planners and FWS are confident that project affects to those populations can effectively be avoided or mitigated.

There is currently insufficient information to determine whether impacts to the PPC that may result from the I-11 project can be mitigated or to assure that a jeopardy opinion from the FWS would not occur during formal consultation on the PPC. A potential jeopardy decision for the PPC due to potentially large losses of this endangered species is critical and poses a serious challenge to I-11 planners.

Central Arizona Project

Reclamation and the Central Arizona Water Conservation District (CAWCD) have design standards for facilities that encroach on CAP lands. These design standards protect the CAP facilities and the ability to perform Operation and Maintenance of project facilities. As I-11 reaches the design phase, we recommend coordination with CAWCD and Reclamation on the applicable design standards.

Segment U of the recommended alternative which spans north through the Hassayampa Plain and Tonopah Desert study area has the potential to affect wildlife movement over two concrete wash overchutes and a wildlife bridge. While the primary intent of overchutes is to maintain hydrological connectivity, wildlife use was considered in their design. Reclamation has performed long-term monitoring of multiple CAP wildlife bridge and concrete wash overchutes. Some overchutes currently being monitored have recorded total individual crossings by mule deer as high as 380 a month. It is expected that Segment U would devalue and reduce the wildlife utilization of the overchutes and the wildlife bridge in the surrounding area. Replacement of multiple wildlife crossing structures should be included as mitigation in Segment U.

Summary Comments

As Cooperating Agencies, we value our cooperative relationship and believe an Individual Section 4(f) Evaluation is the most appropriate evaluation moving forward. At its conclusion, if Segment D is still chosen as part of the preferred alternative, then the Department still believes the same conditions identified in Reclamation's June 8, 2018 letter are still applicable to accomplish the required minimization under 23 CFR 774.3(a)(2) and the appropriate mitigation required to compensate for the loss and "use" of 453-acres (18% of the TMC) and all necessary measures to avoid defeating the initial purpose of its acquisition [16 U.S.C., section 663(d)]. The Department continues to be committed to consulting and collaborating on the analysis necessary to determine the best way to minimize and mitigate the effects of the proposed I-11.

Thank you for the opportunity to provide comments and a path forward to minimize impacts to the TMC and the features and values for which the property was established. The Department and bureaus would be available to meet to clarify any of our recommendations, and further assist the FHWA and ADOT with identification of appropriate measures for the benefit of wildlife.

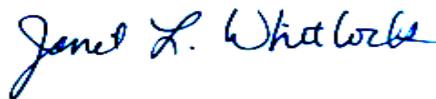
For additional comments from BLM, please see **Attachment 1** – *Additional Comments from the BLM on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

For additional comments from Reclamation, please see **Attachment 2** – *Additional Comments from Reclamation on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

For additional comments from NPS, please see **Attachment 3** – *Additional Comments from NPS on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

Thank you for the opportunity to provide comments, and we look forward to continued work with the FHWA and ADOT. For questions regarding specific comments please contact: Mr. Lane Cowger with BLM at 602-417-9612 or via email at lcowger@blm.gov; Mr. Bob Lehman with FWS at 602-242-0210 or via email at Robert_lehman@fws.gov; Mr. Jeff Conn with NPS at 623-773-6250 or via email at jeffery_conn@nps.gov; Mr. Sean Heath with Reclamation at 623-773-6250 or via email at sheath@usbr.gov. For all other comments or questions please contact me at 415-420-0524 or via email at janet_whitlock@ios.doi.gov.

Sincerely,



Janet Whitlock
Regional Environmental Officer
Office of Environmental Policy and Compliance

Attachments

Cc

Shawn Alam, DOI
Jeff Conn, NPS
Lane Cowger, BLM
Sean Heath, BOR
Courtney Hoover, DOI
Robert Lehman, FWS
Joseph Mathews, SOL
Roxanne Runkel, NPS

Attachment 3 – Additional Comments from NPS on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.

#	Section	Page	Paragraph/Bullet/ Figure	Lines	Reviewer	Comments
1	1				NPS-AS	We appreciate the additional specificity included about potential, future multi-modal uses. We suggest including a discussion of these potential indirect and cumulative effects in the Executive Summary. In-depth discussion on this topic comes late in the document (Volume II, Section 3.17), and the question of how the impacts of future multimodal impacts will be addressed is left open until that point.
2	2				NPS-AS	We acknowledge the difficulty in selecting an alignment that will minimize impacts to sensitive resources. For a project of this magnitude, it is unavoidable for some resources to be degraded or entirely lost if a Build Alternative is selected. In the southern section the current narrative appears to give more weight to protecting the known archeological resources along the current I-10 (Orange) than the known environmental resources and unknown archeological resources along the Recommended Alternative (Purple). We suggest adding explanatory text to describe how these resources/Section 4(f) properties are evaluated relative to each other.
3	3				NPS-AS	We appreciate the addition of Table 6-1 for providing a summary comparison of the alternatives relative to the Purpose and Need. We encourage a similar summary table that provides a side-by-side comparison of the relative impacts on sensitive resources for each of the alternatives.
4	4				NPS-AS	We appreciate the new text describing the economic impact of tourism. While this infrastructure could bring more people, more quickly to Saguaro NP; we also seek to protect the underlying qualities the public seeks and natural resources at Saguaro NP. NPS supports the protection of the qualities driving this economic sector as the other sectors served through this project are developed.
5	ES1.2	ES-2	2	8-12	NPS-AS	We appreciate the addition of specifically naming potential future multimodal uses.
6	ES1.3	ES-4	1	5-7	NPS-AS	We request clarifying whether the committed projects also need to have NEPA analysis completed. This was a criteria listed in the previous draft. It would clarify to the reader if a decision document has been completed.
7	ES1.3	ES-5	Figure ES-3	N/A	NPS-AS	Please label Casa Grande Ruins National Monument and including line symbology for "National Trails" that would identify the Juan Bautista de Anza National Historic Trail.
8	ES1.6.1	ES-7	3	33-35	NPS-AS	This statement connotes that NPS supports the conclusions of the environmental screening. Rather, we request that additional analyses be conducted before selecting an alternative.
9	ES1.6.2.1	ES-10	Bullet 1	2-8	NPS-AS	We request that this description also note that the corridor may also include freight rail, passenger rail, and utility corridor in the future and may substantially exceed the 400' width.
10	ES1.7	ES-12	1	1-19	NPS-AS	Please add Designated Wilderness in this list with a standalone bullet.
11	ES1.9.1.2	ES-17	1	13-14	NPS-AS	Suggest adding language to clarify that these estimates are maximums, and that time savings are primarily from Casa Grande northward.
12	ES1.9.1.2	ES-17		28-29	NPS-AS	If construction impacts within downtown Tucson are discussed, it is also important to discuss impacts in other locations for all alternatives. It has been indicated that the Recommended Alternative could be engineered to be as narrow as 100'. We suggest clarifying whether this narrower alignment could not also be achieved for the Orange Alternative or including an analysis of impacts with this narrower corridor.
13	ES1.9.2	ES-20	Table ES-2, 2nd row		NPS-AS	If construction impacts within downtown Tucson are discussed, it is also important to discuss impacts in other locations for all alternatives. During our DOI/ADOT/FHWA meeting in April 2019, it was indicated that the Recommended Alternative could be engineered to be as narrow as 100'. We suggest clarifying why this narrower alignment could not also be achieved for the Orange Alternative or including an analysis of impacts with this narrower corridor.
14	ES1.9.2	ES-22	Figure ES-8	N/A	NPS-AS	We suggest including symbology for designated Wilderness to identify the several Wilderness areas within the project area including the Saguaro Wilderness, Pajarita Wilderness, North and South Maricopa Mountains Wilderness, Sierra Estrella Wilderness, and others.

15	ES1.9.3	ES-23	1	1-14	NPS-AS	We suggest also noting noise-related mitigations as a bullet in this list: "Minimizing noise impacts to national parks and designated Wilderness areas."
16	1.4.1	1-8	1	21-44	NPS-AS	We appreciate the additional discussion regarding multimodal transportation within the corridor.
17	1.5.2	1-18	Table 1-3	N/A	NPS-AS	We suggest clarifying whether these estimates include the 20,000 daily riders projected from the Arizona Passenger Rail Corridor Study referenced earlier on page 1-8.
18	2.2.4	2-10	N/A	40-44	NPS-AS	We suggest adding a summary statement describing how potential cumulative effects would be treated if/when these additional modes are implemented.
19	2.4.1	2-25	Figure 2-11	N/A	NPS-AS	This figure includes boundaries for some public lands like Ironwood Forest NM, but not all (including Saguaro NP). Please revise.
20	2.4.3.1	2-30	Figures 2-14 & 2-15	N/A	NPS-AS	We appreciate the information conveyed in these new figures since the previous draft. We suggest adding more narrative to describe the figures. As the explanatory text on page 2-28 indicates there would be less than 1 percent increase in VMT with any of the build alternatives. It's difficult to reconcile that projection with the large influx of freight traffic projected to be re-routed from the I-5, along with the other population growth statistics and figures already presented. Also, please consider adding similar figures for the current conditions, which may clarify anticipated changes to VMT.
21	2.4.5	2-34	Table 2-9	N/A	NPS-AS	We suggest including an additional column to this table which captures the total cost of each alternative, by multiplying the annual operational & maintenance costs by the 20 year life of the project and add to the initial cost. This information would help clarify the overall cost comparison for all options.
22	3.2	3.2-2	Table 3.2-1	N/A	NPS-DS	Additional information on the TMC would be helpful for readers. Suggested text: after "Crosses wildlife linkage area associated in Avra Valley" ... "and the Tucson Mitigation Corridor (TMC), a designated conservation area set aside in perpetuity to provide wildlife connectivity between the valley and Tucson Mountains as part of Central Arizona Project (CAP) mitigation."
23	3.2	3.2-3	Table 3.2-1	bullet 7	NPS-DS	For clarity, under bullet 7, please add after the word "unobstructed views;" "these issues cannot be resolved, but some site-specific mitigation measures would be identified during Tier 2..."
24	3.2	3.2-4	Table 3.2-1	bullet 1	NPS-DS	Under bullet 1 re: siphons, add to end of sentence, "although they would be significantly longer." Also replace the word "crossings" with "overpasses" or "underpasses", since these two types are very different in their effectiveness. For consistency with the TMC, it is assumed that these are overpasses, but should be clarified here.
25	3.2	3.2-4	Table 3.2-1	bullet 2	NPS-DS	Suggest clarification of what is meant by "alignment of wildlife structures with i-11 would avoid greater fragmentation of wildlife crossing areas." This statement may refer to alignment of Sandario Road, but that's not a wildlife structure.
26	3.2	3.2-9	Table 3.2-2	N/A	NPS-DS	See above comments for Purple Alternative; since language is essentially the same as for that alternative, this section should also be revised accordingly.
27	3.3.1.3	3.3-4	Figure 3.3-1	N/A	NPS-AS	Saguaro NP is labeled but not shown in this map. Please include the park's boundary and all designated wilderness areas in this map and in public meeting materials.
28	3.3.1.3	3.3-8	4	31-36	NPS-AS	We appreciate the inclusion of this text regarding Wilderness impacts. It's important that the coordination with agencies to understand consequences (described in the last sentence) should occur before a ROD is issued for Tier I. Suggested addition after last sentence: "This coordination should occur before a ROD is issued for Tier 1."
29	3.3.1.4	3.3-14	Figure 3.3-5	N/A	NPS-AS	Designated Wilderness is a Planned Land Use at several locations within the project area, including Saguaro NP. It's important to NPS that this category be added to the map.
30	3.3.1.4	3.3-20	Figure 3.3-8	N/A	NPS-AS	We appreciate the inclusion of this figure and the detailed inset map.
31	3.4.3	3.4-2	1	2-9	NPS-AS	We suggest including designated wilderness areas in this introductory paragraph because of their standalone Congressional designations and the unique recreation opportunities offered to the public. We have noted and appreciate the inclusion of wilderness impacts such as in the last paragraph of page 3.4-5.

32	3.6.4.5	3.6-18	Table 3.6-8	N/A	NPS-AS	The top 3 sections of this table (separated by yellow bars) seem to be lacking titles/labels.
33	3.6.6	3.6-19	1	27-38	NPS-AS	We suggest that these surveys would be more beneficial to the Tourism Sector if used to select the best corridor in Tier I, rather than the relatively minor adjustments to the specific alignment made in Tier II.
34	3.6.6	3.6-21	Table 3.6-9	N/A	NPS-AS	We suggest adding a bullet to the table under the Purple Alternative describing how environmental impacts from the project (e.g. sound, light, views, etc) could degrade tourists' experience and impact this sector of the economy. Suggested text: "Alternatively, environmental impacts (such as noise and light pollution and viewshed impacts) from a major highway so close to major high-value tourist attractions such as the Arizona-Sonora Desert Museum, Saguaro National Park, and Tucson Mountain Park could degrade tourist experience and impact this sector of the economy."
35	3.7.2.4	3.7.2.4	1	29-30	NPS-RB	Suggest replacing the word "inventory" with "available information" since most of the Purple and Green alternatives have had significantly less cultural resource inventory than the Orange Alternative.
36	3.7.2.2	3.7-4	Table 3.7-1	N/A	NPS-AS	The "Response to Invitation" status can be updated to "Accepted". NPS accepted on October 18, 2018 via email to Alan Hansen as requested.
37	3.7.3.1	3.7-8	2	33-37	NPS-AS	The introductory text of this section indicates that the majority of the all three alternatives are unsurveyed. We suggest adding the word "known" to the text comparing the number and density of sites along each route.
38	3.7.3.2	3.7-14	Table 3.7-5	N/A	NPS-AS	Tumacácori NHP is listed as "Tumacácori National Monument" in this location and several others in the document.
39	3.8.3.1	3.8-7	Table 3.8-2	Mon 35c	NPS IMR-NR	We appreciate the inclusion of new ambient noise monitoring data, including the Discovery Trail site measured by NPS in 2016. Our main concern remains for the FHWA procedure for characterizing the existing noise environment. In FHWA-HEP-10-025, FHWA defines the existing noise level as the worst noise hour resulting from the combination of mechanical sources and human activity usually present in a particular area. This definition of a worst case noise hour is inconsistent with ANSI/ASA 12.100 and other standards for measurement of natural quiet in protected areas. Furthermore, we argue that use of a worst case noise hour for the affected environment is likely to underestimate noise impacts in Saguaro National Park and other wilderness areas.
40	3.8.3.1	3.8-7	Table 3.8-2	Mon 35c	NPS IMR-NR	To ensure that impacts to existing sound environment at Saguaro National Park are not underestimated, NPS staff have committed to making new ambient sound measurements in the next couple of months within the western part of the Saguaro National Park, Tucson Mountain unit. For assessment of potential noise increase and potential need for noise mitigation, we respectfully request that ADOT consider including this new data in the Tier 1 Final EIS, in the Tier 2 Draft EIS, or both.
41	3.9.3.1	3.9-7	2	13-20	NPS-AS	The Tucson Mountains should also be listed for the southern section.
42	3.9.3.6	3.9-19	2	8-11	NPS-AS	Please add this statement: "Tumacácori NHP received dark sky status in May 2018 from the International Dark Sky Association (https://www.darksky.org/tumacacori-national-historical-park-becomes-100th-designated-international-dark-sky-place/)."

		3.10-9				The document states: "The approximate distance from the Class 1 air shed range to the Study Area is 7,900 feet for Option A; 6,800 feet for Option B; 1,700 feet for Option C; and 1,300 feet for Option D. The variation in distance between the Corridor Options in this portion of the Analysis Area is not considered to be notable as transportation sources do not significantly contribute to visibility impairment in the Class I areas" The suggestion that the impact to visibility does not vary by alternative despite the differences in distance from the alternatives to Saguaro NP is not supported by a quantitative analysis of the proposed project, nor does the statement consider the differences in impacts on criteria pollutants in Saguaro NP, such as concentrations of NO ₂ , particulate matter, and CO. Furthermore, this appears to be contradicted by statements elsewhere in the air quality analysis (page 3.10-22 line 13, page 3.10-23 line 38) that indicate that alternatives that are closer to Saguaro NP have greater potential to impact air quality in the Class I area. In addition, on page 3.10-18, line 29, the DEIS acknowledges that the build corridor alternatives may adversely impact visibility and other AQRVs in the park. A quantitative analysis using an EPA-recommended near-field air quality model (such as AERMOD) is needed in order to determine the differences in impacts among the alternatives to air quality in Saguaro NP. This should include an air quality impact analysis for impacts to the park at its west unit for the Green and Purple alternatives, and at its east and west units for the Orange alternative. The air quality analysis needs to address impacts to the National Ambient Air Quality Standards (NAAQS) for the criteria pollutants (NO ₂ , PM ₁₀ , PM 2.5, and carbon monoxide) for all the appropriate averaging periods for each pollutant, and it should include both construction and operational phases of the project. The air quality analysis for both of the phases also needs to address impacts to air quality related values (AQRVs), specifically deposition and near field visibility. Impacts to AQRVs, including deposition of total nitrogen and total sulfur, should be calculated and compared to the deposition analysis threshold of 0.005 kilograms per hectare year (kg/ha/yr) per the Federal Land Managers Air Quality Related Values Workgroup (FLAG) guidance from 2010. Deposition impacts may be calculated with AERMOD in the near field. The impacts to visibility in the near field should follow the recommendations in the FLAG document. The near field visibility impacts (less than 50 km from the source to the boundary of the Park) should be assessed with the EPA VISCREEN model (a screening model), or in the case of very significant predicted coherent plume impacts predicted by the VISCREEN analysis, the EPA PLUVUE model should be employed.
43	3.10				NPS-DM	
		3.10-16		6		The document states: "For all Build Corridor Alternatives, air quality effects are driven by the behavior of vehicles in the transportation network." Location and distance of particular build corridor alternatives will also likely affect the air quality impacts on Saguaro NP.
44	3.10				NPS-DM	
		3.10-23		32, 37, 39		In its discussion of the alternatives through the southern section near Tucson, the document indicates that the Orange alternative (along the existing 1-10 corridor) would relieve congestion more effectively than either the Green or Purple alternatives. It also states that the Orange alternative is farthest from Saguaro NP and thus least likely to negatively impact air quality in the park. Earlier in Section 3.10, the analysis indicated that reducing congestion is preferable for reducing air quality impacts. Thus, it appears that in this area the recommended alternative will be less likely to reduce congestion and more likely to negatively impact air quality at Saguaro NP than the Orange alternative.
45	3.10				DM	
46	3.10				DM	Please include an analysis of the impacts of induced growth from the Purple and Green alternatives on air quality in Saguaro NP.
						Please add relevant language from the Organic Act of 1916: "The Organic Act establishes the fundamental purpose of the parks is to conserve scenery, natural resources, historic objects and wild life in them and to provide for the enjoyment of them "in such manner and by such means as will leave them unimpaired for future generations."
47	3.14.1	3.14-2		7-11	NPS-DS	
						The statement that wildlife movement could potentially be improved seems plausible for the Santa Rita-Tumacacori linkage, but not seem plausible for the other two linkages where there are not existing highways that could be improved and where i-11 represents a significant new impact. This is probably an inadvertant mistake, so recommend limiting this paragraph to the SR-T linkage, or (if it's not a mistake) explaining in more detail how the other two linkages would be improved.
48	3.14-9	3.14-43		18-23	NPS-DS	

49	3.14-9	3.14-44		36-38	NPS-DS	Because the impacts of the Green and Purple alternatives are really very similar in the South Section, as described in previous sections, recommend re-writing this sentence to say, "The Green Alternative has the greatest potential to disrupt wildlife linkages and connectivity, slightly more than the Purple Alternative and significantly more than the Orange alternative." If this is too general a statement for the whole corridor, then sentence could be re-written to make the distinction between the Green and Purple alternatives in the North and South Sections.
50	3.14.5	3.14-54			NPS-DS	p. 3.14-54. "Wildlife Connectivity." As indicated elsewhere in our comments, NPS should be listed anytime the other stakeholders (AGFD, BLM, BOR, etc.) are listed who will determine wildlife connectivity, due to our agency's strong interest in the TMC.
51	3.14.5	3.14-54	Table 3.14-11	Column two, cell one	NPS-JC	Please add the words "invasive and" before noxious in the first sentence.
52	4.4.3.3.	4-77		21-24	NPS-DS	The TMC is a very sensitive area with significant history that should be included here for a full perspective of the potential environmental impacts. We suggest the following text be inserted in line 23, (after the first sentence): "The TMC was established to reduce impacts from the Central Arizona Project (CAP) on wildlife movement across the Avra Valley. Based on several years of wildlife studies by BOR, AGFD, and other agencies, it provides a strategic linkage between about 45,000 acres of habitat to the east within Tucson Mountain Park and Saguaro National Park, and over 2.5 million acres of open space to the west on the Tohono O'odham Nation and Ironwood Forest National Monument."
53	4.4.3.3	4-77		30-33	NPS-DS	Please add in line 32 (after the words "own NEPA process") "with extensive collaborative involvement from the public, environmental organizations, and government agencies,..."
54	4.4.3.3.	4-80 and 4-81		40-45, 1-7	NPS-DS	We greatly appreciate the inclusion of the tunnel discussion as part of potential net benefit for the TMC. As indicated in our comments elsewhere, achieving a net benefit is possible but is a high bar, and a tunnel has a high chance for success compared to other mitigations. Although Sandario Road negatively impacts wildlife, it is not nearly the barrier that I-11 would be, and mitigations along Sandario would be less expensive and more effective than mitigations for I-11.
55	4.4.3.3.	4-81 through 4-84			NPS-DS	The proposed mitigations are excellent for standard highways such as I-10, where a highway has already been constructed and there is a goal to restore some of the wildlife connectivity that has been lost. In these cases, any improvement in wildlife connectivity is positive for wildlife. For a net benefit to be achieved is a different standard and a different scale of mitigation, because currently there is no interstate highway or multi-modal transportation corridor that runs through the TMC. In the end, the net benefit must be a true benefit that results in larger populations, greater connectivity, increases genetic exchange and diversity, and maintains or enhances high biological diversity in the Tucson Mountain area that the TMC was designed to protect. This benefit may be achievable but requires a more expansive view of mitigations than is presented here.
56	4.4.3.3	4-82		21-32	NPS-DS	In line 23, add to end of sentence, "although they would be significantly longer." Also replace the word "crossings" with "overpasses" or "underpasses", since these two types are very different in their effectiveness. For consistency with the TMC, it is assumed that these are overpasses, but should be clarified here.
57	4.4.3.3	4-82		3-35	NPS-DS	Please add language to clarify if Sandario Road will be removed (as stated in line 7 and 23) or relocated to align with I-11. If the road is not removed, but re-located, it should be noted that this would widen the transportation corridor, which has the potential to offset the benefit of co-aligning the road with I-11. Perhaps there is a traffic analysis of Sandario Road elsewhere in the document. NPS assumes that some percentage of the traffic on this long N-S road would be expected to be diverted to I-11 if the highway were to be constructed following the same general route.
58	4.4.3.3	4-82		40-41	NPS-DS	Please list "NPS" as one of the agencies that would be involved in the design and implementation of wildlife studies in this paragraph and elsewhere, such as on page 4-83, lines 7-8.
59	4.4.4.2	4-87	2	16-25	NPS-AS	We request that similar text is added to the Noise section (3.8) to indicate that noise impacts are only being considered for impacts to human receptors and not to wildlife within parks and Wilderness areas, per FHWA regulation.

60	6	6-22	Table 6-4		NPS-DM	The document indicates that in the southern section, the impacts to resources from the recommended alternative can be mitigated. Table 6-4 lists only potential prohibition of interchanges in the Avra Valley as a mitigation strategy for air. Please explain how this will mitigate air quality impacts to Saguaro NP that result from choosing the build corridor most likely to impact the park.
61	3.9.4.5 6		9, 27		NPS-DM	The document states that from the perspective of viewpoints in Saguaro NP, the Green and Purple alternatives “would be incongruous in the overall setting and would create Co-Dominant (daytime) or Dominant (nighttime) visual contrast due to scale. Recreational viewers will have middle ground views of the Green and Purple Alternatives, and the overall visual impact is likely to be high because of high viewer sensitivity and superior, unobstructed views. The CAP Design Option will have slightly higher visual impacts, as it is aligned closer to both the park areas compared to Option C and Option D (Sandario Road Portion).” It further states “The visual intrusions related to the Build Corridor Alternatives could impact the visual resources and result in unsatisfactory visitor experiences.” Chapter 6 indicates that impacts can be mitigated but does not identify specific mitigations for visual impacts. Please explain how visual impacts to Saguaro NP from the recommended alternative can be mitigated, particularly since the viewpoints are generally located at a higher elevation than the proposed build corridor.
62	6				NPS-DM	Simulations of the corridor, produced at a suitable scale, could more clearly show potential changes in the landscape. NPS requests the simulations be prepared in accordance guidance in Chapter 5 of the Guide to evaluating visual impact assessments for renewable energy projects, available at: https://irma.nps.gov/DataStore/Reference/Profile/2214258
63	6.1	6-3	Table 6-1	N/A	NPS-AS	This table is very helpful for making a side by side comparison of how the alternatives meet the Purpose & Need. We respectfully request that a similar table is included in this summary section that includes the comparative costs and impacts of each alternative.
64	6.2.2	6-6	1	26-36	NPS-AS	Because of the elevated interest in this section (Sahuarita to Marana), we suggest more detailed data for the projected travel times, costs, and break-down of impacts for the Purple/Recommended Alternative and Orange/I-10 Alternative for this segment. Data for these metrics have been aggregated for longer reaches, making it difficult to make a side-by-side comparison of the costs and benefits of these options over this more limited stretch.
65	Appendix F	1	2		NPS-AS	We request clarification on the process and timing (Tier I or Tier II) of determining Constructive Use impacts on Saguaro NP. Additionally, we suggest clarification on whether the separately designated Saguaro Wilderness should be included in this Constructive Use analysis.
66	Appendix F	11			NPS-AS	We realize that it is probably an inadvertent mistake, but the National Park Service disagrees with the statement that "Saguaro National Park is managed as the public park and for natural resource preservation; it is not a wildlife or waterfowl refuge." As a protected area for wildlife adjacent lands open to development, hunting, and other disturbances, the park is an important refuge for wildlife and its "significant wildlife qualities" are named in the park's enabling legislation. More importantly, the Organic Act of 1916 establishes that the fundamental purpose of the parks is to conserve scenery, natural resources, historic objects "and wild life" so as to leave them unimpaired for future generations. We request that it be removed and be replaced with language more consistent with the NPS Organic Act and enabling legislation of the TMD.
67	Appendix F	29			NPS-AS	We appreciate the inclusion of the 5 letters from NPS and 2 sets of meeting notes from our face-to-face discussions in Appendix F. It appears that additional documents pertinent to this section (NPS letters dated 9/30/16, 11/3/16, 12/16/16, 3/17/17, 11/3/17, 8/6/18, and notes from our in-person meeting on 8/10/18) are not included. We can readily provide copies if needed.

68	Appendix F	7	Table 1 to Part 772 - Noise Abatement Criteria	IMR-NR (RS)	The Noise Abatement Criteria in Table 1 to Part 772 are arguably insufficient to address remoteness from sights and sounds of people and Congress' stated intent (in Public Law 103-364) to protect opportunities for solitude in the Saguaro National Park, Tucson Mountain unit. We request a constructive use analysis that considers the projected noise increase (ambient degradation) for Saguaro National Park locations, based on existing median and residual sound levels that might reasonably address existing conditions of quiet in protected areas, pursuant to ANSI/ASA S12.100.
69	Appendix F	7	Table 1 to Part 772 - Noise Abatement Criteria	IMR-NR (RS)	The Noise Abatement Criteria in Table 1 to Part 772 are arguably insufficient to address remoteness from sights and sounds of people and Congress' stated intent (in Public Law 103-364) to protect opportunities for solitude in the Saguaro National Park, Tucson Mountain unit. We request a constructive use analysis that considers the projected noise increase (ambient degradation) for Saguaro National Park locations, based on existing median and residual sound levels that might reasonably address existing conditions of quiet in protected areas, pursuant to ANSI/ASA S12.100.



Department of the Interior



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Letter from Department of the Interior with DEIS Comments, July 8, 2019



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United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
333 Bush Street, Suite 515
San Francisco, California, 94104

July 8, 2019

In Reply Refer To:
19/0143
Filed Electronically

Ms. Karla Petty
Division Administrator
Federal Highway Administration
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Subject: Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona, dated March 2019.

Dear Ms. Petty:

The Department of the Interior (Department) has reviewed the *Draft Tier 1 Environmental Impact Statement (EIS) and Preliminary Section 4(f) Evaluation for the Interstate 11 Corridor in Santa Cruz, Pima, Pinal, Maricopa, and Yavapai Counties, Arizona*, dated March 2019 and provides the following comments on behalf of its bureaus; the U.S. Bureau of Reclamation (Reclamation), the U.S. Fish and Wildlife Service (FWS), the U.S. Bureau of Land Management (BLM), and the U.S. National Park Service (NPS).

General Section 4(f) Comments

The Tucson Mitigation Corridor (TMC) is a 2,514-acre 4(f) designated property purchased in 1990 for approximately \$15 million. The land was purchased to partially mitigate biological impacts from the Central Arizona Project (CAP) Tucson Aqueduct-Phase B. Additionally, the CAP was modified to accommodate the TMC. In the Final EIS for the CAP Tucson Aqueduct-Phase B, Reclamation identified specific environmental commitments and mitigation measures to reduce project impacts. In accordance with the Fish and Wildlife Coordination Act of 1958 (PL 85-624, 16 U.S.C. 661 et seq.), Reclamation, Arizona Game and Fish Department (AGFD), FWS, and several public conservation groups agreed on a specific parcel (i.e., TMC) for mitigation. In 1990, Reclamation, FWS, AGFD, and Pima County signed a Cooperative Agreement. The Cooperative Agreement states:

"WHEREAS, 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)]".

[Type here]

The Master Management Plan (attached to Cooperative Agreement) prohibits any future development within the area other than existing wildlife habitat improvements or developments agreed to by Reclamation, AGFD, FWS, and Pima County.

In an effort to work with the Federal Highways (FHWA) and to accommodate FHWA's Programmatic EIS schedule, Reclamation identified preliminary conditions for a potential path to a programmatic Net Benefit determination for the TMC in a letter dated June 8, 2018. This letter stated that, "*Based on the proposed process to identify, evaluate, and implement potential mitigation measures, Reclamation believes that a net benefit could be achieved, and Reclamation would concur with the application of the Net Benefit Programmatic Evaluation to the TMC.*" Our understanding is that FHWA is requesting a higher level of commitment than what was provided in the June 8, 2018 letter prior to the Tier 1 EIS Record of Decision. Based on the lack of specificity and qualitative analysis inherent in a Programmatic EIS, Reclamation would not be able to provide a higher level of commitment on our concurrence for a 4(f) net benefit determination for the TMC.

After continued consultation with our TMC partners, the Department is requesting FHWA prepare an Individual Section 4(f) Evaluation for the TMC. Based on discussions with FHWA, it is our understanding that this change will not affect the overall EIS schedule.

The true value of the TMC is the functional and critical role the property plays in maintaining the primary wildlife movement corridor between the Roskrige Mountains, Ironwood Forest National Monument and west across Avra Valley to the Tucson Mountains and Saguaro National Park (SNP). The corridor supports multiple biological processes that are critical to the ecological health of SNP and Tucson Mountain Park, both Section 4(f) properties found within the Tucson Mountains that total approximately 44,818-acres. As a result of this role, Reclamation has viewed and managed the TMC as a Section 4(f) property of unique significance and critical importance.

General EIS Comments

Recommended Alternative

The Department continues to be concerned that the analysis at the Tier 1 level is insufficient to determine a Recommended Alternative or a Preferred Alternative in the Final EIS. The Recommended Alternative, which is 0.3 miles from SNP and 0.6 miles from Wilderness, should include the necessary studies to illustrate and further quantify the impacts the highway and cumulative effects of future multi-modal transportation and reasonably foreseeable subsequent development would have to park resources and visitors; specifically to wildlife movement and park wilderness values; impacting the view shed, diminishing natural sounds; diminishing night sky darkness and increasing air pollution.

The Tucson Mountain District of SNP was established to protect its natural resources, scenic beauty, and habitat from various threats associated with the growth of metropolitan Tucson. Because many wildlife species rely on the ability to move in and out of SNP to meet their water needs throughout the year, SNP works closely with adjacent land managers and neighbors to assist in providing habitat (and water sources) that maintain healthy wildlife populations.

These needs have been recognized and formalized through federal and local efforts. As mentioned above, Reclamation established the TMC to protect a critical wildlife corridor. Additionally, Pima County established the Pima County Buffer Overlay Zone, in part to: “3. Establish mechanisms that will protect the public preserves and result in an ecologically sound transition between the preserves and more urbanized development; 4. Assure the continued existence of adequate wildlife habitat and foster the unimpeded movement of wildlife in the vicinity of Pima County's public preserves...” (Pima County Code of Ordinances § 18.67). Finally, the Sonoran Desert Conservation Plan has identified critical wildlife corridors within the project study area which connect the park to other adjacent conservation lands.

The Recommended Alternative directly impacts all three of these properties: it bisects the TMC, it overlaps 916 acres of the Buffer Overlay Zone, and “most of the corridor (94%) impacts one or more categories of the Conservation Land System” identified in the Sonoran Desert Conservation Plan (Pima County DOT Report, Appendix F, p. 267).

Based on the potential for significant adverse impacts to SNP, TMC, Ironwood National Monument, and Pima Pineapple Cactus (PPC), the Department recommends the Orange Alternative for the southern section of the corridor. Additionally, the Orange Alternative better serves planned growth areas, freight industry focus areas, and economic activity centers while still reducing travel time over the no build alternative. Our determination is based on an analysis of the potential impacts and the EIS which states the Orange alternative best responds to continued population and employment growth in the South Section; provides the most access to economic activity centers; reduced impact to wildlife corridors and linkages; and, would have fewer impact to PPC and its habitat.”

Overall the environmental impact under Segment B is less severe to wildlife connectivity and the federally endangered PPC. Therefore, as identified above, Segment B is the ideal selection for the southern end of the study area.

Pima Pineapple Cactus

The Department recommends that FHWA develops a preliminary effects analysis and mitigation strategy for the federally endangered PPC (*Coryphantha scheeri* var. *robustispina*) before Option D of the recommended alternative is finalized in the Record of Decision. If the effects analysis and mitigation strategy are deferred until Tier II, we recommend that all options for aligning I-11 through Pima County remain open.

Of all listed species that may be affected by the I-11 project, FWS is most concerned about effects to the PPC. Unlike other listed species that occur in the I-11 study area—which tend to occur in small numbers in restricted or relatively inaccessible habitats—the PPC occurs in significant numbers within all three of the I-11 build corridor alternatives. The recommended alignment for I-11 will bisect the PPC’s entire known range from south to north and will affect possibly hundreds of individual cactus plants. The proportion (percent) of the known range-wide population that will be affected is unknown but is likely to be significant.

FWS is currently aware of fewer than 8,000 extant PPC individuals across the range of the taxon. In addition, 1,837 are known to no longer exist, primarily due to development and mining.

A primary concern is to assure that a path to avoid Endangered Species Act Section 7(a)(2) prohibitions against jeopardy is available before formal section 7 consultation on the cactus occurs during or after Tier II. That assurance can be provided only if PPC numbers and distribution within the build corridor alternatives, or at least the recommended alternative, have been assessed in advance, and only if I-11 planners and FWS are confident that project affects to those populations can effectively be avoided or mitigated.

There is currently insufficient information to determine whether impacts to the PPC that may result from the I-11 project can be mitigated or to assure that a jeopardy opinion from the FWS would not occur during formal consultation on the PPC. A potential jeopardy decision for the PPC due to potentially large losses of this endangered species is critical and poses a serious challenge to I-11 planners.

Central Arizona Project

Reclamation and the Central Arizona Water Conservation District (CAWCD) have design standards for facilities that encroach on CAP lands. These design standards protect the CAP facilities and the ability to perform Operation and Maintenance of project facilities. As I-11 reaches the design phase, we recommend coordination with CAWCD and Reclamation on the applicable design standards.

Segment U of the recommended alternative which spans north through the Hassayampa Plain and Tonopah Desert study area has the potential to affect wildlife movement over two concrete wash overchutes and a wildlife bridge. While the primary intent of overchutes is to maintain hydrological connectivity, wildlife use was considered in their design. Reclamation has performed long-term monitoring of multiple CAP wildlife bridge and concrete wash overchutes. Some overchutes currently being monitored have recorded total individual crossings by mule deer as high as 380 a month. It is expected that Segment U would devalue and reduce the wildlife utilization of the overchutes and the wildlife bridge in the surrounding area. Replacement of multiple wildlife crossing structures should be included as mitigation in Segment U.

Summary Comments

As Cooperating Agencies, we value our cooperative relationship and believe an Individual Section 4(f) Evaluation is the most appropriate evaluation moving forward. At its conclusion, if Segment D is still chosen as part of the preferred alternative, then the Department still believes the same conditions identified in Reclamation's June 8, 2018 letter are still applicable to accomplish the required minimization under 23 CFR 774.3(a)(2) and the appropriate mitigation required to compensate for the loss and "use" of 453-acres (18% of the TMC) and all necessary measures to avoid defeating the initial purpose of its acquisition [16 U.S.C., section 663(d)]. The Department continues to be committed to consulting and collaborating on the analysis necessary to determine the best way to minimize and mitigate the effects of the proposed I-11.

Thank you for the opportunity to provide comments and a path forward to minimize impacts to the TMC and the features and values for which the property was established. The Department and bureaus would be available to meet to clarify any of our recommendations, and further assist the FHWA and ADOT with identification of appropriate measures for the benefit of wildlife.

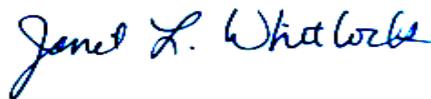
For additional comments from BLM, please see **Attachment 1** – *Additional Comments from the BLM on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

For additional comments from Reclamation, please see **Attachment 2** – *Additional Comments from Reclamation on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

For additional comments from NPS, please see **Attachment 3** – *Additional Comments from NPS on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

Thank you for the opportunity to provide comments, and we look forward to continued work with the FHWA and ADOT. For questions regarding specific comments please contact: Mr. Lane Cowger with BLM at 602-417-9612 or via email at lcowger@blm.gov; Mr. Bob Lehman with FWS at 602-242-0210 or via email at Robert_lehman@fws.gov; Mr. Jeff Conn with NPS at 623-773-6250 or via email at jeffery_conn@nps.gov; Mr. Sean Heath with Reclamation at 623-773-6250 or via email at sheath@usbr.gov. For all other comments or questions please contact me at 415-420-0524 or via email at janet_whitlock@ios.doi.gov.

Sincerely,



Janet Whitlock
Regional Environmental Officer
Office of Environmental Policy and Compliance

Attachments

Cc

Shawn Alam, DOI

Jeff Conn, NPS

Lane Cowger, BLM

Sean Heath, BOR

Courtney Hoover, DOI

Robert Lehman, FWS

Joseph Mathews, SOL

Roxanne Runkel, NPS

Attachment 1 – Additional Comments from BLM on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.

#	Section	Page	Paragraph/ Bullet/ Figure	Line	Reviewer	Comments
1	2.4.2.1	2-26		7	Cowger	“54” should be “60”- i.e., 297 minus 237= 60
2	2.4.5	2-33	Table 2-8		Cowger	Options Q2a and b and Q3 a and b are only mentioned in this table and nowhere else in the document. Elsewhere only Q2 and Q3 are referenced. This should be clarified or removed.
3	3.1	3.1-1		16-18	Cowger	It appears the concept that is being relayed here is that the recommended alternative may be one of the one of the defined alternatives or a hybrid of two or more of them. The sentence is missing a word or is otherwise unclear and thus fails to adequately relay this important idea. Suggest adding “not” between be and one in line 16 or changing “but” to “or” in line 17 or otherwise rewriting to make this concept clear.
4	3.1.2	3.1-3		16	Cowger	“alternatives” misspelled twice on this line
5	3.2	Table 3.2-2	3.2-9		D. Tersey	No mention of impacts to Ironwood Forest National Monument and access to the monument through Manville Rd. Potential to impact visual resources, noise levels, and visitor experience for the Ironwood Forest National Monument. Issue for Tier 2 analysis. Potential for high overall visual impact from Ironwood Forest national Monument because of high viewer sensitivity and superior, unobstructed views. Issue for Tier 2 analysis.
6	3.2	Table 3.2-2	3.2-10		D. Tersey	No mention that the alternative would significantly impact the Los Robles Archaeological district on the National Register. No mention of impacts to Ironwood Forest National Monument and access to the monument through Sasco Rd.
7	3.3	3.3-5		19-20	Cowger	Better language for BLM utility corridor definition- -“...within Bureau of Land Management (BLM) designated multi-use utility corridors, which are defined corridors for linear infrastructure development. These multi-use...” Avoids using “rights-of-way”- which are the road/pipeline/powerline authorizations themselves rather than the corridor
8	3.3	3.3-8		32	D. Tersey	The definition of wilderness is misleading, and sounds more like the definition of a national monument than a wilderness area. “Wilderness is protected and managed so as to <u>preserve</u> its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable; (2) has outstanding opportunities for solitude... may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.” (Section 2(c) Wilderness Act of 1964) The primary purpose of wilderness is for unimpaired views and solitude and may also have scientific value.
9	3.3	3.3-10		42	Cowger	Global change: Any references in document to VMRA or VMCRMA should be changed to VMRMZ or Vulture Mountains Recreation Management Zone This stands for Vulture Mountain Recreation Management Zone, it’s designation in the Bradshaw-Harquahala RMP. The VMRA/CRMA title was previously used under the assumption that the BLM and Maricopa County would enter into a cooperative agreement for management of the entire area. This is no longer the case.
10	3.3	3.3-10		44	Cowger	Add “parts of which are” before “managed” for clarity
11	3.3	3.3-17		37	Cowger	Issue for figures for this entire chapter: Somewhere the numbering of figures in this chapter became off by one. This is where I caught it. Here, Fig 3.3-9 is referenced in the text but it actually corresponds to Fig 3.3-8 on page 3.3-20. Check figures citations with the actual figures throughout chapter.
12	3.3	3.3-23		3-12	D. Tersey	No mention of Option D going through the Los robles Archaeological district.
13	3.3	3.3-25	Fig 3.3-10		Cowger	Another example of disconnect between textual reference and actual figure

#	Section	Page	Paragraph/ Bullet/ Figure	Line	Reviewer	Comments
14	3.3	3.3-37	Table 3.3-6	Wilderness (BLM)	Cowger	Assuming that the 456 acres of BLM wilderness encroachment is similar to footnote 2 that applies to the 6,133 acres of “National Monument (BLM)” above it whereby actual impacts to the national monument are not expected. Should have same/similar footnote if that is the case. If not, any encroachment/development of designated wilderness on BLM lands would be in conflict with Federal wilderness statutes. BLM opposes any development on these Congressionally designated Wilderness lands and would encourage ADOT/FHWA to modify their alternatives to avoid designated Wilderness.
15	3.3	3.3-46		6-8	D. Tersey	Some specially designated BLM lands have prohibitions against new right of ways in their plans that are because of congressional or presidential actions (National Monuments) that cannot be fixed by amending the RMP. This is true of the presidential proclamations for both Ironwood Forest and Sonoran Desert NMs.
16	3.3	3.3-48	Table 3.3-8		D. Tersey	Reasonably foreseeable effects from increased access could increase the damaging effects of increased access to parks, recreational facilities or open space. (Blue, green and purple alternatives.)
17	3.4	3.4-2	Table 3.4-1		Cowger	Much like NPS and USFS, many additional laws and policies apply to recreation on BLM lands beyond just the field office RMPs listed here. Should add: Federal Land Policy and Management Act (FLPMA) of 1976 Wilderness Act of 1964; AZ Desert Wilderness Act of 1990 43 CFR Parts 8200-8260
18	3.4	3.4-6	Figure 3.4-2		Schow	The Sonoran Desert National Monument Resource Management Plan states, "NT-1.1.5: The Anza NHT corridor and the Anza NHT Management Area will be an exclusion area for major utility-scale renewable energy development and new major linear LUAs. In the Lower Sonoran Field Office, utility development could continue on a case by case basis in existing utility multiuse corridors and only if impacts are determined to have a negligible to minor effect on resources." The purple and green alternatives go right through the management area. BLM suggests using the Juan Bautista de Anza NHT Corridor instead for the map. Would need to be considered in Tier 2 analysis and may require BLM resource management plan amendment to authorize right-of-way within NHT management area.
19	3.4	3.4-7	Figure 3.4-3		Pike	The proposed routes would transect one of only two OHV race areas allocated in the Hassayampa Field Office Resource Management Plan (RMP 2010) and travel through the Vulture Mine Recreation Management Zone (RMZ). The RMP at Recreation Resources (RR) 37 states “ <i>Motorized competitive speed races are authorized only in Special Recreation Management Zones (SRMAs) or Recreation Management Zones (RMZs) where an allocation for such use has been made</i> ”. The Hassayampa SRMA and Castle Hot Springs RMZ (RMP at RR 116 and RR 87, respectively) are the only two such allocations. Therefore, the proposed route would potentially affect recreation that is relatively rare on the field office and highly sought after by the OHV race community and general public alike. There would also be potential effects to the Vulture Mine Recreation and Public Purposes Act Lease (R&PP) recently entered into with Maricopa County Parks Department, which formalizes the development of motorized and non-motorized recreation opportunities for the public over approximately 1000 acres adjacent to the proposed route.
20	3.7.3.1	3.7-8			D. Tersey	Section ignores Los Robles Archaeological District crossed by Segment D of the Green Alternative. District has high known archaeological site density.
21	3.7.3.1	3.7-8			D. Tersey	Suggest rewrite to better reflect that Green Alternative bisects Los Robles Archeological District
22	3.9	3.9-13		5-17	Cowger	Would be helpful to reviewers and public to clearly state in a table the acreage of BLM VRM classes (I through IV) crossed by each alternative.
23	3.9	3.9-13		16-17	Cowger	“VRM Class III areas are compatible with the BLM VRM objective.” This does not make sense. Suggest change to “Management objectives for VRM Class III lands include partially retaining their existing character and allow for moderate change to the subject landscape. Hence, BLM is unlikely to require amendment to their...” Here’s the full VRM III objective if needed to word this for ADOT/FHWA purposes- <ul style="list-style-type: none"> VRM Class III Objective: To partially retain the existing character of the landscape. Allowed Level of Change: The level of change to the characteristic landscape should be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Changes should repeat the basic elements

#	Section	Page	Paragraph/ Bullet/ Figure	Line	Reviewer	Comments
						found in the predominant natural features of the characteristic landscape.
24	3.9	3.9-16	Fig 3.9-7		Cowger	VRM designations only apply on BLM-administered lands. The VRM data displayed in this figure is on all ownerships. Only an issue for the northern portion of the project area- central and south look fine. Apologies if this was a function of the data shared by BLM. Change this map, others like 3.9-10 with similar scales, and full project area maps displaying VRM to reflect this. Fix: ensure all VRM data is clipped to BLM lands only
25	3.12				Plis	The proposed routes would have only a minimal impact on salable minerals in BLM's Lower Sonoran Field Office (LSFO). The green route, and to some extent the orange route, would impact the access road into the Kilauea Crushers/Pioneer Landscaping crushed stone pit in T2S, R3W, section 12. Otherwise, BLM sees no adverse impacts to any other LSFO salable minerals operations or potentially minable areas. The net effect of these new transportation routes will likely be beneficial to our salable minerals operations in that they will create demand for product used in constructing the routes, and thereafter the routes will enhance the ability to move sand & rock to other customers. Active mining operations will be analyzed in detail in the Tier 2 document, and so will stop here.
26	3.12				Plis	The proposed routes would have a negligible impact on locatable minerals in BLM's Lower Sonoran Field Office (LSFO). The purple route entirely avoids areas of high locatable mineral potential. The green and orange routes would cut across the area of high locatable mineral potential in the Buckeye Hills, but the impact to the locatable minerals resources there would be negligible because there are no active locatable minerals operations there, and the routes avoid creating significant new disturbance in previously mined and prospected locations within that high potential zone.
27	3.12	3.12-1		13	Cowger	US or United States Forest Service not "National" FS
28	3.14	3.14-13	Table 3.14-3 and	4	Cowger	For biological discussion and referenced table, please include BLM Sensitive Species. Link included with comprehensive list and more info on applicability. https://www.blm.gov/policy/az-im-2017-009
29	3.14	20			Daehler	BLM LSFO RMP has designated wildlife movement corridors. These corridors are sometimes similar to AGFD corridors but not always. These corridors should be considered and steps taken to ensure wildlife movement through these areas. Link to LSFO wildlife corridor map- https://eplanning.blm.gov/epl-front-office/projects/lup/11856/39910/42108/LSDA-Map-06_Wildlife_Special_Status_Species.pdf
30	3.14	21		29	Daehler	The text on page 3.14-21 references many studies and figures 3.14-5 to 3.14-7 depict "Detailed on other wildlife linkage designs" but the figures do not appear to accurately represent all of the wildlife movement corridors identified in these studies. For example, the Gila River is an important wildlife movement corridor identified in the Arizona Wildlife Linkages. This linkage and many others do not appear in any of the figures and the Gila River linkage is important considering that a new crossing is being proposed through this linkage area.
31	3.16	3.16-2		15-22	D. Tersey	Suggest splitting out impact summary discussion so each alternative is fully covered separately. An explanation of how much more resource impact the green alternative would have than the purple alternative would be helpful. Right now it is in the most basic relative terms.
32	3.17	3.17-15	Table 3.17-2		Cowger	Sonoran Valley Parkway ROD should be updated to 2019
33	4.3.1	4-12		24-32	D. Tersey	The entire IFNM (approximately 128,400 acres) is designated as a Special Recreation Management Area (SRMA). IFNM RMP Record of Decision page 69
34	4.3.1	4-12		24-32 and 38 through line 4 on pg 4-13	Cowger	BLM understands that impacts to Ironwood Forest NM and Sonoran Desert NM will be primarily indirect or otherwise limited because corridors either avoid (Ironwood) or collocate with existing infrastructure (Sonoran Desert) rather than cross or extensively develop these national monuments. However, it is incorrect to state that these national monuments do not function as or designated as a "significant recreation area" within its RMP as stated in Line 26 (IFNM) or implied in the SDNM discussion. Both of these national monuments include multiple Special Recreation Management

#	Section	Page	Paragraph/ Bullet/ Figure	Line	Reviewer	Comments
						<p>Area (SRMA) and/or Recreation Management Zone (RMZ) designations covering most or all of the BLM lands within them. Note that this is similar to the Vulture Mtn RMZ that is considered a 4(f) property, making the logic of not including these two monuments (or possibly the RMZs within them) while including Vulture Mtn very inconsistent.</p> <p>Regardless of 4(f) applicability, development of an interstate highway on or near these national monuments will impact the recreation that occurs on these monuments as well as the monument objects (i.e., ecological setting, cultural resources) justifying the designation of these monuments in the first place. At the very least, these impacts should be fully analyzed in the Tier 2 permitting for the project and avoidance, minimization, and mitigation appropriately used to decrease and ameliorate same.</p> <p>See extensive recreation discussion and designations in the RMPs for each monument</p> <p>Ironwood Forest NM RMP- https://eplanning.blm.gov/epl-front-office/projects/lup/78206/104878/128446/ROD_IFNM_Record_of_Decision_Approved_Resource_Management_Plan.pdf</p> <p>Sonoran Desert NM RMP- https://eplanning.blm.gov/epl-front-office/projects/lup/11856/40128/42157/01-SDNM_ROD-ARMP_FINAL_2012-09-19_web-with-Links_sans-map-pages.pdf</p>
35	4.3.2		Table 4-2		D. Tersey	Table and associated maps need to reflect 4(f) historic property- Los Robles Archaeological District. Crossed by Green Alternative.
36	4.6	4-99		10 and 20	Cowger	<p>BLM's Lower Sonoran Field Office has designated wildlife movement corridors that should be dealt with similar to the wildlife linkage discussed on lines 11 and 21 of this page. Map of these designated corridors is attached. Can also provide GIS data. More information on the corridor designations and restrictions is available in the Lower Sonoran RMP, linked above in these comments.</p> <p>Link to LSFO wildlife corridor map- https://eplanning.blm.gov/epl-front-office/projects/lup/11856/39910/42108/LSDA-Map-06_Wildlife_Special_Status_Species.pdf</p>
37	Appendix E12				Kilbey	There is no study area buffer zone in the northernmost part of the central section study area at purple route R portion, Orange and Green route portion Q3.
38	Appendix E12	E12-12	Table E12-2		Kilbey	The table lists route portion Q2 as having subsidence feature. This conclusion is incorrect because the route segment passes through area of shallow covered bedrock. Therefore, no potential for valley-fill subsidence.
39	Appendix E12	E12-12	Table E12-2		Kilbey	The Table lists route portion L has having no earth fissure analysis area, but an Analysis Area on Figure E12-6 occurs adjacent to northeast.
40	Appendix E12	E12-12	Table E12-2		Kilbey	The Table lists route portion L as not having land subsidence potential, L segment is entirely within valley fill, it would be prudent to list portion L as having land subsidence potential as was rational for segment I2 and I1.
41	Appendix F	2			D. Tersey	<p>Item (3) at the top of the page (consultation with management) has not occurred with the Ironwood Forest National Monument.</p> <p>Encourage ADOT/FHWA to discuss this directly with BLM Tucson Field Office and Ironwood Forests NM management as part of the Tier 2 analysis.</p>
42	Appendix F	2			D. Tersey	BLM has designated the entire IFNM as a Special Recreation Management Area. Allocate the entire IFNM (approximately 128,400 acres) as a Special Recreation Management Area (SRMA). IFNM RMP Record of Decision page 69
43	General				Cowger	<p>BLM directs you to its August 2018 comments on the ADEIS (included in Errata to Appendix H section in Errata to Draft Tier 1 DEIS). These comments still generally apply, particularly regarding BLM's preference for the orange alternative for the entire length of the project and reasoning therefore. The orange alternative minimizes new disturbance and collocates new facilities where possible, thereby minimizing impacts to BLM designations and uses and sensitive resources throughout the project area. These include:</p> <ul style="list-style-type: none"> -Avoids Vulture Mountain RMZ -Avoids additional impacts to Sonoran Desert National Monument -Avoids additional impacts to Ironwood Forest National Monument -Avoids additional impacts to wildlife connectivity in the Lower Sonoran and Tucson Field Offices/Central and South Project Sections -Avoids additional impacts to the Juan Batista De Anza National Historic Trail

#	Section	Page	Paragraph/ Bullet/ Figure	Line	Reviewer	Comments
						-Avoids additional impacts to the Lower Gila Terraces and Historic Trails ACEC -Avoidance of additional impacts to outdoor recreation on BLM lands throughout the project area
44	General-minerals				Ernst	There is no minerals section to review. There could be sand and gravel resources impacted as well as mining claims in the study area. An issue for Tier 2 specific analysis.
45	General-Grazing				Whitbeck	Livestock grazing is mentioned as a past and present action. Livestock grazing operations would be affected by all but the "no build" alternative. For the central section, impacts to grazing operations would be most with the purple alternative and least with the orange alternative. Issue for Tier 2 analysis.
46	General-Grazing				Holden	No rangeland management/livestock specific section. Project divides multiple allotments, potentially complicating livestock management. Issue for Tier 2 analysis.

Attachment 2 – Additional Comments from Reclamation on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.

#	Section	Page	Paragraph/Bullet/Figure	Line(s)	Reviewer	Comments
1	Overall comment				Reclamation	Please characterize the impacts as to their context and intensity. For example, in the document the term “impacts” is used instead. This does not tell the reader if the effects are adverse or beneficial.
2	Overall comment				Reclamation	Reclamation feels that additional analysis would be helpful to completely evaluate the potential effects of the proposed action. The DEIS should provide sufficient detail to foster an informed decision and not preclude corridor choices in the future when that information is available. A ROD will be signed at the end of this NEPA process for a specific corridor that is based on a broad, programmatic approach. Put another way, by the time the Tier II NEPA analysis occurs the corridor has already been selected and the Tier II site specific analysis will not be used to make a truly informed decision on the corridor, only on the alignment within the chosen corridor. Selection of a corridor in the Tier I EIS deprives the decision maker and the public of evaluating the true impacts of the proposed action and alternatives. Recommend carrying multiple corridors forward to the Tier II NEPA analysis, particularly where the environmental impacts are controversial or additional information would facilitate an informed decision.
3	Overall comment				Reclamation	Use of “could” throughout document. For the environmental effects section, “could” is often used to characterize the potential for an impact to occur. For example, on page 3.9-33 line 27 “The visual intrusions related to the Build Corridor Alternatives could impact the visual resources and result in unsatisfactory visitor experiences.” In most cases, the document could be a little more definitive. In this instance, the build corridor alternatives would impact visual resources.
4	3.2	3.2-3	Table 3.2-1	Purple alt, corridor option C, 4 th bullet	Reclamation	If this alternative is chosen, FHWA’s proposal to address disproportionate impacts to Environmental Justice populations is “targeted outreach”? At the Tier II level, the corridor decision has already been made so the potential menu of mitigation options is reduced.
5	3.2, 3.8.4	3.2-4, 3.8-11	Table 3.2-1, Table 3.8-4		Reclamation	“Potential for substantial noise impacts (15-dBA increase from existing).” On page 3.8-8 (line 2) it states there could be a 33 dBA difference between a low use area and a point near an existing interstate. This seems like it should be the baseline, or at least the worst-case scenario for the NEPA analysis.
6	3.2	3.2-4	Table 3.2-1	Purple alt, corridor option G, 1 st bullet	Reclamation	“Better avoids impacts on Santa Cruz River in Pinal County” This statement is an outlier compared to the rest of the table. It would better avoid impacts compared to? Does this table compare environmental affects among alternatives and against the no action alternative?
7	3.2	3.2-5	Table 3.2-1	Purple alt, corridor option II, 5 th bullet	Reclamation	Suggest delete “avoid” and just state minimize and mitigate for impacts since 99% of the soils have been mapped as prime and unique.
8	3.3.1.3	3.3-2			Reclamation	Wherever appropriate in this section, please include the CAP trail, a National Recreational Trail. The trail has only been partially completed but it is designated and included in CAP NEPA evaluations.
9	3.3.1.3	3.3-8			Reclamation	Land Management and Special Designated Lands Section Please describe all existing management plans (e.g., RMP, FMP, trail mgmt. plan, etc.) and evaluate consistency with those plans (40 CFR §1502.16(c))
10	3.3.1.4	3.3-21		31-35	Reclamation	Option X (and all alternatives) would cross the CAP and impact mitigation land on the north side of the canal.
11	3.3.5	3.3-47	Table 3.3-8, overall land use considerations		Reclamation	Under the purple alternative, it states that the corridor is “generally consistent with adopted plans”. It is not consistent with the Master Management plan for the TMC. Is it “generally” consistent with RMPs, FMPs, HCPs, and local plans? (i.e., SNP, Ironwood NM, Avra Valley HCP, etc.)
12	3.4.2	3.4-2	Table 3.4-1		Reclamation	SNP also has a Comprehensive Trail Management Plan

13	3.4.2	3.4-2	1 st para	2-9	Reclamation	Please add the CAP National Recreational Trail
14	3.4.6	3.4-13	Table 3.4-5, Federal Resource topic		Reclamation	Please add Saguaro National Park under the purple and green alternative. Both alternatives would affect recreation in the park.
15		3.7-2		39-40	Reclamation	Reword discussion of indirect effects. ACHP guidance posted on June 10, 2019 considers indirect effects to be caused later in time; therefore, visual and atmospheric effects from highway construction would be considered direct effects, not indirect effects. Link provided https://www.achp.gov/news/court-rules-definitions-informs-agencies-determining-effects
16		3.7-7		13	Reclamation	Given the considerable backlog in AZSITE (some 8,000 records) and the scale of the EIS, recommend supplementing this analysis with a records check from the ASM Archaeological Records Office, and updating the tables and counts throughout the EIS to reflect this addition. Additionally, FHWA should consider conducting a spatial search using tDAR to gain access to records that might not otherwise be available from the ARO.
17		3.7-7		42-45	Reclamation	Why did FHWA exclude GLO maps as part of their identification process? These records will likely contain named structures not visible on modern aerials.
18		3.7-8		1-2	Reclamation	Was the preliminary classification submitted to anyone for consultation? SHPO? Tribes?
19		3.7-8		24-25	Reclamation	It would be useful to provide an estimation of how much of the alternatives have been surveyed in the last 10 years in addition to the total survey coverage provided. This will give the public an idea of how reliable the survey data are.
20		3.7-13		Table 3.7-4	Reclamation	Would be helpful to add a column or text in the header column for each alternative and show again the percent surveyed, so that readers don't have to go back 5 pages to find it and they can properly understand the site frequency in relation to percentage of land covered. For example, the orange alternative has almost twice as many sites, but also almost twice as much percentage surveyed.
21		3.7-15		Table 3.7-6	Reclamation	Why are the NRHP evaluations of archaeological sites not presented in a similar table to this one? I think that would be very helpful!
22		3.7-17		15-16	Reclamation	Why does FHWA not consider increased traffic from I-11 traffic to have the potential to adversely affect sites adjacent to highways that won't need new lanes added?
23		3.7-17		38	Reclamation	Why does FHWA not include known TCPs along the alignment as something that might be considered to have high impacts?
24		3.7-18		12-13	Reclamation	It seems unwise to identify non-surveyed areas as having moderate potential for unrecorded sites to be placed in the Low impact column. Many professionals can attest to finding substantial subsurface intact deposits in areas where they didn't expect to find much, especially in southern Arizona. Recommend reclassifying moderate potential to the moderate impact section.
25		3.7-18		25-28	Reclamation	Doesn't this methodology skew the data to over-represent areas with more survey coverage?
26		3.7-20		16-19	Reclamation	The EIS did not have a sentence about the Purple Alternative but did include Orange and Green. Please add Purple.
27		3.7-22		1-26	Reclamation	This discussion seems to consider adverse effects to historic properties that have not previously been affected and adverse effects to historic properties that have been previously mitigated on equal footing. Some would argue that it makes more sense to favor impacting sites that have already been effected, rather than putting unaffected sites at risk of adverse effects. For example, the Dairy Site is already compromised, so why not impact it further rather than impacting a site that hasn't been compromised yet? Why not allow previous investigations in southern Arizona to carry some of the mitigation burden for FHWA?
28		3.7-22		37	Reclamation	Tables showing the number of sites that will be impacted by Options B, G, and Q3 would be helpful to give a sense of scale. You could also consider showing the values in previous tables in parentheses so people know these sites will be impacted no matter which alternative is selected.

29		3.7-29		15-29	Reclamation	Would it be possible to protect deeply buried deposits on the Santa Cruz by building over them, and not exposing them at all? Or is that not feasible given the scope of earthwork in these areas?
30		3.7-30		13	Reclamation	Why is there not discussion of cumulative effects in the text, but only bullet points in tables? Why is there no consideration of proposed projects that cross these alternatives, like Sun Zia and TEP lines, San Carlos Irrigation Project Rehab, or the expansion of wells and mines in these areas?
31	3.8.4.1	3.8-9		1	Reclamation	Stating a difference of 15 dBA seems an understatement since at the top of page 3.8-8 it says there could be a difference of 33 dBA.
32	3.8.4.1	3.8-9	2 nd paragraph	7-12	Reclamation	The statement regarding noise impacts occurring out to 250 feet is not the case for Saguaro National Park. In the park where noise is an unwanted intrusion the effects would occur much farther out. How far into the park would visitors hear traffic from I-11?
33	3.8.4.1	3.8-9	3 rd paragraph	23	Reclamation	Does the sensitive receptor count include visitors to SNP? The baseline for sensitive receptors along segment B of the orange alternative includes existing interstate traffic noise, segments C and D of the purple and green alternatives do not.
34	3.8.4.2	3.8-12	Table 3.8-5		Reclamation	The dBA numbers in this table are much different than the numbers in Table 3.8-3. Why are the noise levels so much lower for I-11 than existing interstates? Would the projected traffic levels on I-11 be much less than SR 85?
35	3.9.4.5	3.9-33		39-	Reclamation	<p>“Build Corridor Alternatives on new alignments where no road currently exists would increase sky glow the most because they would:</p> <ul style="list-style-type: none"> * Introduce new sources of light. * Provide transportation corridor access to the adjacent areas, which could encourage adjacent development based on local zoning.” <p>It is identified that segment D or C would result in High potential for light pollution because new segments would bring additional vehicles into the area but also attract residential and commercial development. It is expected that additional night lighting on the west side of the TMC would devalue and reduce wildlife utilization of the existing 7 siphon crossing structures and constructed highway overpasses. Artificial night lighting is known to adversely impact the behavior, foraging, movement, and predation of wildlife (Beier 2006). Artificial lighting can alter the light-sensitive cycle of different species and impair an individual’s ability to navigate through an area through disorientation from and attraction to that artificial light source (Beier 2006). The attraction of wildlife to artificial light sources varies by species, but it has been identified as a cause of decline in reptile populations (Perry and Fischer 2006). It is anticipated that a freeway that is artificially illuminated along with vehicle lights would obstruct individual animals from accessing and departing the Tucson Mountain Park and Saguaro National Park from the west.</p>
36	3.12.3	3.12-10	Table 3.12-9		Reclamation	The large number of acres for prime and unique farmlands for the southern section of the orange alternative does not seem possible. In this section it would be co-located with I-10 but segments C and D of the purple and green alternative would be breaking new ground.
37	3.13.4	3.13-20	1 st para	5-7	Reclamation	Is this percentage of corridor approach consistently used for all resource topics? Or, is there a specific reason why it could only be applied here?
38	3.14	3.14.30		1-15	Reclamation	Bureau of Reclamation biologists have been performing long-term monitoring of multiple Central Arizona Project Canal wildlife bridge and concrete wash overchutes. Segment U of the recommended alternative which spans north through the Hassayampa Plain and Tonopah Desert study area comes within approximately 450 feet of a concrete wash overchute that is located north east of the proposed Segment U. While the primary intent of overchutes is to maintain hydrological connectivity, wildlife use was considered in their design. Some overchutes currently being monitored have recorded total individual crossings by mule deer as high as 380 a month. It is expected that Segment U would

					<p>devalue and reduce the wildlife utilization of that overchute and the surrounding area. Devaluing that overchute would be coupled with the proposed Belmont development to the south and Douglas Ranch to the north. Two large scale communities that if built to full design would by themselves also devalue and reduce its use by wildlife. However, it is expected that a new major travel corridor would also attract additional businesses, residential development, and increase public access to these now secluded structures. As a result of that anticipated development and increased access it is expected that an additional CAP overchute and wildlife bridge approximately 1.2 and 2.4 miles to the west would also be devalued and their wildlife utilization reduced. Therefore the following mitigation for wildlife connectivity is being requested.</p> <p>The primary purpose of the concrete overchutes is for hydrological connectivity, but their secondary design consideration was wildlife movement so their recommended mitigation replacement is 1:1. Which is 1 replacement structure for each overchute that is expected to be permanently and significantly devalued by a project such as the proposed I-11. Due to the proximity of Douglas Ranch and Belmont development the recommended mitigation for the overchute east of the proposed segment is reduced to 0.5:1. Therefore the overchute found approximately 1.2 miles west also has a recommended mitigation replacement of 0.5:1. The wildlife bridge found 2.4 miles west is a mitigation structure designed and solely built for wildlife connectivity. It has a wildlife mitigation replacement value of 2:1. As with the overchutes the proximity of both planned developments has reduced the replacement value to 1:1. In the end the total requested mitigation replacement for dedicated and secondary CAP canal wildlife crossing structures is <u>2 total</u>.</p>
39	3.14	3.14-57	Tucson Mitigation Corridor	Reclamation	<p>Specific mitigation related to the TMC includes: (1) relocating and reclaiming Sandario Road; (2) conducting wildlife studies prior to the Tier 2 process; (3) aligning I-11 wildlife crossing structures to match the existing CAP canal siphons (7 crossings total); (4) <u>creating an additional wildlife crossing near the TMC, depending on the results of wildlife studies</u>; (5) acquiring property (<u>at a 1:1 ratio</u>) to support additional wildlife connectivity corridors within Avra Valley for the number of acres of the TMC that will be impacted by I-11; and (6) implementing design restrictions, such as no interchanges in the TMC or immediate area, and minimizing the width of I-11 to limit the I-11 footprint in the TMC area (see Chapter 4 [Preliminary Draft Section 4(f) Evaluation] for more detail on these mitigation strategies).</p> <p>As previously mentioned, please make the following edit to number 4. <u>(4) creating an additional wildlife crossing(s) near the TMC, depending on the results of wildlife studies</u>. Crossings needs to be plural by incorporating an S because no studies have been done that have identified how many new wildlife corridors would be needed to reach a Net Benefit.</p> <p>Item number 5 also requires that the reference to a 1:1 ratio be removed. Reclamation has not agreed to a 1:1 ratio and provided past written and verbal communication that it should be removed. A Net Benefit could not be accomplished with a 1:1 replacement ratio. The recommended replacement ratio would be based on the results of the proposed wildlife studies.</p>
40	4	4-7, 4-94	First Bullet	4-94	<p><u>23 CFR 774.3(d) Programmatic Section 4(f) evaluations are a time-saving procedural alternative to preparing individual Section 4(f) evaluations under paragraph (a) of this section for certain minor uses of Section 4(f) property. Programmatic Section 4(f) evaluations are developed by the Administration based on experience with a specific set of conditions that includes project type, degree of use and impact, and evaluation of avoidance alternatives.</u></p> <p>Based on the language above, the document does not explain how an interstate through the TMC can qualify as a “certain minor use”. It is a loss of 453-acres (18%)</p>

						(Page 4-44) How is bisecting the entire length of a wildlife movement corridor considered a minor use?
41	4	4-44	22		Reclamation	Reclamation requests the acreage totals for the TMC be corrected to 2,514-acres and identify the acreage loss as 18% from both the purple and orange alternatives. A loss of 453-acres from 2,514-acres is 18%.
42	4	4-55, 4-72, 4-73, 4-89, 4-95	Table 4-5	12, 4, 11-19	Reclamation	<p>The summary of use of the El Paso and Southwestern Greenway Trail should be categorized as <u>No Use</u> on page 4-55 due to information provided on page 4-72. It identifies the trail and states the following: <u>These properties can be avoided through grade-separation or other means.</u></p> <p>Additionally, the El Paso and Southwestern Greenway Trail should also be removed from the bulleted list on Page 4-73 and the total number of Section 4(f) properties be reduced to 6 or 7 (depending on Manning house) in the text on lines 26 and 28.</p> <p>Additionally on page 4-95 it states: “Downtown Tucson: There are seven Section 4(f) properties that fall within 120’ of either side of I-10. I-11 would expand the ROW 60 feet of either side, or 120 feet on one side or the other. There are 7 properties at risk, but a smaller number would be impacted.”</p> <p>When evaluating the Levi H. Manning House, a 120’ expansion from the east side of I-10 would only utilize a section of the parking lot while leaving the house unaffected and intact. Is this still a use? How far out does the 4(f) property extend?</p> <p>The EIS does not address whether FHWA evaluated other Net Benefit opportunities along Segment B. At a May 22, 2019 Cooperating Agency Meeting FHWA was asked and they stated they had not pursued a Net Benefit option with any other Section 4(f) properties including David G. Herrera and Ramon Quiroz Park. During that meeting they were informed an opportunity exists at Estevan Park located approximately 0.2-miles north. A Net Benefit can be achieved by relocating at the larger park and installing and upgrading newer and additional facilities for the local community. Only a Net Benefit was pursued by FHWA and ADOT on Segment D. “Section 4(f) properties should be identified as early as practicable in the planning and project development process in order that complete avoidance of the protected resources can be given full and fair consideration (23 CFR 774.9(a))”. By not considering and pursuing a Net Benefit for the Herrera and Ramon Quiroz Park, FHWA and ADOT did not give full and fair consideration to the TMC.</p> <p>Based on information provided in Chapter 4, only 6 Section 4(f) properties are at risk in Tucson area. Please update page, 4-75 and 4-95.</p>
43	4	4-60	Table 4-5		Reclamation	<p>Reclamation requests that FHWA include the following italicized and underlined summary quantification in the results section of Table 4-5 to show total impact from use. The following information should be provided in the table summary and discussed further to properly identify use of Section 4(f) properties in Avra Valley and Tucson.</p> <p><u>Use (total acres): 453-acres (Purple), 453-acres (Green), 234-acres (Orange)</u></p>
44	4	4-77		41	Reclamation	<p>Please incorporate the following italicized and underlined edits which identifies and clarifies the extent of use of the TMC.</p> <p>In the Preliminary Draft Section 4(f) Evaluation, the Purple or Green Alternatives (Options C and D) would incorporate a portion <u>453-acres (18%) of TMC land</u>, thereby using the TMC property.</p>
45	4	4-77			Reclamation	<p>Identified under Section 4(f) Legislation, Regulations, and Guidance for Net Benefit is the following information. Within the section titled Findings it states that in order to determine that the do-nothing and avoidance alternatives described in the Alternatives section are not feasible and prudent you must do the</p>

						<p>following which <u>only</u> occurs in the Tier 1 EIS and not Tier 2.</p> <p><u>“The net impact of the do-nothing or build alternatives must also consider the function and value of the Section 4(f) property before and after project implementation as well as the physical and/or functional relationship of the Section 4(f) property to the surrounding area or community.”</u></p> <p>The physical and/or functional relationship is missing from the analysis. Please identify and evaluate the physical and/or functional relationship of the Section 4(f) property (Tucson Mitigation Corridor) to the surrounding area or community such as Saguaro National Park, Tucson Mountain Park, and further west across Avra Valley.</p>
46	4	4-79		34-36	Reclamation	<p>Please incorporate the following line.</p> <p>The Orange Alternative is co-located with I-10 in the Tucson area. The Orange Alternative would avoid the TMC but would impact more Section (f) properties than the Purple and Green Alternatives. <u>Whereas the Purple and Green Alternatives would result in a greater loss of 453-acres to only 234-acres on the Orange Alternative.</u> The Orange Alternative is not an avoidance alternative.</p>
47	4	4-80		14-15	Reclamation	<p>“Wildlife connectivity would be disrupted at the entrance and exit structures.”</p> <p>That would only be correct if you constructed the entrance and exit structures near the boundaries of the property. For that reason that would never be the recommended entrance and exit locations for a tunnel.</p>
48	4	4-80		38, 43-44	Reclamation	<p>Please clarify the line identified below. While Sandario Road borders the western boundary of TMC and does result in the deaths of some wildlife by vehicle strikes and likely results in some intimidation, it is not an impermeable barrier to wildlife. Lots of mule deer and desert big horn are able to safely cross Sandario Road under current traffic conditions.</p> <p>Modify line 38 to the following. “Sandario Road would remain <u>a temporal barrier to wildlife movements with inconsistent periods of traffic and the absence of traffic.</u>”</p>
49	4	4-80		20-22	Reclamation	<p>“The Orange Alternative would avoid the TMC Section 4(f) property but would impact Section 4(f) properties that are clustered in Downtown Tucson.” FHWA did not identify or present any comparison of value or importance of the identified Section 4(f) properties on Segment B, C, and D. There is little to no information on their history, purpose, or value to adequately inform readers of the EIS.</p> <p>1) Santa Cruz River Park (multi use local park), 2) David G. Herrera and Ramon Quiroz Park (athletic fields and swimming pool), 3) Barrio El Membrillo Historic District, 4) El Paso and Southwestern Railroad District, and 5) Barrio Anita Historic District</p> <p>Whereas the 2,514-acre Tucson Mitigation Corridor functions as the primary wildlife movement corridor for approximately 44,818-acres (Tucson Mountain Park 20,000-acres and Saguaro National Park 24,818-acres) of two ecologically sensitive and unique parks both categorized as Section 4(f) properties. Even with minimization and mitigation in place such as multiple wildlife overpasses, an I-11 travel corridor would further isolate them. The existing wildlife linkage would be impaired and its ecological functions suppressed.</p>
50	4	4-82			Reclamation	<p>Need to clarify what is mitigation vs minimization. Mitigation is compensation by replacing or providing substitute resources such as purchasing additional land to compensate for the direct loss of 18% of the TMC. Minimization is where you limit the degree or magnitude of the action and its implementation such as constructing overpasses across I-11 within the TMC.</p> <p>1) CAP Design Option - Minimization 2) Remove and reclaim Sandario Road – Minimization 3) Relocate Sandario Road – Minimization 4) I-11 crossings within the TMC – Minimization</p>

						5) Acquisition of land and crossings structures for additional wildlife movement corridor(s) – Mitigation 6) Dark Skies compliant – Minimization 7) Visual Screening - Minimization
51	4	4-83		7	Reclamation	Please edit Line 7 to make the word Corridor plural because no studies have been done to show the level of mitigation that will be needed. <i>Mitigation Recommended in Wildlife Studies Including Additional Wildlife Corridor(s)</i>
52	4	4-91		11-18	Reclamation	Reclamation questions what FHWA identifies as severe disruption of communities along Segment B when compared to Segments C and D? It was previously requested that FHWA <u>quantify and report</u> the number of homes that would be disrupted and need to be removed on all three segments in order for proper comparison and analysis. Additionally, since a Net Benefit is part of this analysis FHWA should include a quantification of how many homes would potentially be removed from the acquisition of land and homes approximately 0.9 miles north of the TMC. This location has been previously discussed as a probable location for one new wildlife corridor. A preliminary count by Reclamation personnel identified that a minimum of approximately 101 homes located outside the I-11 right of way would require acquisition to restore that area into a new wildlife corridor.
53	4.6	4-95, 4-96	4-7		Reclamation	“Downtown Tucson: There are seven Section 4(f) properties that fall within 120’ of either side of I-10. I-11 would expand the ROW 60 feet of either side, or 120 feet on one side or the other. There are 7 properties at risk, but a smaller number would be impacted.” Clarify how many and which properties would be impacted. Identifying 7 properties as part of the analysis when not all would be impacted inflates the level of impact for Segment B under Factor 1. On Page 4-96 it states Segment B would potentially impact 7 properties. It should be clarified to reflect what was identified in Table 4-7, that a smaller number would be impacted what specific properties would be in order to avoid overestimating the level of impact. As previously mentioned FHWA needs to provide background information on the other Section 4(f) properties located along the Orange alternative. There is an imbalance of information and on the TMC but nothing of equal comparison for the Orange alternative.
54	4	4-96		23-25, 29-31	Reclamation	As stated in accompanying letter, Reclamation feels that a programmatic evaluation is no longer a feasible approach and recommends an individual evaluation. Please revise accordingly. “The Recommended Alternative is the only alternative for which use of a Section 4(f) property could result in a beneficial outcome for the property.” As identified in a Department of Interior Points for Discussion document submitted to FHWA on March 28, 2019 there is a risk based on the assumption that a net benefit to the TMC could be reached given appropriate mitigation. If it is determined that one cannot be reached then under FHWA’s current evaluation either proposed segment through the TMC would not be the most prudent when compared to Segment B.
55	4.6	4-96		29-31	Reclamation	“By achieving the programmatic net benefit finding, the Purple, Green, and Recommended Alternatives would substantially reduce and possibly eliminate remaining harm to the TMC property.” How can the construction of the proposed I-11 reduce and eliminate remaining harm to the TMC property? Please Identify and incorporate into the referenced section.
56	4.6	4-97		20-26	Reclamation	“Reclamation requested FHWA and ADOT follow a prescribed process to identify, evaluate, and implement mitigation measures. <u>Wildlife studies shall be developed and completed, in coordination with Reclamation, prior to the Tier 2 EIS, to ensure adequate data is available for that process. AGFD and USFWS, as recognized</u>

					<p><u>authorities on wildlife, with coordination and input from the TMC Working Group, should use these studies to identify the Tier 2 preferred wildlife corridor location and design. FHWA and the Arizona Department of Transportation (ADOT) would consult with the TMC Working Group to develop the recommended approach, prior to Reclamation's concurrence on a Tier 2 final Net Benefit Programmatic determination.</u> Reclamation stated in their letter of June 8, 2018, co-alignment of the I-11, Sandario Road, and CAP canal crossings will provide the benefit of encouraging and enhancing conditions for wildlife movements across the TMC.”</p> <p>Please update the above paragraph to incorporate information from Reclamation’s June 8, 2018 letter to FHWA.</p>
57	4.6	4-97, 4-98		Reclamation	<p>Factor 5 address 7 elements of the project purpose and need while primarily evaluating the three alternatives as a whole and to a much lesser extent the segments used to construct the preferred alternative which is a hybrid of the three.</p> <p>1) Planned Growth Areas: Areas identified for anticipated future growth by municipal general and county comprehensive plans identifies prominent growth in Sahuarita along existing Interstate 19 and in Marana along existing Interstate 10. Growth while mild in size is anticipated on existing state route 86 which is a short distance from existing I-19. There is no forecasted or planned growth within Avra Valley or nearby that would justify the selection of Segment D and C. The two proximate growth areas identified in Sahuarita and Marana would logically be better served by the selection of Segment B through Tucson. Specifically within the EIS it states the following: “The Orange Alternative best responds to continued population and employment growth in the South Section; however, less growth is anticipated in the Tucson urbanized area compared to other portions of the Study Area”.</p> <p><u>As mentioned in the EIS the Orange Alternative best responds to continued population and employment growth in the South Section.</u></p> <p>2) Travel Time: Travel time in minutes for City pairs between Nogales and Casa Grande shows 117 minutes for Purple, 121 for Green, and 133 for Orange. The difference between the Purple (fastest) and Orange (slowest) is only a difference of 16 minutes.</p> <p><u>The Purple Alternative is the preferred with an improvement of 16 minutes travel time.</u></p> <p>3) As shown on Table 2-5 (2040 Vehicle Miles Traveled), Figure 2-14 (2040 Vehicle Miles Traveled for Passenger Cars and Trucks), and Figure 2-15 (2040 Vehicle Miles Traveled for Trucks), there would be a negligible increase (less than 1 percent) in VMT in the South Section with the Build Corridor Alternatives.”</p> <p><u>There is a negligible difference in VMT between the two alternatives and segments.</u></p> <p>4) Key Economic Centers: “The Orange Alternative provides the most access to economic activity centers, followed by the Purple Alternative” (p.2-32, 2-35) and within the southern section. So it is unclear why that Segment is identified as such a suitable option for growth and economic activity centers when Segment B is identified as the best option.</p> <p><u>As mentioned in the EIS the Orange Alternative provides the most access to economic activity centers.</u></p> <p>5) Alternate Regional Route: As previously mentioned for #3 there is a negligible increase in VMT for an Avra Valley alignment that leaves the only remaining justification for choosing one is that it provides an alternate regional route.</p> <p><u>Purple provides an alternate route over Orange.</u></p> <p>6) FHWA did not address or attempt to quantify the future acquisition of homes that would be needed to establish a new wildlife corridor required as mitigation</p>

					<p>for the loss of 453-acres and devaluing wildlife use of the TMC and the 7 siphon crossings within it. A past discussion with FHWA identified an area approximately 0.9-miles north of the TMC where a preliminary count by Reclamation personnel identified a minimum of 101 homes located outside the I-11 right-of-way that would require acquisition to restore that area into a new wildlife corridor.</p> <p><u>Within the EIS it states the Orange Alternative will result in less species isolation and less impact to the federally listed Pima pineapple cactus. Impacts to cultural resources would be comparable if not less along the Orange alternative.</u></p> <p>7) Substantial differences in costs: Capital costs for segment C (Purple) is \$2,371,714,000.00, \$2,082,061,000.00 for D (Green), and \$585,899,000.00 for B (Orange). That is a difference of \$1,785,815,000 more for constructing Segment C and \$1,496,162,000.00 more for Segment D over Segment B. It is far more costly to tax payers to construct new segments in Avra Valley then to improve and expand the existing Segment B.</p> <p><u>As identified within the EIS it is far less costly to construct Segment B.</u></p> <p>To summarize the 5 Factors: Factor 1 favors construction of Segment B. Factor 2 slightly favors Segment C. Factor 3 results in a negligible difference in VMT. Factor 4 favors Segment B. Factor 5 favors Segment C. Factor 5 favors Segment C. Factor 6 favors Segment B. Factor 7 favors Segment B. That is a difference of 4 to 3 in favor of Segment B.</p>
58	4	6-7		17-18	<p>Reclamation</p> <p>“The adverse effects on the low-income and minority populations in Tucson have the potential to exceed those borne by non-environmental justice populations.”</p> <p>This is a very general statement. How do they have the potential and what quantification has been done to show the level of impact in both areas? Incorporate the preliminary quantification of homes that would be removed from the acquisition of land and homes approximately 0.9 miles north of the TMC. This location has been previously discussed as a probable location for one new wildlife corridor. A preliminary count by Reclamation personnel identified that a minimum of approximately 101 homes located outside the I-11 right of way would require acquisition to restore that area into a new wildlife corridor.</p>
59	4.6	4-102		42	<p>Reclamation</p> <p>See comment #48 for suggested language.</p>
60	6	6-17			<p>Reclamation</p> <p>Reclamation disagrees with the recommended alternative and believes Segment B would be a better fit over Segment D. After evaluating the seven elements of Factor 5 previously identified and clarified above, Segment B better serves: 1) Planned Growth Areas, 2) Key Economic Activity Centers, 3) results in less species isolation, impacts to the listed Pima pineapple cactus and comparable or less impacts to cultural resources, and 4) significantly lower capital costs for construction.</p> <p>The 2,514-acre TMC was established in 1990 for a present-day cost of approximately \$15 million. It was acquired as mitigation for the construction of the Tucson Aqueduct of the Central Arizona Project (CAP) canal. The true value of the TMC is the functional and critical role the property plays with maintaining the primary wildlife movement corridor between the Roskrige Mountains, Ironwood Forest National Monument and west across Avra Valley to the Tucson Mountains. The corridor supports multiple biological processes that are critical to the ecological health of Saguaro National Park and Tucson Mountain Park, both Section 4(f) properties found within the Tucson Mountains.</p> <p>Additionally the 1990 Cooperative Agreement in which the TMC was established states the following: "WHEREAS, lands described herein for fish and wildlife purposes shall not become subject to exchange or other transaction if those actions would defeat the</p>

						initial purpose of their acquisition [16 U.S.C., section 663(d)]". No section 4(f) property located along Segment B within Tucson was established with or currently has a federal statute with a comparable level of protection.
61	6	6-7		3-9	Reclamation	<p>“The Purple and Green Alternatives also are located closer to Tucson Mountain Park, the Tucson Mitigation Corridor (TMC), and Saguaro National Park (SNP) – West and designated wilderness within the park). A new interstate in this area would result in varying degrees of change in noise, light, air quality, and visual character for SNP-West, Tucson Mountain Park, and the TMC. After careful consideration, FHWA and ADOT determined Orange Alternative impacts are unmitigable, whereas impacts under the Purple and Green Alternatives could be mitigated.”</p> <p>1) How did FHWA and ADOT determine those impacts within Avra Valley can be mitigated but not along the Orange alignment through Tucson? You can mitigate for noise, light, and air quality in Tucson the same way you can in Avra Valley.</p> <p>2) The differences between the two is impacts to Section 4(f) properties. There is the claim to not being able to mitigate impacts to some identified properties, such as the losses of certain homes or structures in historic districts. But you also have no guarantee of being able to effectively mitigate impacts to the TMC. The whole purpose of adequate time for wildlife studies is to determine if and how a Net Benefit could be reached, but there is no guarantee the measures to reach one can be identified or acquired. If they could be identified there is no guarantee from FHWA that those mitigation measures can be acquired and properly implemented to reach one. So there are risks and challenges for both segments.</p>

Attachment 3 – Additional Comments from NPS on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.

#	Section	Page	Paragraph/Bullet/ Figure	Lines	Reviewer	Comments
1	1				NPS-AS	We appreciate the additional specificity included about potential, future multi-modal uses. We suggest including a discussion of these potential indirect and cumulative effects in the Executive Summary. In-depth discussion on this topic comes late in the document (Volume II, Section 3.17), and the question of how the impacts of future multimodal impacts will be addressed is left open until that point.
2	2				NPS-AS	We acknowledge the difficulty in selecting an alignment that will minimize impacts to sensitive resources. For a project of this magnitude, it is unavoidable for some resources to be degraded or entirely lost if a Build Alternative is selected. In the southern section the current narrative appears to give more weight to protecting the known archeological resources along the current I-10 (Orange) than the known environmental resources and unknown archeological resources along the Recommended Alternative (Purple). We suggest adding explanatory text to describe how these resources/Section 4(f) properties are evaluated relative to each other.
3	3				NPS-AS	We appreciate the addition of Table 6-1 for providing a summary comparison of the alternatives relative to the Purpose and Need. We encourage a similar summary table that provides a side-by-side comparison of the relative impacts on sensitive resources for each of the alternatives.
4	4				NPS-AS	We appreciate the new text describing the economic impact of tourism. While this infrastructure could bring more people, more quickly to Saguaro NP; we also seek to protect the underlying qualities the public seeks and natural resources at Saguaro NP. NPS supports the protection of the qualities driving this economic sector as the other sectors served through this project are developed.
5	ES1.2	ES-2	2	8-12	NPS-AS	We appreciate the addition of specifically naming potential future multimodal uses.
6	ES1.3	ES-4	1	5-7	NPS-AS	We request clarifying whether the committed projects also need to have NEPA analysis completed. This was a criteria listed in the previous draft. It would clarify to the reader if a decision document has been completed.
7	ES1.3	ES-5	Figure ES-3	N/A	NPS-AS	Please label Casa Grande Ruins National Monument and including line symbology for "National Trails" that would identify the Juan Bautista de Anza National Historic Trail.
8	ES1.6.1	ES-7	3	33-35	NPS-AS	This statement connotes that NPS supports the conclusions of the environmental screening. Rather, we request that additional analyses be conducted before selecting an alternative.
9	ES1.6.2.1	ES-10	Bullet 1	2-8	NPS-AS	We request that this description also note that the corridor may also include freight rail, passenger rail, and utility corridor in the future and may substantially exceed the 400' width.
10	ES1.7	ES-12	1	1-19	NPS-AS	Please add Designated Wilderness in this list with a standalone bullet.
11	ES1.9.1.2	ES-17	1	13-14	NPS-AS	Suggest adding language to clarify that these estimates are maximums, and that time savings are primarily from Casa Grande northward.
12	ES1.9.1.2	ES-17		28-29	NPS-AS	If construction impacts within downtown Tucson are discussed, it is also important to discuss impacts in other locations for all alternatives. It has been indicated that the Recommended Alternative could be engineered to be as narrow as 100'. We suggest clarifying whether this narrower alignment could not also be achieved for the Orange Alternative or including an analysis of impacts with this narrower corridor.
13	ES1.9.2	ES-20	Table ES-2, 2nd row		NPS-AS	If construction impacts within downtown Tucson are discussed, it is also important to discuss impacts in other locations for all alternatives. During our DOI/ADOT/FHWA meeting in April 2019, it was indicated that the Recommended Alternative could be engineered to be as narrow as 100'. We suggest clarifying why this narrower alignment could not also be achieved for the Orange Alternative or including an analysis of impacts with this narrower corridor.
14	ES1.9.2	ES-22	Figure ES-8	N/A	NPS-AS	We suggest including symbology for designated Wilderness to identify the several Wilderness areas within the project area including the Saguaro Wilderness, Pajarita Wilderness, North and South Maricopa Mountains Wilderness, Sierra Estrella Wilderness, and others.

15	ES1.9.3	ES-23	1	1-14	NPS-AS	We suggest also noting noise-related mitigations as a bullet in this list: "Minimizing noise impacts to national parks and designated Wilderness areas."
16	1.4.1	1-8	1	21-44	NPS-AS	We appreciate the additional discussion regarding multimodal transportation within the corridor.
17	1.5.2	1-18	Table 1-3	N/A	NPS-AS	We suggest clarifying whether these estimates include the 20,000 daily riders projected from the Arizona Passenger Rail Corridor Study referenced earlier on page 1-8.
18	2.2.4	2-10	N/A	40-44	NPS-AS	We suggest adding a summary statement describing how potential cumulative effects would be treated if/when these additional modes are implemented.
19	2.4.1	2-25	Figure 2-11	N/A	NPS-AS	This figure includes boundaries for some public lands like Ironwood Forest NM, but not all (including Saguaro NP). Please revise.
20	2.4.3.1	2-30	Figures 2-14 & 2-15	N/A	NPS-AS	We appreciate the information conveyed in these new figures since the previous draft. We suggest adding more narrative to describe the figures. As the explanatory text on page 2-28 indicates there would be less than 1 percent increase in VMT with any of the build alternatives. It's difficult to reconcile that projection with the large influx of freight traffic projected to be re-routed from the I-5, along with the other population growth statistics and figures already presented. Also, please consider adding similar figures for the current conditions, which may clarify anticipated changes to VMT.
21	2.4.5	2-34	Table 2-9	N/A	NPS-AS	We suggest including an additional column to this table which captures the total cost of each alternative, by multiplying the annual operational & maintenance costs by the 20 year life of the project and add to the initial cost. This information would help clarify the overall cost comparison for all options.
22	3.2	3.2-2	Table 3.2-1	N/A	NPS-DS	Additional information on the TMC would be helpful for readers. Suggested text: after "Crosses wildlife linkage area associated in Avra Valley" ... "and the Tucson Mitigation Corridor (TMC), a designated conservation area set aside in perpetuity to provide wildlife connectivity between the valley and Tucson Mountains as part of Central Arizona Project (CAP) mitigation."
23	3.2	3.2-3	Table 3.2-1	bullet 7	NPS-DS	For clarity, under bullet 7, please add after the word "unobstructed views;" "these issues cannot be resolved, but some site-specific mitigation measures would be identified during Tier 2..."
24	3.2	3.2-4	Table 3.2-1	bullet 1	NPS-DS	Under bullet 1 re: siphons, add to end of sentence, "although they would be significantly longer." Also replace the word "crossings" with "overpasses" or "underpasses", since these two types are very different in their effectiveness. For consistency with the TMC, it is assumed that these are overpasses, but should be clarified here.
25	3.2	3.2-4	Table 3.2-1	bullet 2	NPS-DS	Suggest clarification of what is meant by "alignment of wildlife structures with i-11 would avoid greater fragmentation of wildlife crossing areas." This statement may refer to alignment of Sandario Road, but that's not a wildlife structure.
26	3.2	3.2-9	Table 3.2-2	N/A	NPS-DS	See above comments for Purple Alternative; since language is essentially the same as for that alternative, this section should also be revised accordingly.
27	3.3.1.3	3.3-4	Figure 3.3-1	N/A	NPS-AS	Saguaro NP is labeled but not shown in this map. Please include the park's boundary and all designated wilderness areas in this map and in public meeting materials.
28	3.3.1.3	3.3-8	4	31-36	NPS-AS	We appreciate the inclusion of this text regarding Wilderness impacts. It's important that the coordination with agencies to understand consequences (described in the last sentence) should occur before a ROD is issued for Tier I. Suggested addition after last sentence: "This coordination should occur before a ROD is issued for Tier 1."
29	3.3.1.4	3.3-14	Figure 3.3-5	N/A	NPS-AS	Designated Wilderness is a Planned Land Use at several locations within the project area, including Saguaro NP. It's important to NPS that this category be added to the map.
30	3.3.1.4	3.3-20	Figure 3.3-8	N/A	NPS-AS	We appreciate the inclusion of this figure and the detailed inset map.
31	3.4.3	3.4-2	1	2-9	NPS-AS	We suggest including designated wilderness areas in this introductory paragraph because of their standalone Congressional designations and the unique recreation opportunities offered to the public. We have noted and appreciate the inclusion of wilderness impacts such as in the last paragraph of page 3.4-5.

32	3.6.4.5	3.6-18	Table 3.6-8	N/A	NPS-AS	The top 3 sections of this table (separated by yellow bars) seem to be lacking titles/labels.
33	3.6.6	3.6-19	1	27-38	NPS-AS	We suggest that these surveys would be more beneficial to the Tourism Sector if used to select the best corridor in Tier I, rather than the relatively minor adjustments to the specific alignment made in Tier II.
34	3.6.6	3.6-21	Table 3.6-9	N/A	NPS-AS	We suggest adding a bullet to the table under the Purple Alternative describing how environmental impacts from the project (e.g. sound, light, views, etc) could degrade tourists' experience and impact this sector of the economy. Suggested text: "Alternatively, environmental impacts (such as noise and light pollution and viewshed impacts) from a major highway so close to major high-value tourist attractions such as the Arizona-Sonora Desert Museum, Saguaro National Park, and Tucson Mountain Park could degrade tourist experience and impact this sector of the economy."
35	3.7.2.4	3.7.2.4	1	29-30	NPS-RB	Suggest replacing the word "inventory" with "available information" since most of the Purple and Green alternatives have had significantly less cultural resource inventory than the Orange Alternative.
36	3.7.2.2	3.7-4	Table 3.7-1	N/A	NPS-AS	The "Response to Invitation" status can be updated to "Accepted". NPS accepted on October 18, 2018 via email to Alan Hansen as requested.
37	3.7.3.1	3.7-8	2	33-37	NPS-AS	The introductory text of this section indicates that the majority of the all three alternatives are unsurveyed. We suggest adding the word "known" to the text comparing the number and density of sites along each route.
38	3.7.3.2	3.7-14	Table 3.7-5	N/A	NPS-AS	Tumacácori NHP is listed as "Tumacácori National Monument" in this location and several others in the document.
39	3.8.3.1	3.8-7	Table 3.8-2	Mon 35c	NPS IMR-NR	We appreciate the inclusion of new ambient noise monitoring data, including the Discovery Trail site measured by NPS in 2016. Our main concern remains for the FHWA procedure for characterizing the existing noise environment. In FHWA-HEP-10-025, FHWA defines the existing noise level as the worst noise hour resulting from the combination of mechanical sources and human activity usually present in a particular area. This definition of a worst case noise hour is inconsistent with ANSI/ASA 12.100 and other standards for measurement of natural quiet in protected areas. Furthermore, we argue that use of a worst case noise hour for the affected environment is likely to underestimate noise impacts in Saguaro National Park and other wilderness areas.
40	3.8.3.1	3.8-7	Table 3.8-2	Mon 35c	NPS IMR-NR	To ensure that impacts to existing sound environment at Saguaro National Park are not underestimated, NPS staff have committed to making new ambient sound measurements in the next couple of months within the western part of the Saguaro National Park, Tucson Mountain unit. For assessment of potential noise increase and potential need for noise mitigation, we respectfully request that ADOT consider including this new data in the Tier 1 Final EIS, in the Tier 2 Draft EIS, or both.
41	3.9.3.1	3.9-7	2	13-20	NPS-AS	The Tucson Mountains should also be listed for the southern section.
42	3.9.3.6	3.9-19	2	8-11	NPS-AS	Please add this statement: "Tumacácori NHP received dark sky status in May 2018 from the International Dark Sky Association (https://www.darksky.org/tumacacori-national-historical-park-becomes-100th-designated-international-dark-sky-place/)."

		3.10-9				The document states: "The approximate distance from the Class 1 air shed range to the Study Area is 7,900 feet for Option A; 6,800 feet for Option B; 1,700 feet for Option C; and 1,300 feet for Option D. The variation in distance between the Corridor Options in this portion of the Analysis Area is not considered to be notable as transportation sources do not significantly contribute to visibility impairment in the Class I areas" The suggestion that the impact to visibility does not vary by alternative despite the differences in distance from the alternatives to Saguaro NP is not supported by a quantitative analysis of the proposed project, nor does the statement consider the differences in impacts on criteria pollutants in Saguaro NP, such as concentrations of NO2, particulate matter, and CO. Furthermore, this appears to be contradicted by statements elsewhere in the air quality analysis (page 3.10-22 line 13, page 3.10-23 line 38) that indicate that alternatives that are closer to Saguaro NP have greater potential to impact air quality in the Class I area. In addition, on page 3.10-18, line 29, the DEIS acknowledges that the build corridor alternatives may adversely impact visibility and other AQRVs in the park. A quantitative analysis using an EPA-recommended near-field air quality model (such as AERMOD) is needed in order to determine the differences in impacts among the alternatives to air quality in Saguaro NP. This should include an air quality impact analysis for impacts to the park at its west unit for the Green and Purple alternatives, and at its east and west units for the Orange alternative. The air quality analysis needs to address impacts to the National Ambient Air Quality Standards (NAAQS) for the criteria pollutants (NO2, PM10, PM 2.5, and carbon monoxide) for all the appropriate averaging periods for each pollutant, and it should include both construction and operational phases of the project. The air quality analysis for both of the phases also needs to address impacts to air quality related values (AQRVs), specifically deposition and near field visibility. Impacts to AQRVs, including deposition of total nitrogen and total sulfur, should be calculated and compared to the deposition analysis threshold of 0.005 kilograms per hectare year (kg/ha/yr) per the Federal Land Managers Air Quality Related Values Workgroup (FLAG) guidance from 2010. Deposition impacts may be calculated with AERMOD in the near field. The impacts to visibility in the near field should follow the recommendations in the FLAG document. The near field visibility impacts (less than 50 km from the source to the boundary of the Park) should be assessed with the EPA VISCREEN model (a screening model), or in the case of very significant predicted coherent plume impacts predicted by the VISCREEN analysis, the EPA PLUVUE model should be employed.
43	3.10				NPS-DM	
		3.10-16		6		The document states: "For all Build Corridor Alternatives, air quality effects are driven by the behavior of vehicles in the transportation network." Location and distance of particular build corridor alternatives will also likely affect the air quality impacts on Saguaro NP.
44	3.10				NPS-DM	
		3.10-23		32, 37, 39		In its discussion of the alternatives through the southern section near Tucson, the document indicates that the Orange alternative (along the existing 1-10 corridor) would relieve congestion more effectively than either the Green or Purple alternatives. It also states that the Orange alternative is farthest from Saguaro NP and thus least likely to negatively impact air quality in the park. Earlier in Section 3.10, the analysis indicated that reducing congestion is preferable for reducing air quality impacts. Thus, it appears that in this area the recommended alternative will be less likely to reduce congestion and more likely to negatively impact air quality at Saguaro NP than the Orange alternative.
45	3.10				DM	
46	3.10				DM	Please include an analysis of the impacts of induced growth from the Purple and Green alternatives on air quality in Saguaro NP.
						Please add relevant language from the Organic Act of 1916: "The Organic Act establishes the fundamental purpose of the parks is to conserve scenery, natural resources, historic objects and wild life in them and to provide for the enjoyment of them "in such manner and by such means as will leave them unimpaired for future generations."
47	3.14.1	3.14-2		7-11	NPS-DS	
						The statement that wildlife movement could potentially be improved seems plausible for the Santa Rita-Tumacacori linkage, but not seem plausible for the other two linkages where there are not existing highways that could be improved and where i-11 represents a significant new impact. This is probably an inadvertant mistake, so recommend limiting this paragraph to the SR-T linkage, or (if it's not a mistake) explaining in more detail how the other two linkages would be improved.
48	3.14-9	3.14-43		18-23	NPS-DS	

49	3.14-9	3.14-44		36-38	NPS-DS	Because the impacts of the Green and Purple alternatives are really very similar in the South Section, as described in previous sections, recommend re-writing this sentence to say, "The Green Alternative has the greatest potential to disrupt wildlife linkages and connectivity, slightly more than the Purple Alternative and significantly more than the Orange alternative." If this is too general a statement for the whole corridor, then sentence could be re-written to make the distinction between the Green and Purple alternatives in the North and South Sections.
50	3.14.5	3.14-54			NPS-DS	p. 3.14-54. "Wildlife Connectivity." As indicated elsewhere in our comments, NPS should be listed anytime the other stakeholders (AGFD, BLM, BOR, etc.) are listed who will determine wildlife connectivity, due to our agency's strong interest in the TMC.
51	3.14.5	3.14-54	Table 3.14-11	Column two, cell one	NPS-JC	Please add the words "invasive and" before noxious in the first sentence.
52	4.4.3.3.	4-77		21-24	NPS-DS	The TMC is a very sensitive area with significant history that should be included here for a full perspective of the potential environmental impacts. We suggest the following text be inserted in line 23, (after the first sentence): "The TMC was established to reduce impacts from the Central Arizona Project (CAP) on wildlife movement across the Avra Valley. Based on several years of wildlife studies by BOR, AGFD, and other agencies, it provides a strategic linkage between about 45,000 acres of habitat to the east within Tucson Mountain Park and Saguaro National Park, and over 2.5 million acres of open space to the west on the Tohono O'odham Nation and Ironwood Forest National Monument."
53	4.4.3.3	4-77		30-33	NPS-DS	Please add in line 32 (after the words "own NEPA process") "with extensive collaborative involvement from the public, environmental organizations, and government agencies,..."
54	4.4.3.3.	4-80 and 4-81		40-45, 1-7	NPS-DS	We greatly appreciate the inclusion of the tunnel discussion as part of potential net benefit for the TMC. As indicated in our comments elsewhere, achieving a net benefit is possible but is a high bar, and a tunnel has a high chance for success compared to other mitigations. Although Sandario Road negatively impacts wildlife, it is not nearly the barrier that I-11 would be, and mitigations along Sandario would be less expensive and more effective than mitigations for I-11.
55	4.4.3.3.	4-81 through 4-84			NPS-DS	The proposed mitigations are excellent for standard highways such as I-10, where a highway has already been constructed and there is a goal to restore some of the wildlife connectivity that has been lost. In these cases, any improvement in wildlife connectivity is positive for wildlife. For a net benefit to be achieved is a different standard and a different scale of mitigation, because currently there is no interstate highway or multi-modal transportation corridor that runs through the TMC. In the end, the net benefit must be a true benefit that results in larger populations, greater connectivity, increases genetic exchange and diversity, and maintains or enhances high biological diversity in the Tucson Mountain area that the TMC was designed to protect. This benefit may be achievable but requires a more expansive view of mitigations than is presented here.
56	4.4.3.3	4-82		21-32	NPS-DS	In line 23, add to end of sentence, "although they would be significantly longer." Also replace the word "crossings" with "overpasses" or "underpasses", since these two types are very different in their effectiveness. For consistency with the TMC, it is assumed that these are overpasses, but should be clarified here.
57	4.4.3.3	4-82		3-35	NPS-DS	Please add language to clarify if Sandario Road will be removed (as stated in line 7 and 23) or relocated to align with I-11. If the road is not removed, but re-located, it should be noted that this would widen the transportation corridor, which has the potential to offset the benefit of co-aligning the road with I-11. Perhaps there is a traffic analysis of Sandario Road elsewhere in the document. NPS assumes that some percentage of the traffic on this long N-S road would be expected to be diverted to I-11 if the highway were to be constructed following the same general route.
58	4.4.3.3	4-82		40-41	NPS-DS	Please list "NPS" as one of the agencies that would be involved in the design and implementation of wildlife studies in this paragraph and elsewhere, such as on page 4-83, lines 7-8.
59	4.4.4.2	4-87	2	16-25	NPS-AS	We request that similar text is added to the Noise section (3.8) to indicate that noise impacts are only being considered for impacts to human receptors and not to wildlife within parks and Wilderness areas, per FHWA regulation.

60	6	6-22	Table 6-4		NPS-DM	The document indicates that in the southern section, the impacts to resources from the recommended alternative can be mitigated. Table 6-4 lists only potential prohibition of interchanges in the Avra Valley as a mitigation strategy for air. Please explain how this will mitigate air quality impacts to Saguaro NP that result from choosing the build corridor most likely to impact the park.
61	3.9.4.5 6		9, 27		NPS-DM	The document states that from the perspective of viewpoints in Saguaro NP, the Green and Purple alternatives “would be incongruous in the overall setting and would create Co-Dominant (daytime) or Dominant (nighttime) visual contrast due to scale. Recreational viewers will have middle ground views of the Green and Purple Alternatives, and the overall visual impact is likely to be high because of high viewer sensitivity and superior, unobstructed views. The CAP Design Option will have slightly higher visual impacts, as it is aligned closer to both the park areas compared to Option C and Option D (Sandario Road Portion).” It further states “The visual intrusions related to the Build Corridor Alternatives could impact the visual resources and result in unsatisfactory visitor experiences.” Chapter 6 indicates that impacts can be mitigated but does not identify specific mitigations for visual impacts. Please explain how visual impacts to Saguaro NP from the recommended alternative can be mitigated, particularly since the viewpoints are generally located at a higher elevation than the proposed build corridor.
62	6				NPS-DM	Simulations of the corridor, produced at a suitable scale, could more clearly show potential changes in the landscape. NPS requests the simulations be prepared in accordance guidance in Chapter 5 of the Guide to evaluating visual impact assessments for renewable energy projects, available at: https://irma.nps.gov/DataStore/Reference/Profile/2214258
63	6.1	6-3	Table 6-1	N/A	NPS-AS	This table is very helpful for making a side by side comparison of how the alternatives meet the Purpose & Need. We respectfully request that a similar table is included in this summary section that includes the comparative costs and impacts of each alternative.
64	6.2.2	6-6	1	26-36	NPS-AS	Because of the elevated interest in this section (Sahuarita to Marana), we suggest more detailed data for the projected travel times, costs, and break-down of impacts for the Purple/Recommended Alternative and Orange/I-10 Alternative for this segment. Data for these metrics have been aggregated for longer reaches, making it difficult to make a side-by-side comparison of the costs and benefits of these options over this more limited stretch.
65	Appendix F	1	2		NPS-AS	We request clarification on the process and timing (Tier I or Tier II) of determining Constructive Use impacts on Saguaro NP. Additionally, we suggest clarification on whether the separately designated Saguaro Wilderness should be included in this Constructive Use analysis.
66	Appendix F	11			NPS-AS	We realize that it is probably an inadvertent mistake, but the National Park Service disagrees with the statement that "Saguaro National Park is managed as the public park and for natural resource preservation; it is not a wildlife or waterfowl refuge." As a protected area for wildlife adjacent lands open to development, hunting, and other disturbances, the park is an important refuge for wildlife and its "significant wildlife qualities" are named in the park's enabling legislation. More importantly, the Organic Act of 1916 establishes that the fundamental purpose of the parks is to conserve scenery, natural resources, historic objects "and wild life" so as to leave them unimpaired for future generations. We request that it be removed and be replaced with language more consistent with the NPS Organic Act and enabling legislation of the TMD.
67	Appendix F	29			NPS-AS	We appreciate the inclusion of the 5 letters from NPS and 2 sets of meeting notes from our face-to-face discussions in Appendix F. It appears that additional documents pertinent to this section (NPS letters dated 9/30/16, 11/3/16, 12/16/16, 3/17/17, 11/3/17, 8/6/18, and notes from our in-person meeting on 8/10/18) are not included. We can readily provide copies if needed.

68	Appendix F	7	Table 1 to Part 772 - Noise Abatement Criteria	IMR-NR (RS)	The Noise Abatement Criteria in Table 1 to Part 772 are arguably insufficient to address remoteness from sights and sounds of people and Congress' stated intent (in Public Law 103-364) to protect opportunities for solitude in the Saguaro National Park, Tucson Mountain unit. We request a constructive use analysis that considers the projected noise increase (ambient degradation) for Saguaro National Park locations, based on existing median and residual sound levels that might reasonably address existing conditions of quiet in protected areas, pursuant to ANSI/ASA S12.100.
69	Appendix F	7	Table 1 to Part 772 - Noise Abatement Criteria	IMR-NR (RS)	The Noise Abatement Criteria in Table 1 to Part 772 are arguably insufficient to address remoteness from sights and sounds of people and Congress' stated intent (in Public Law 103-364) to protect opportunities for solitude in the Saguaro National Park, Tucson Mountain unit. We request a constructive use analysis that considers the projected noise increase (ambient degradation) for Saguaro National Park locations, based on existing median and residual sound levels that might reasonably address existing conditions of quiet in protected areas, pursuant to ANSI/ASA S12.100.



Bureau of Land Management



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Pre-Scoping Meeting with Bureau of Land Management, April 13, 2016



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MEETING PURPOSE: Pre-Scoping Meeting with Bureau of Land Management (BLM)

DATE & TIME: April 13, 2016, 1:00 PM

LOCATION: BLM, 1 North Central Ave., Phoenix

ATTENDEES: Dorothea Boothe (BLM), Joanie Cady (ADOT), Lauren Clementino (ADOT), Rebecca Heick (BLM), Nancy Favour (BLM), Joshua Fife (ADOT), Lisa Ives (AECOM), Michael Kies (ADOT), Aryan Lirange (FHWA), Elroy Masters (BLM), Karla Petty (FHWA), Jennifer Pyne (AECOM), Raymond Sauzo (BLM), Jay Van Echo (ADOT), Rebecca Yedlin (FHWA),

MEETING NOTES

Purpose:	
Meet prior to formal scoping to present preliminary project information, answer questions, and discuss communication protocols going forward.	
Key Discussion Points/Action Items:	Responsible Party / Action Item
1. Rebecca Yedlin initiated the meeting and Jay van Echo provided a history of the I-11 Corridor.	N/A
2. The Notice of Intent (NOI) is expected to publish in May 2016, and public and agency scoping meetings will be scheduled. The Tier 1 EIS will build upon the prior studies and PEL. Jennifer Pyne provided an overview of the environmental process that will be initiated. During the Tier 1, the goal is to avoid as many impacts as possible. The group discussed that the Tier 1 ROD would clear a 2000 foot corridor based on typical sections. The level of the analysis will match the level of project definition. A refined alignment within this corridor would be cleared as part of subsequent Tier 2 NEPA analysis.	N/A
3. The potential inclusion of major utilities within the facility was of interest and it was noted that the BLM had previously identified preferred locations for solar development on BLM-managed land, and so would be looking to direct utility development to access those areas. Restoration design RITAs were developed as part of the solar programmatic EIS.	ADOT Study Team to review BLM programmatic EIS for solar project development. Coordinate with R. Heick as needed.
4. Elroy Masters noted that it would be useful to clearly identify mitigation responsibilities among the agencies as part of the process. BLM may also provide information on landscape assessments.	Coordination between Jennifer Pyne and Elroy Masters on data collection pending MOU.
5. The I-11 study team intends to disclose in the NOI that a combined FEIS and ROD will be pursued unless statutory or	N/A

Purpose:	
Meet prior to formal scoping to present preliminary project information, answer questions, and discuss communication protocols going forward.	
Key Discussion Points/Action Items:	Responsible Party / Action Item
practicability considerations preclude this option pursuant to MAP-21 and FAST Act. Discussion noted that a preferred alternative would need to be identified in the DEIS to enable the combined FEIS/ROD.	
6. It was noted that potential for impacts on the national monuments managed by BLM would be a key area of concern. It was confirmed that upgrades to existing facilities are expected to be one of the build alternatives.	N/A
7. Raymond Sauzo recommended early coordination with tribes and contact with Customs & Border Patrol. Contacting utilities was also suggested.	Tribal & CBP coordination efforts are underway by ADOT/FHWA. Utilities will be contacted during scoping .
8. There was some discussion of the potential for new monuments to be delineated in Arizona, but this will not be known until early 2017.	N/A
9. Raymond Sauzo recommended that the Study Team work through the State Office so they can coordinate communications with the various district and field offices within the study area. BLM requested executing an MOU to confirm the arrangement as a cooperating agency and facilitate data-sharing.	FHWA requested an example MOU.
10. BLM would like to participate in the process as a cooperating agency. Letter should be directed to State Office.	Cooperating agency letters to be sent in May 2016.
Next Meeting Date: TBD	

c Document Control

Attachments: Agenda, Handout

PRE-SCOPING MEETING WITH BUREAU OF LAND MANAGEMENT

WEDNESDAY, APRIL 13, 2016
1:00 PM

1 NORTH CENTRAL AVE., 7TH FLOOR
PHOENIX, AZ

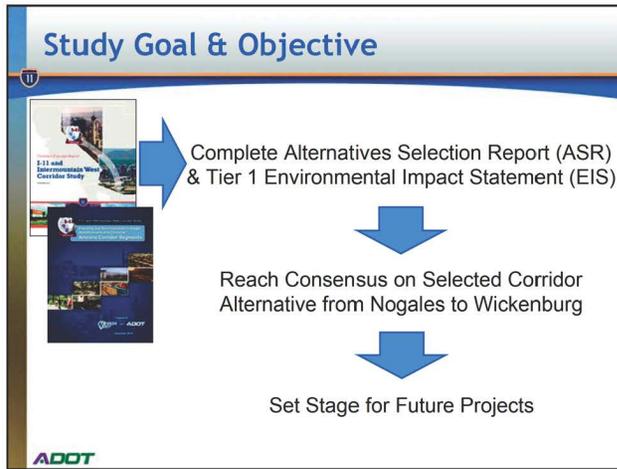
* * * AGENDA * * *

1. Introductions and Purpose of Meeting
2. History of I-11 Corridor
3. Overview of Environmental Review Process
 - a. Scoping
 - b. Alternatives Selection Report
 - c. Tier 1 Environmental Impact Statement (EIS)
 - d. Combined FEIS/ROD
4. BLM Experience with Other Tier 1 EIS
5. Discussion of I-11 Corridor Issues Relevant to BLM
6. On-Going Communication Protocols and Outreach Efforts
 - a. FHWA/ADOT and BLM Coordination
 - b. Stakeholder Outreach and Involvement
7. Contact Information
 - a. Project E-Mail: I-11ADOTStudy@hdrinc.com
 - b. Toll Free Hotline: 1-844-544-8049 (Bilingual)
 - c. Website: <http://i11study.com/Arizona>
 - d. Mail: Interstate 11 Tier 1 EIS Study Team
c/o ADOT Communications
1655 W. Jackson St., MD 126F
Phoenix, AZ 85007
8. Other Issues or Items
9. Next Steps



Interstate 11 Corridor Tier 1 Environment Impact Statement

OVERVIEW OF STUDY PROCESS



1

I-11 Corridor

- 280-Mile Study Area from Nogales to Wickenburg
- Initially Studied in Sections during ASR
 - ▶ South (Nogales to Casa Grande)
 - ▶ Central (Casa Grande to Buckeye)
 - ▶ North (Buckeye to Wickenburg)

2

Corridor Alternatives Studied in ASR

I-11 Corridor

Study Area varies in width from approximately 5 to 25 miles

280 Miles

I-11 Corridor Study Area (Nogales to Wickenburg)

Corridor Alternatives Studied within I-11 Corridor in ASR

Corridor Alternatives within the I-11 Corridor represent the approximate area needed to build & operate a proposed transportation facility, including potential highway, rail, & utility components.

3

Identifying Corridor Alternatives

STUDY AREA

Conduct Free-to-Roam Analysis Looking for Routes

ROUTE ANALYSIS

Identify Route Trends for Corridor Alternatives

CORRIDOR ALTERNATIVE

Evaluate & Refine Corridor Alternatives

Quantm will map potential routes for a proposed transportation facility within the I-11 Corridor between Nogales & Wickenburg. The proposed transportation facility could include potential highway, rail, & utility components.

Route trends will emerge for potential Corridor Alternatives. They will be analyzed & screened to reduce the number of recommended corridor alternatives that will advance into the Tier 1 EIS.

4

Recommended Corridor Alternatives Advance into Tier 1 EIS

2,000-Foot Corridor in Tier 1 EIS to Assess Social, Economic, & Natural Environment (i.e., Study Area)

Build Alternative

Segments of Independent Utility (SIU)

Proposed Transportation Facility

Recommended Corridor Alternatives will advance into the Tier 1 EIS as "Build" Alternatives to compare against a "No Build" Alternative (i.e., do nothing alternative).

Build Alternatives will have smaller, individual projects (or SIUs).

5

What Questions will Tier 1 EIS Answer?

- Primary Goal is to Reach Consensus on a Selected Corridor Alternative for the I-11 Corridor, including:
 - ▶ Defined Corridor between Nogales & Wickenburg for Proposed Transportation Facility
 - ▶ Type of Transportation Facility, including Potential Highway, Rail, & Utility Components
 - ▶ Footprint to Accommodate Proposed Transportation Facility
 - ▶ Smaller, Individual Projects (or SIUs) for Future Implementation

The Tier 1 EIS will Provide a Roadmap for Advancing These Individual Projects in the Future.

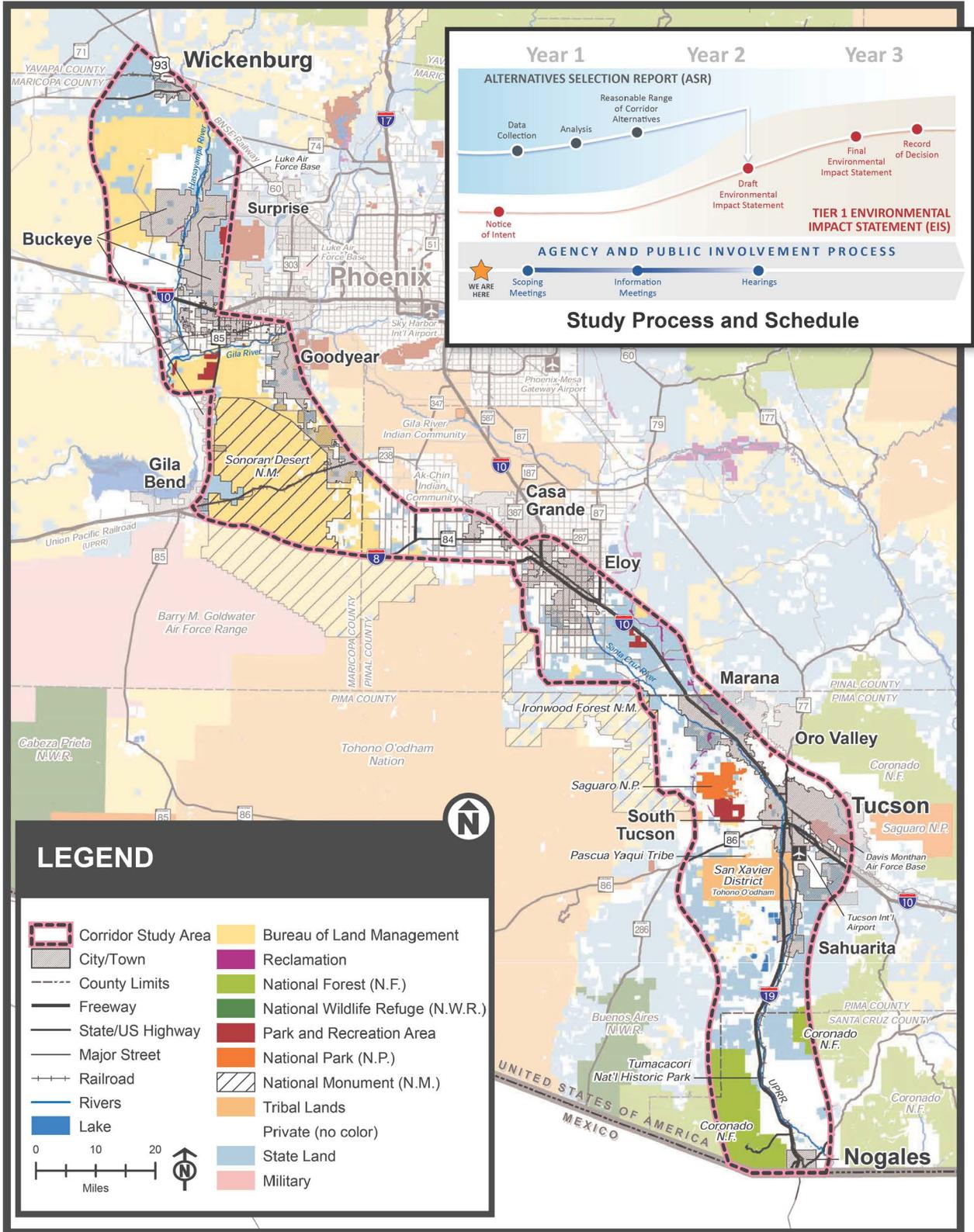
6





Interstate 11 Corridor Tier 1 Environment Impact Statement

I-11 CORRIDOR STUDY AREA



Project No. M5180 01P / Federal Aid No. 999-M[161]S



Interstate 11 Tier 1 EIS Study Team
 c/o ADOT Communications
 1655 W. Jackson Street, Mail Drop 126F
 Phoenix, AZ 85007

FOR MORE INFORMATION:
 1-844-544-8049
 i-11ADOTStudy@hdrinc.com
 i11study.com/Arizona



Letter from Bureau of Land Management, July 13, 2016



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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Arizona State Office
One North Central Avenue, Suite 800
Phoenix, Arizona 85004-4427
www.blm.gov/az/



JUL 18 2016

JUL 13 2016

In Reply Refer To:
9110-1 (9200)

U.S. Department of Transportation
Federal Highway Administration
Attn: Karla S. Petty
4000 N. Central Avenue, Suite 1500
Phoenix, AZ 85012-3500

Dear Ms. Petty:

The Bureau of Land Management (BLM), Arizona State Office, appreciates the opportunity to offer comments to the Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) on the Tier 1 Environmental Impact Statement (EIS) for the I-11 Corridor. The BLM understands that this EIS is an opportunity to identify and study multiple alternatives within the already identified I-11 Study Corridor and hopes to assist in this process by identifying both potential natural resource and management conflicts in portions of the Study Corridor as well as appropriate locations for siting new transportation infrastructure.

As a cooperating agency on this project, the BLM looks forward to assisting the FHWA and ADOT in this analysis. Much of the discussion below identifies possible conflicts with sensitive resources on BLM-administered lands or designations within BLM's resource management plans (RMPs) in the study area. The FHWA and ADOT's scoping materials acknowledge many of these designations and potential conflicts. Amendments to BLM's RMPs may be necessary on the project-specific level in order to grant a right-of-way or otherwise permit an interstate highway or larger multi-modal corridor. These amendments would be part of the project-specific Tier 2 National Environmental Policy Act analysis. However, the BLM will work with the FHWA and ADOT to try to identify these issues to the extent practicable through this Tier 1 process.

The three sections of the Study Corridor (North, Central, and South) identified in the scoping materials roughly align with three BLM field offices in central and southern Arizona: Hassayampa, Lower Sonoran, and Tucson. Additionally, two BLM-administered national monuments, Sonoran Desert and Ironwood Forest, are within or adjacent to the Study Corridor. Accordingly, geographically focused comments follow these administrative divisions followed by additional, more general comments.

North Section: BLM Hassayampa Field Office

Within the Hassayampa Field Office, the eastern and western portions of the I-11 Study Corridor are the preferred locations for further analysis. In the Hassayampa Field Office area, a route from I-10 through Surprise to U.S. Highway 60 in the eastern part of the Study Corridor would avoid the 70,000 acre Vulture Mountains Cooperative Recreation Management Area and most BLM specially designated areas and natural resource conflicts. A western route through the study corridor that avoids both the Vulture Mountains Cooperative Recreation Management Area and the Black Butte Area of Critical Environmental Concern (ACEC) would also avoid sensitive resources while providing an alternative corridor for analysis.

Central Section: BLM Lower Sonoran Field Office and Sonoran Desert National Monument

The identification of new routes as corridor alternatives within the Sonoran Desert National Monument (SDNM) should be avoided. Per the 2001 Presidential Proclamation establishing the SDNM, the nearly 500,000 acre monument “encompasses a functioning desert ecosystem with an extraordinary array of biological, scientific, and historic resources.” Moreover, the SDNM includes two congressionally designated wilderness areas and the Juan Batista de Anza National Historic Trail corridor. Currently, the southern portion of the SDNM is crossed by I-8. This existing portion of I-8, generally between Casa Grande and Gila Bend, may be a viable corridor alternative for analysis. However, adding additional infrastructure, including a wider highway or other multi-modal features, would be incompatible with the national monument and wilderness designations.

West of the SDNM, an I-11 alignment in the western edge of the Study Corridor from I-8 in the Gila Bend area on State Route 85 to I-10 would take advantage of existing transportation corridors and avoid significant impacts to the SDNM and additional BLM-administered lands and natural resources.

The Study Corridor also extends to lands north of the SDNM. This area may be a viable route for a corridor alternative, and portions of it have previously been studied as part of the Sonoran Valley Parkway, another transportation proposal. Compatibility with that proposal as well as designated wildlife corridors, existing rights-of-way, and a permitted (but not yet built) solar energy facility in the area should be considered.

South Section: BLM Tucson Field Office and Ironwood Forest National Monument

The BLM Tucson Field Office has significant concerns about potential overlap or adjacency of the I-11 Study Corridor with the eastern boundary of the 129,000-acre Ironwood Forest National Monument (IFNM). The study corridor includes sliver-like portions along the eastern boundary of the IFNM that the BLM recommends avoiding and eliminating from further analysis. The portions of the IFNM in the Study Corridor contain multiple resource values including extensive recreational use, cultural and archaeological resources, and biological values including State and Federal endangered and otherwise protected species.

The Presidential Proclamation establishing the IFNM states that Monument lands “are withdrawn from all forms of entry, location, selection, sale, or leasing or other disposition under

the public land laws, including but not limited to withdrawal from location, entry and patent under the mining laws relating to mineral and geothermal leasing other than by exchange that furthers the protective purposes of Monument.” This would appear to preclude the granting of a transportation right-of-way to the FHWA or ADOT. The 2012 IFNM RMP makes no allocations for transportation corridors within the IFNM boundaries. Additionally, the IFNM is a Special Recreation Management Area (SRMA) designated in the RMP. The SRMA designation includes objectives to preserve its undeveloped character. If an alignment is selected along the western part of the Study Corridor, the character of this SRMA would be affected.

Should a route alternative in the vicinity of the IFNM be selected, impacts analysis should consider potential impacts to monument objects and resources within the designated IFNM boundaries. Objects of the IFNM as defined in the IFNM RMP that may be impacted by a highway or multi-modal corridor such as this include visual resources, habitat for threatened and endangered wildlife and vegetative species, archaeological objects of scientific interest, and visitor access.

The Study Corridor includes several access routes providing public access to the IFNM from I-10. These routes are on roads maintained by Pinal and Pima Counties (Avra Valley, Silverbell, Sunland Gin, and Harmon Roads). Depending on the selected alignment, these routes and the access to the IFNM they provide could be impacted. Ideally, any new interstate highway alignment near the IFNM would not negatively impact visitor access.

Important cultural resources that should be avoided within the study corridor include the 13,000-acre Los Robles Archaeological District, which is on the National Register of Historic Places and other large archaeological sites located along the Santa Cruz and Greens Reservoir drainages. Another important cultural resource is the Indian Kitchen area near Helmet Peak. At a minimum, locations of these and other cultural resources should be identified through a Class 1 archaeological literature review in coordination with the Arizona State Museum and State Historic Preservation Office.

Overarching Issues

Threatened, endangered, and sensitive species identified by the BLM and other agencies identified in the study area include the Pima pineapple cactus, yellow-billed cuckoo, southwestern willow flycatcher, gilded flicker, Sonoran desert tortoise, desert bighorn sheep, cave myotis bat, California leaf nose bat, longfin dace, and lowland leopard frog. The BLM encourages close coordination with the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service to identify potential impacts to these and other species in the Study Corridor. Additionally, the BLM encourages avoidance of RMP designated wildlife movement corridors and wildlife habitat management areas

The Study Corridor includes the Juan Bautista de Anza National Historic Trail corridor from its origin in Nogales through the SDNM. This trail is managed by the National Park Service in coordination with the BLM and includes a general route and a motorized route along existing County-maintained roads. This trail does not cross any BLM land in the Tucson Field Office; it does cross BLM-administered land in the Lower Sonoran Field Office and the Sonoran Desert National Monument to the northwest.

Impacts to other resources and designations that should be considered in this Tier 1 analysis include RMP designations for visual resource management, recreation and travel management, and specially designated areas (e.g., ACEC, wilderness areas). Potential impact to existing uses including permitted rights-of-way, livestock grazing, and mining should also be considered.

Questions regarding these comments can be directed to Lane Cowger, Project Manager, at 602-417-9612, or email at lcowger@blm.gov. Mr. Cowger will also be the point of contact for sharing geographic information system shapefiles for the resources and designations identified in these comments. Thank you.

Sincerely,



Rebecca Heick
Deputy State Director
Lands, Minerals and Energy

cc: Interstate 11 Tier 1 EIS Study Team
c/o Arizona Department of Transportation
Attn: Communications
1655 W. Jackson Street, Mail Drop 126F
Phoenix, AZ 85007

Bureau of Land Management
Gila District Office
Attn: Pamela Mathis, Acting District Manager
3201 E. Universal Way
Tucson, AZ 85756-5021

Bureau of Land Management
Phoenix District Office
Attn: Leon Thomas, District Manager
21605 N. 7th Avenue
Phoenix, AZ 85027-5500



Letter from Bureau of Land Management, February 24, 2017



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MEETING PURPOSE: Discuss I-11 ASR and Tier 1 EIS

DATE & TIME: February 24, 2017

LOCATION: Conference Call

ATTENDEES: Rebecca Yedlin, FHWA; Aryan Lirange, FHWA; Jay Van Echo, ADOT; Lane Cowger, BLM; Rem Hawes, BLM; Jennifer Pyne, AECOM

MEETING SUMMARY

Key Discussion Points/Action Items:	Responsible Party / Action Item
1. BLM would prefer alternatives that are west of the Vulture Mountains Recreation Area (VMRA). In lieu of this option, an alternative within the multi-use corridor in Vulture Mountains would be considered acceptable. The third choice would be to deviate from the designated corridor in order to have a more direct route. BLM does not consider an alternative on Vulture Mine Road to be acceptable.	
2. Regardless of whether an alternative is located within the multi-use corridor, the VMRA would be considered a 4(f) resource. An exception could occur if FHWA and BLM engage in joint planning and required mitigation would be identified in this area. Rem Hawes stated that BLM can provide a letter on this topic, and he will coordinate with resource specialists regarding potential mitigation.	BLM to provide letter on joint planning for 4(f) resource [Vulture Mountains Recreation Area]. BLM will review 4(f) issues and coordinate with FHWA.
3. FHWA indicated that alternatives through VRMA may not be presented unless a letter on joint planning is provided, due to the 4(f) issue. The study team needs to know which alternatives are realistic on BLM-managed lands.	
4. BLM indicated that a Resource Management Plan Amendment would not be required if an alternative is entirely within the multi-use corridor. It was noted that scattered BLM parcels throughout the I-11 study area would require a ROW grant and/or new corridor designation.	
5. ADOT/FHWA will provide shapefiles for rough alternatives locations so BLM can provide input on potential issues.	ADOT/FHWA to provide GIS shapefiles for preliminary alternative locations.
6. The I-8 corridor is generally 300 feet wide. It was stated that alternatives	

Key Discussion Points/Action Items:	Responsible Party / Action Item
following I-8 could probably fit within the existing ROW. It was noted that it would be difficult decision for BLM to allow encroachment along this corridor.	
7. The group discussed whether a meeting was warranted between Ray Suazo and Karla Petty, and concluded that it was not needed at this time. They should touch base before the Draft EIS is issued.	
8. Rem Hawes indicated that an MOU was under preparation between BLM and Maricopa County Parks regarding recreation management in VMRA.	

cc: Document Control



Letter from Bureau of Land Management, May 12, 2017



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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Phoenix District
Hassayampa Field Office
21605 North 7th Avenue
Phoenix, Arizona 85027
www.blm.gov/az/



May 12, 2017

In Reply Refer To:
1610 (P010)

Karla S. Petty
US Department of Transportation
Federal Highway Administration
4000 N Central Avenue, Suite 1500
Phoenix, AZ 85012-3500

Dear Ms. Petty:

The Bureau of Land Management (BLM), Hassayampa Field Office, appreciates this opportunity to offer our comments on alternative routes under consideration in the Interstate 11 Tier 1 Environmental Impact Statement, particularly their conformance with the BLM's Bradshaw-Harquahala Resource Management Plan (RMP) in the northern portion of the I-11 study area. This is to address Federal Highway Administration 4F property requirements and our joint planning requirement.

The BLM is particularly interested in avoidance, minimization, and mitigation of potential impacts to the Vulture Mountains Cooperative Recreation Management Area (CRMA) south of Wickenburg. The BLM would prefer complete avoidance of the Vulture Mountains CRMA. This could be accomplished by selecting Segment S or a hybrid of Segments S and T, which skirt the CRMA to the west. This alternative would not require an RMP amendment.

Alternatively, the Bradshaw-Harquahala RMP identifies a multi-use corridor in the western portion of the Vulture Mountains CRMA. Segment U is within this corridor, and future development in the corridor could be collocated with existing electrical transmission infrastructure in the corridor to consolidate disturbance and environmental impacts.

The BLM would consider amendments to the Bradshaw-Harquahala RMP needed to permit highway development as part of a future right-of-way application and Tier 2 analysis.

The BLM encourages you to eliminate alternative segments V and W because of their potential impact to access and recreation within the Vulture Mountains CRMA as well as the Vulture Mountains Area of Critical Environmental Concern, wildlife habitat, and other sensitive natural and cultural resources in the area.

I appreciate our cooperating agency relationship on this important project and look forward to continued cooperation between our agencies now and in future Tier 2 permitting. Please don't hesitate to reach out to me at rhawes@blm.gov or 623-580-5530, or the BLM's project manager, Lane Cowger at lcowger@blm.gov or 602-417-9612, with any inquires about this correspondence or other needs.

Sincerely,



Rem Hawes
Field Manager

Cc: Rebecca Yedlin
USDOT Federal Highway Administration
4000 N Central Ave
Phoenix, AZ 85012-3500

Aryan Lirange
USDOT Federal Highway Administration
4000 N Central Ave
Phoenix, AZ 85012-3500

Lane Cowger, BLM AZSO, LLAZ9200



Letter to Bureau of Land Management, Signed Concurrence, April 30, 2018



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U.S. Department
of Transportation
**Federal Highway
Administration**

ARIZONA DIVISION

4000 North Central Avenue
Suite 1500
Phoenix, Arizona 85012-3500
Phone: (602) 379-3646
Fax: (602) 382-8998
<http://www.fhwa.dot.gov/azdiv/index.htm>

April 12, 2018

In Reply Refer To:

999-M(161)
999 SW 0 M5180 01P
I-11, I-19/SR189 to US 93/SR 89
I-11 Corridor Tier 1 EIS
Vulture Mountain CRMA Section 4(f) Consultation

Mr. D. Remington Hawes, Field Manager
Bureau of Land Management
Hassayampa Field Office, Phoenix District
21605 North 7th Avenue
Phoenix, AZ 85027

Dear Mr. Hawes:

The Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) are preparing a Tier 1 Environmental Impact Statement (Tier 1 EIS) for the Interstate 11 (I-11) Corridor between Nogales and Wickenburg, Arizona. The FHWA is the Federal Lead Agency and ADOT is the Local Project Sponsor for the Tier 1 EIS. The I-11 Corridor study area encompasses some Bureau of Land Management (BLM) land including the Sonoran Desert National Monument and the Vulture Mountains Cooperative Recreation Management Area (CRMA). The purpose of this letter is to seek your input and understanding, as the official with jurisdiction, concerning the history and purpose of the multi-use corridor established within the Vulture Mountain CRMA to help inform our determination of Section 4(f) applicability to the alternatives under consideration.

A. I-11 and Vulture Mountains CRMA

The Tier 1 EIS evaluates the need for a transportation facility from Nogales in southern Arizona to just north of Wickenburg and means to address it. Three build corridor alternatives are being examined in the EIS in the North Section of the study area and are shown in the enclosed Corridor Options Map. Among these corridors, two Build Corridors (also known as Options U and V in the Alternatives Selection Report: V was recently modified to avoid Vulture Mine Road and relabeled to X for clarity) are located within the multi-use corridor through the Vulture Mountain CRMA to avoid direct impacts to the property's recreational attributes. The third Build Corridor (also known as Option S) would be aligned west of and adjacent to the Vulture Mountains CRMA property, such that no direct impact on the Vulture Mountains CRMA property would occur.

B. Planning Documents

The BLM manages the Vulture Mountains CRMA, consisting of approximately 70,000 acres of land south of Wickenburg, Arizona. Activities on the land are guided by two primary planning documents: the 2010 Bradshaw-Harquahala RMP and the 2012 CRMA Plan. The RMP

designates a number of multi-use corridors, including the north-south multi-use corridor that crosses the western portion of the Vulture Mountains CRMA property (see enclosed BLM Map 9 from the B-H RMP). Multi-use corridors are defined in the RMP as being for major utilities and regionally significant transportation uses. The facilities must be compatible with one another in order to be co-located within the corridors, and facility development requires analysis of impacts in accordance with the National Environmental Policy Act (NEPA). The RMP specifies that the BLM will coordinate with ADOT in advancing such transportation uses in multi-use corridors. I-11 is specifically identified in the CRMA Plan as a planned transportation project.

C. Compliance with Section 4(f) Joint Planning Criteria

Section 4(f) of the US Department of Transportation Act of 1966, as amended (23 CFR 774) [Section 4(f)] requirements stipulate that FHWA and other DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless: (1) there is no feasible and prudent avoidance alternative to the use of land; and the action includes all possible planning to minimize harm to the property resulting from such use; or, (2) the Administration determines that the use of the property will have a *de minimis* impact.

However, there are several special situations where the Section 4(f) requirements don't apply [See 23 CFR § 774.11 (Applicability)]. One situation is when a public park, recreation area, or wildlife and waterfowl refuge is planned or developed with a future transportation use in mind, and an area is reserved or set aside within the Section 4(f) property for that use; the so-called "Joint Development" situation [§ 771.11(i)]. As long as the reservation was made before or at the same time the adjacent portions were designated as a park, recreational area, or refuge property, Section 4(f) will not apply. The specific governmental action that must be taken to reserve a transportation corridor with the Section 4(f) property is a question of the applicable law, but may include ordinances, adopted land use plans, deed restrictions, or other actions. Documented evidence must be provided in order to demonstrate that the area in question was reserved for transportation purposes before or at the same time that the adjacent portions were designated as a park, recreational area or refuge property.

FHWA believes that either the Option U or X Build Corridor Alternatives, which will utilize the multi-use corridor through the CRMA, satisfy the Joint Development criteria and that Section 4(f) would not apply in those locations (See enclosed I-11 VM Area Linkages Map). This conclusion is based on our understanding that:

1. The Vulture Mountain multi-use corridor was designated by the Bradshaw-Harquahala RMP and reaffirmed in the CRMA Plan, both prior to the initiation of the I-11 Tier 1 EIS;
2. The purpose of the multi-use corridor is to accommodate future infrastructure development, including interstate transportation facilities, and I-11 was specifically contemplated as one such potential development;
3. The proposed alternatives conform to the intent and purpose of the multi-use corridor and the Bradshaw-Harquahala RMP; and
4. All NEPA requirements for the future development of the corridor by I-11 will be addressed in the I-11 Tier 1 EIS and future Tier 2 NEPA studies. FHWA is already working with the

BLM as a cooperating agency, which is defined in 40 CFR § 1501.6, in this effort. Recent and relevant correspondence between BLM and FHWA is provided in the enclosed BLM Letter Re: RMP dated May 12, 2017.

FHWA requests BLM's input and concurrence on these assumptions to assist in making a final determination on the applicability of Section 4(f) to the Option U and X Corridor Alternatives under § 771.11(i). If you concur with these assumptions, please indicate your concurrence by signing below, or let us know if you think further information should be considered.

FHWA and ADOT look forward to continuing our successful working relationship with BLM on this project. If you have questions or concerns, please contact Rebecca Yedlin, FHWA Environmental Coordinator at Rebecca.Yedlin@dot.gov or 602-382-8979.

Sincerely yours,



Karla S. Petty
Division Administrator



Signature for BLM Concurrence
999-M(161)

4/30/2018

Date

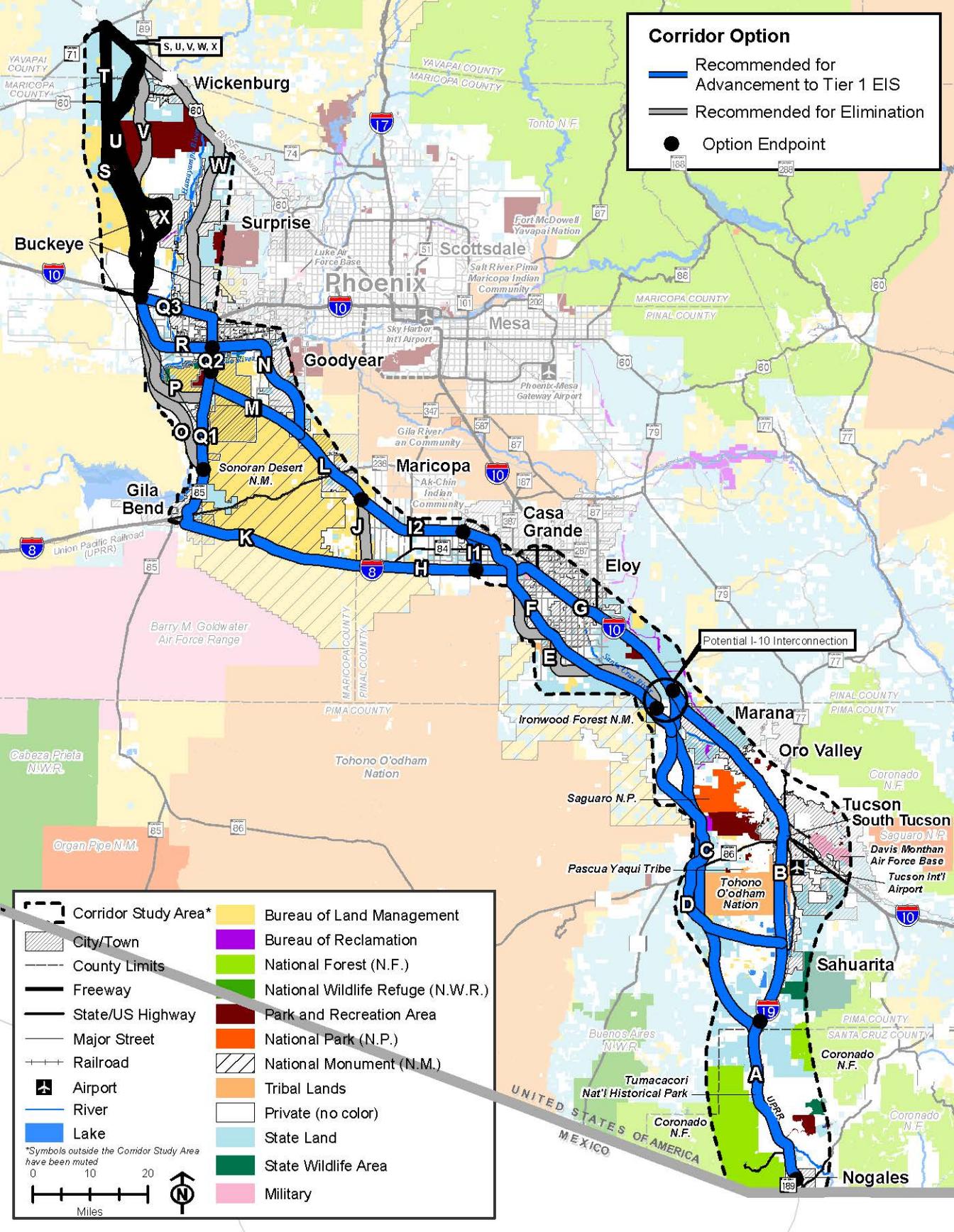
Enclosures

ecc:
Lane Cowger, BLM
ALirange
JVan Echo

The BLM concurs with your assumptions regarding Section 4(f) applicability. We continue to prefer complete avoidance of the Vulture Mountains recreation area, which could be accomplished by selecting Segment S.

Corridor Option

- Recommended for Advancement to Tier 1 EIS
- Recommended for Elimination
- Option Endpoint



	Corridor Study Area*		Bureau of Land Management
	City/Town		Bureau of Reclamation
	County Limits		National Forest (N.F.)
	Freeway		National Wildlife Refuge (N.W.R.)
	State/US Highway		Park and Recreation Area
	Major Street		National Park (N.P.)
	Railroad		National Monument (N.M.)
	Airport		Tribal Lands
	River		Private (no color)
	Lake		State Land
*Symbols outside the Corridor Study Area have been muted			State Wildlife Area
			Military

Potential I-10 Interconnection

UNITED STATES OF AMERICA
MEXICO

Map 9
Bradshaw-Harquahala
Planning Area

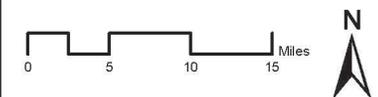
Utility & Transportation
Corridors and
Communication Sites

-  Agua Fria National Monument Planning Area
-  Bradshaw Harquahala Planning Area
-  BLM Wilderness
-  USFS Wilderness
-  Interstate
-  Highway
-  Major Road
-  Major River, Streams or Wash

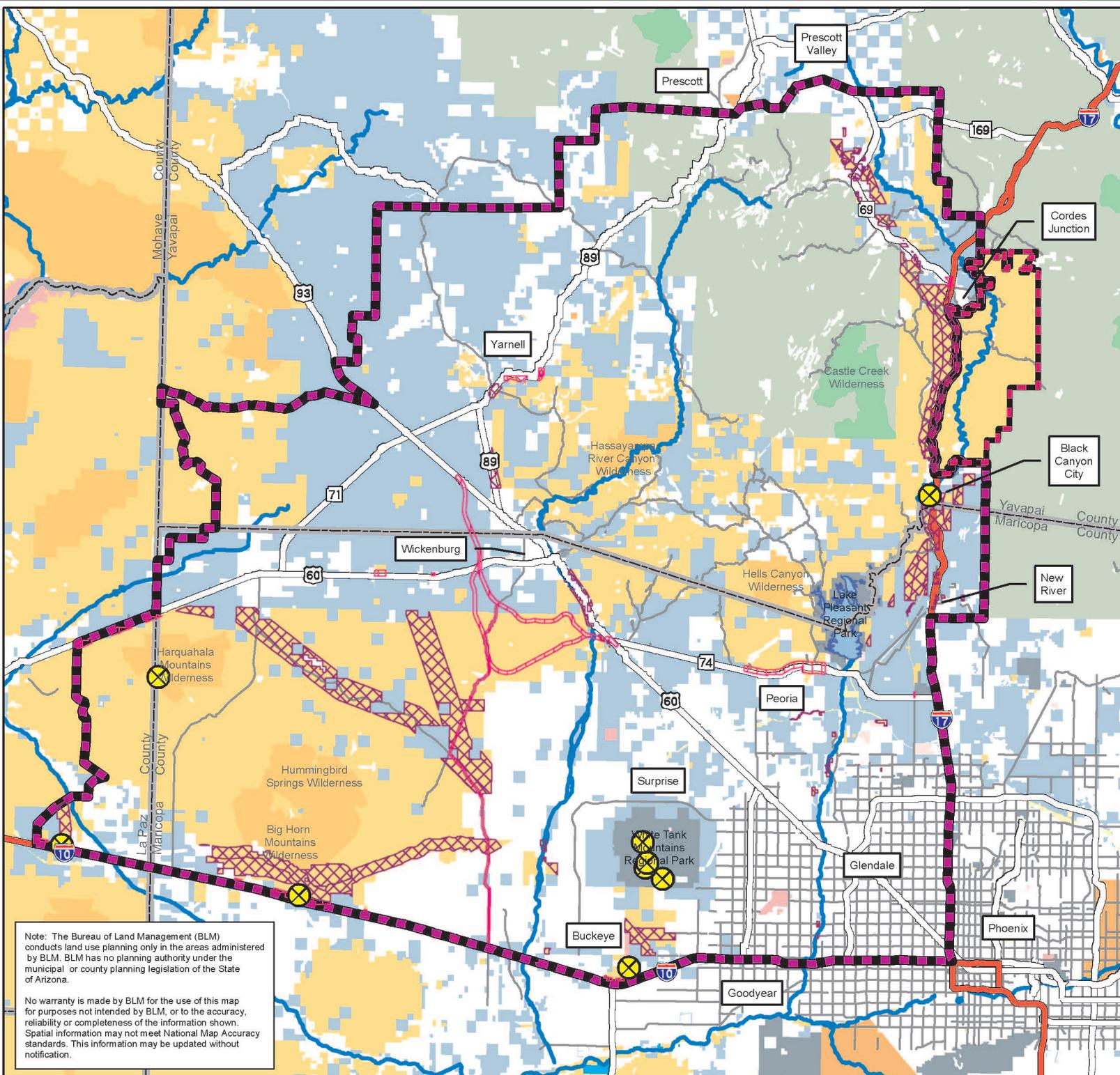
Corridors Allocations

-  Multi-use Corridor
-  Transportation Corridor
-  Communication Site

Note: Land Status legend located on Map 1-1

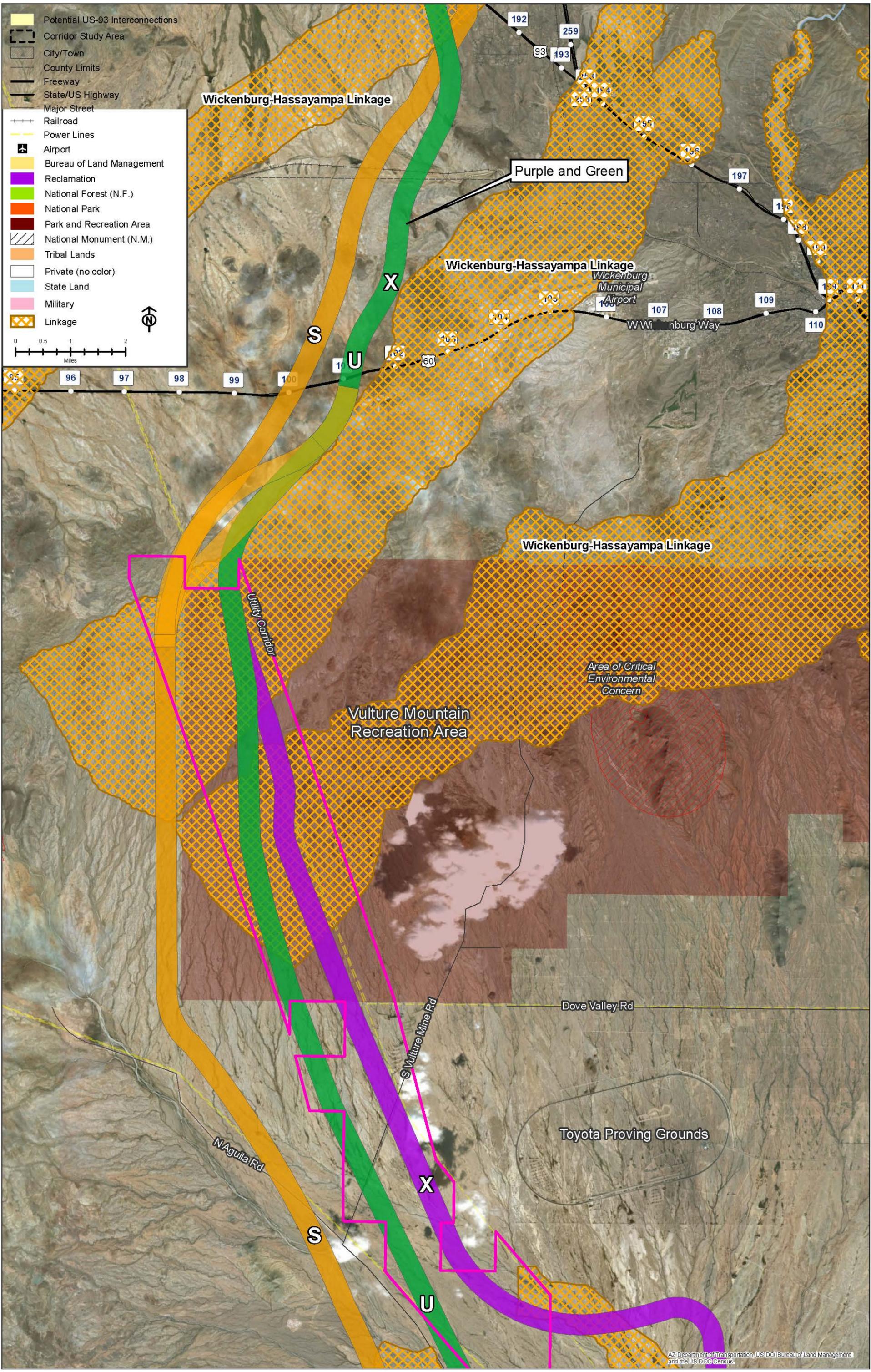


Bureau of Land Management
Phoenix District Office
Phoenix, AZ
October 2006



Note: The Bureau of Land Management (BLM) conducts land use planning only in the areas administered by BLM. BLM has no planning authority under the municipal or county planning legislation of the State of Arizona.

No warranty is made by BLM for the use of this map for purposes not intended by BLM, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy standards. This information may be updated without notification.





United States Department of the Interior



BUREAU OF LAND MANAGEMENT

Phoenix District
Hassayampa Field Office
21605 North 7th Avenue
Phoenix, Arizona 85027
www.blm.gov/az/

May 12, 2017

In Reply Refer To:
1610 (P010)

Karla S. Petty
US Department of Transportation
Federal Highway Administration
4000 N Central Avenue, Suite 1500
Phoenix, AZ 85012-3500

Dear Ms. Petty:

The Bureau of Land Management (BLM), Hassayampa Field Office, appreciates this opportunity to offer our comments on alternative routes under consideration in the Interstate 11 Tier 1 Environmental Impact Statement, particularly their conformance with the BLM's Bradshaw-Harquahala Resource Management Plan (RMP) in the northern portion of the I-11 study area. This is to address Federal Highway Administration 4F property requirements and our joint planning requirement.

The BLM is particularly interested in avoidance, minimization, and mitigation of potential impacts to the Vulture Mountains Cooperative Recreation Management Area (CRMA) south of Wickenburg. The BLM would prefer complete avoidance of the Vulture Mountains CRMA. This could be accomplished by selecting Segment S or a hybrid of Segments S and T, which skirt the CRMA to the west. This alternative would not require an RMP amendment.

Alternatively, the Bradshaw-Harquahala RMP identifies a multi-use corridor in the western portion of the Vulture Mountains CRMA. Segment U is within this corridor, and future development in the corridor could be collocated with existing electrical transmission infrastructure in the corridor to consolidate disturbance and environmental impacts.

The BLM would consider amendments to the Bradshaw-Harquahala RMP needed to permit highway development as part of a future right-of-way application and Tier 2 analysis.

The BLM encourages you to eliminate alternative segments V and W because of their potential impact to access and recreation within the Vulture Mountains CRMA as well as the Vulture Mountains Area of Critical Environmental Concern, wildlife habitat, and other sensitive natural and cultural resources in the area.

I appreciate our cooperating agency relationship on this important project and look forward to continued cooperation between our agencies now and in future Tier 2 permitting. Please don't hesitate to reach out to me at rhawes@blm.gov or 623-580-5530, or the BLM's project manager, Lane Cowger at lcowger@blm.gov or 602-417-9612, with any inquires about this correspondence or other needs.

Sincerely,



Rem Hawes
Field Manager

Cc: Rebecca Yedlin
USDOT Federal Highway Administration
4000 N Central Ave
Phoenix, AZ 85012-3500

Aryan Lirange
USDOT Federal Highway Administration
4000 N Central Ave
Phoenix, AZ 85012-3500

Lane Cowger, BLM AZSO, LLAZ9200



Email from Bureau of Land Management, September 7, 2018



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From: [Cowger, Lane](#)
To: [Lirange, Aryan \(FHWA\)](#); [Jay Van Echo](#); [Richardson, Anita](#)
Subject: Today's follow up
Date: Friday, September 07, 2018 7:34:47 PM

All,

Nice meeting with you today. To follow up on one minor point of clarification, going forward we should refer to the recreation feature as the Vulture Mountain Recreation Management Zone instead of Vulture Mountain CRMA. As discussed, the BLM-County management partnership for the whole 70,000 acres is not going to happen, shifting to county Recreation and Public Purpose grants for a few discrete locations out there. I think your 4f analysis in the EIS stands up with just the change of name (it's still identified for recreation in the BLM's RMP and for the same uses), nothing else needed other than scrubbing of any discussion of Maricopa County being a co-manager.

Thanks,

Lane Cowger
Project Manager
Bureau of Land Management- Arizona State Office
One N Central Avenue, Suite 800
Phoenix, AZ 85004
602-417-9612
lcowger@blm.gov



Letter from Department of the Interior with Bureau of Land Management DEIS Comments, July 8, 2019



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United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
333 Bush Street, Suite 515
San Francisco, California, 94104

July 8, 2019

In Reply Refer To:
19/0143
Filed Electronically

Ms. Karla Petty
Division Administrator
Federal Highway Administration
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Subject: Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona, dated March 2019.

Dear Ms. Petty:

The Department of the Interior (Department) has reviewed the *Draft Tier 1 Environmental Impact Statement (EIS) and Preliminary Section 4(f) Evaluation for the Interstate 11 Corridor in Santa Cruz, Pima, Pinal, Maricopa, and Yavapai Counties, Arizona*, dated March 2019 and provides the following comments on behalf of its bureaus; the U.S. Bureau of Reclamation (Reclamation), the U.S. Fish and Wildlife Service (FWS), the U.S. Bureau of Land Management (BLM), and the U.S. National Park Service (NPS).

General Section 4(f) Comments

The Tucson Mitigation Corridor (TMC) is a 2,514-acre 4(f) designated property purchased in 1990 for approximately \$15 million. The land was purchased to partially mitigate biological impacts from the Central Arizona Project (CAP) Tucson Aqueduct-Phase B. Additionally, the CAP was modified to accommodate the TMC. In the Final EIS for the CAP Tucson Aqueduct-Phase B, Reclamation identified specific environmental commitments and mitigation measures to reduce project impacts. In accordance with the Fish and Wildlife Coordination Act of 1958 (PL 85-624, 16 U.S.C. 661 et seq.), Reclamation, Arizona Game and Fish Department (AGFD), FWS, and several public conservation groups agreed on a specific parcel (i.e., TMC) for mitigation. In 1990, Reclamation, FWS, AGFD, and Pima County signed a Cooperative Agreement. The Cooperative Agreement states:

"WHEREAS, 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)]".

[Type here]

The Master Management Plan (attached to Cooperative Agreement) prohibits any future development within the area other than existing wildlife habitat improvements or developments agreed to by Reclamation, AGFD, FWS, and Pima County.

In an effort to work with the Federal Highways (FHWA) and to accommodate FHWA's Programmatic EIS schedule, Reclamation identified preliminary conditions for a potential path to a programmatic Net Benefit determination for the TMC in a letter dated June 8, 2018. This letter stated that, "*Based on the proposed process to identify, evaluate, and implement potential mitigation measures, Reclamation believes that a net benefit could be achieved, and Reclamation would concur with the application of the Net Benefit Programmatic Evaluation to the TMC.*" Our understanding is that FHWA is requesting a higher level of commitment than what was provided in the June 8, 2018 letter prior to the Tier 1 EIS Record of Decision. Based on the lack of specificity and qualitative analysis inherent in a Programmatic EIS, Reclamation would not be able to provide a higher level of commitment on our concurrence for a 4(f) net benefit determination for the TMC.

After continued consultation with our TMC partners, the Department is requesting FHWA prepare an Individual Section 4(f) Evaluation for the TMC. Based on discussions with FHWA, it is our understanding that this change will not affect the overall EIS schedule.

The true value of the TMC is the functional and critical role the property plays in maintaining the primary wildlife movement corridor between the Roskrige Mountains, Ironwood Forest National Monument and west across Avra Valley to the Tucson Mountains and Saguaro National Park (SNP). The corridor supports multiple biological processes that are critical to the ecological health of SNP and Tucson Mountain Park, both Section 4(f) properties found within the Tucson Mountains that total approximately 44,818-acres. As a result of this role, Reclamation has viewed and managed the TMC as a Section 4(f) property of unique significance and critical importance.

General EIS Comments

Recommended Alternative

The Department continues to be concerned that the analysis at the Tier 1 level is insufficient to determine a Recommended Alternative or a Preferred Alternative in the Final EIS. The Recommended Alternative, which is 0.3 miles from SNP and 0.6 miles from Wilderness, should include the necessary studies to illustrate and further quantify the impacts the highway and cumulative effects of future multi-modal transportation and reasonably foreseeable subsequent development would have to park resources and visitors; specifically to wildlife movement and park wilderness values; impacting the view shed, diminishing natural sounds; diminishing night sky darkness and increasing air pollution.

The Tucson Mountain District of SNP was established to protect its natural resources, scenic beauty, and habitat from various threats associated with the growth of metropolitan Tucson. Because many wildlife species rely on the ability to move in and out of SNP to meet their water needs throughout the year, SNP works closely with adjacent land managers and neighbors to assist in providing habitat (and water sources) that maintain healthy wildlife populations.

These needs have been recognized and formalized through federal and local efforts. As mentioned above, Reclamation established the TMC to protect a critical wildlife corridor. Additionally, Pima County established the Pima County Buffer Overlay Zone, in part to: “3. Establish mechanisms that will protect the public preserves and result in an ecologically sound transition between the preserves and more urbanized development; 4. Assure the continued existence of adequate wildlife habitat and foster the unimpeded movement of wildlife in the vicinity of Pima County's public preserves...” (Pima County Code of Ordinances § 18.67). Finally, the Sonoran Desert Conservation Plan has identified critical wildlife corridors within the project study area which connect the park to other adjacent conservation lands.

The Recommended Alternative directly impacts all three of these properties: it bisects the TMC, it overlaps 916 acres of the Buffer Overlay Zone, and “most of the corridor (94%) impacts one or more categories of the Conservation Land System” identified in the Sonoran Desert Conservation Plan (Pima County DOT Report, Appendix F, p. 267).

Based on the potential for significant adverse impacts to SNP, TMC, Ironwood National Monument, and Pima Pineapple Cactus (PPC), the Department recommends the Orange Alternative for the southern section of the corridor. Additionally, the Orange Alternative better serves planned growth areas, freight industry focus areas, and economic activity centers while still reducing travel time over the no build alternative. Our determination is based on an analysis of the potential impacts and the EIS which states the Orange alternative best responds to continued population and employment growth in the South Section; provides the most access to economic activity centers; reduced impact to wildlife corridors and linkages; and, would have fewer impact to PPC and its habitat.”

Overall the environmental impact under Segment B is less severe to wildlife connectivity and the federally endangered PPC. Therefore, as identified above, Segment B is the ideal selection for the southern end of the study area.

Pima Pineapple Cactus

The Department recommends that FHWA develops a preliminary effects analysis and mitigation strategy for the federally endangered PPC (*Coryphantha scheeri* var. *robustispina*) before Option D of the recommended alternative is finalized in the Record of Decision. If the effects analysis and mitigation strategy are deferred until Tier II, we recommend that all options for aligning I-11 through Pima County remain open.

Of all listed species that may be affected by the I-11 project, FWS is most concerned about effects to the PPC. Unlike other listed species that occur in the I-11 study area—which tend to occur in small numbers in restricted or relatively inaccessible habitats—the PPC occurs in significant numbers within all three of the I-11 build corridor alternatives. The recommended alignment for I-11 will bisect the PPC’s entire known range from south to north and will affect possibly hundreds of individual cactus plants. The proportion (percent) of the known range-wide population that will be affected is unknown but is likely to be significant.

FWS is currently aware of fewer than 8,000 extant PPC individuals across the range of the taxon. In addition, 1,837 are known to no longer exist, primarily due to development and mining.

A primary concern is to assure that a path to avoid Endangered Species Act Section 7(a)(2) prohibitions against jeopardy is available before formal section 7 consultation on the cactus occurs during or after Tier II. That assurance can be provided only if PPC numbers and distribution within the build corridor alternatives, or at least the recommended alternative, have been assessed in advance, and only if I-11 planners and FWS are confident that project affects to those populations can effectively be avoided or mitigated.

There is currently insufficient information to determine whether impacts to the PPC that may result from the I-11 project can be mitigated or to assure that a jeopardy opinion from the FWS would not occur during formal consultation on the PPC. A potential jeopardy decision for the PPC due to potentially large losses of this endangered species is critical and poses a serious challenge to I-11 planners.

Central Arizona Project

Reclamation and the Central Arizona Water Conservation District (CAWCD) have design standards for facilities that encroach on CAP lands. These design standards protect the CAP facilities and the ability to perform Operation and Maintenance of project facilities. As I-11 reaches the design phase, we recommend coordination with CAWCD and Reclamation on the applicable design standards.

Segment U of the recommended alternative which spans north through the Hassayampa Plain and Tonopah Desert study area has the potential to affect wildlife movement over two concrete wash overchutes and a wildlife bridge. While the primary intent of overchutes is to maintain hydrological connectivity, wildlife use was considered in their design. Reclamation has performed long-term monitoring of multiple CAP wildlife bridge and concrete wash overchutes. Some overchutes currently being monitored have recorded total individual crossings by mule deer as high as 380 a month. It is expected that Segment U would devalue and reduce the wildlife utilization of the overchutes and the wildlife bridge in the surrounding area. Replacement of multiple wildlife crossing structures should be included as mitigation in Segment U.

Summary Comments

As Cooperating Agencies, we value our cooperative relationship and believe an Individual Section 4(f) Evaluation is the most appropriate evaluation moving forward. At its conclusion, if Segment D is still chosen as part of the preferred alternative, then the Department still believes the same conditions identified in Reclamation's June 8, 2018 letter are still applicable to accomplish the required minimization under 23 CFR 774.3(a)(2) and the appropriate mitigation required to compensate for the loss and "use" of 453-acres (18% of the TMC) and all necessary measures to avoid defeating the initial purpose of its acquisition [16 U.S.C., section 663(d)]. The Department continues to be committed to consulting and collaborating on the analysis necessary to determine the best way to minimize and mitigate the effects of the proposed I-11.

Thank you for the opportunity to provide comments and a path forward to minimize impacts to the TMC and the features and values for which the property was established. The Department and bureaus would be available to meet to clarify any of our recommendations, and further assist the FHWA and ADOT with identification of appropriate measures for the benefit of wildlife.

For additional comments from BLM, please see **Attachment 1** – *Additional Comments from the BLM on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

For additional comments from Reclamation, please see **Attachment 2** – *Additional Comments from Reclamation on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

For additional comments from NPS, please see **Attachment 3** – *Additional Comments from NPS on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

Thank you for the opportunity to provide comments, and we look forward to continued work with the FHWA and ADOT. For questions regarding specific comments please contact: Mr. Lane Cowger with BLM at 602-417-9612 or via email at lcowger@blm.gov; Mr. Bob Lehman with FWS at 602-242-0210 or via email at Robert_lehman@fws.gov; Mr. Jeff Conn with NPS at 623-773-6250 or via email at jeffery_conn@nps.gov; Mr. Sean Heath with Reclamation at 623-773-6250 or via email at sheath@usbr.gov. For all other comments or questions please contact me at 415-420-0524 or via email at janet_whitlock@ios.doi.gov.

Sincerely,



Janet Whitlock
Regional Environmental Officer
Office of Environmental Policy and Compliance

Attachments

Cc

Shawn Alam, DOI

Jeff Conn, NPS

Lane Cowger, BLM

Sean Heath, BOR

Courtney Hoover, DOI

Robert Lehman, FWS

Joseph Mathews, SOL

Roxanne Runkel, NPS

Attachment 1 – Additional Comments from BLM on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.

#	Section	Page	Paragraph/ Bullet/ Figure	Line	Reviewer	Comments
1	2.4.2.1	2-26		7	Cowger	“54” should be “60”- i.e., 297 minus 237= 60
2	2.4.5	2-33	Table 2-8		Cowger	Options Q2a and b and Q3 a and b are only mentioned in this table and nowhere else in the document. Elsewhere only Q2 and Q3 are referenced. This should be clarified or removed.
3	3.1	3.1-1		16-18	Cowger	It appears the concept that is being relayed here is that the recommended alternative may be one of the one of the defined alternatives or a hybrid of two or more of them. The sentence is missing a word or is otherwise unclear and thus fails to adequately relay this important idea. Suggest adding “not” between be and one in line 16 or changing “but” to “or” in line 17 or otherwise rewriting to make this concept clear.
4	3.1.2	3.1-3		16	Cowger	“alternatives” misspelled twice on this line
5	3.2	Table 3.2-2	3.2-9		D. Tersey	No mention of impacts to Ironwood Forest National Monument and access to the monument through Manville Rd. Potential to impact visual resources, noise levels, and visitor experience for the Ironwood Forest National Monument. Issue for Tier 2 analysis. Potential for high overall visual impact from Ironwood Forest national Monument because of high viewer sensitivity and superior, unobstructed views. Issue for Tier 2 analysis.
6	3.2	Table 3.2-2	3.2-10		D. Tersey	No mention that the alternative would significantly impact the Los Robles Archaeological district on the National Register. No mention of impacts to Ironwood Forest National Monument and access to the monument through Sasco Rd.
7	3.3	3.3-5		19-20	Cowger	Better language for BLM utility corridor definition- -“...within Bureau of Land Management (BLM) designated multi-use utility corridors, which are defined corridors for linear infrastructure development. These multi-use...” Avoids using “rights-of-way”- which are the road/pipeline/powerline authorizations themselves rather than the corridor
8	3.3	3.3-8		32	D. Tersey	The definition of wilderness is misleading, and sounds more like the definition of a national monument than a wilderness area. “Wilderness is protected and managed so as to <u>preserve</u> its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable; (2) has outstanding opportunities for solitude... may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.” (Section 2(c) Wilderness Act of 1964) The primary purpose of wilderness is for unimpaired views and solitude and may also have scientific value.
9	3.3	3.3-10		42	Cowger	Global change: Any references in document to VMRA or VMCRMA should be changed to VMRMZ or Vulture Mountains Recreation Management Zone This stands for Vulture Mountain Recreation Management Zone, it’s designation in the Bradshaw-Harquahala RMP. The VMRA/CRMA title was previously used under the assumption that the BLM and Maricopa County would enter into a cooperative agreement for management of the entire area. This is no longer the case.
10	3.3	3.3-10		44	Cowger	Add “parts of which are” before “managed” for clarity
11	3.3	3.3-17		37	Cowger	Issue for figures for this entire chapter: Somewhere the numbering of figures in this chapter became off by one. This is where I caught it. Here, Fig 3.3-9 is referenced in the text but it actually corresponds to Fig 3.3-8 on page 3.3-20. Check figures citations with the actual figures throughout chapter.
12	3.3	3.3-23		3-12	D. Tersey	No mention of Option D going through the Los robles Archaeological district.
13	3.3	3.3-25	Fig 3.3-10		Cowger	Another example of disconnect between textual reference and actual figure

#	Section	Page	Paragraph/ Bullet/ Figure	Line	Reviewer	Comments
14	3.3	3.3-37	Table 3.3-6	Wilderness (BLM)	Cowger	Assuming that the 456 acres of BLM wilderness encroachment is similar to footnote 2 that applies to the 6,133 acres of “National Monument (BLM)” above it whereby actual impacts to the national monument are not expected. Should have same/similar footnote if that is the case. If not, any encroachment/development of designated wilderness on BLM lands would be in conflict with Federal wilderness statutes. BLM opposes any development on these Congressionally designated Wilderness lands and would encourage ADOT/FHWA to modify their alternatives to avoid designated Wilderness.
15	3.3	3.3-46		6-8	D. Tersey	Some specially designated BLM lands have prohibitions against new right of ways in their plans that are because of congressional or presidential actions (National Monuments) that cannot be fixed by amending the RMP. This is true of the presidential proclamations for both Ironwood Forest and Sonoran Desert NMs.
16	3.3	3.3-48	Table 3.3-8		D. Tersey	Reasonably foreseeable effects from increased access could increase the damaging effects of increased access to parks, recreational facilities or open space. (Blue, green and purple alternatives.)
17	3.4	3.4-2	Table 3.4-1		Cowger	Much like NPS and USFS, many additional laws and policies apply to recreation on BLM lands beyond just the field office RMPs listed here. Should add: Federal Land Policy and Management Act (FLPMA) of 1976 Wilderness Act of 1964; AZ Desert Wilderness Act of 1990 43 CFR Parts 8200-8260
18	3.4	3.4-6	Figure 3.4-2		Schow	The Sonoran Desert National Monument Resource Management Plan states, "NT-1.1.5: The Anza NHT corridor and the Anza NHT Management Area will be an exclusion area for major utility-scale renewable energy development and new major linear LUAs. In the Lower Sonoran Field Office, utility development could continue on a case by case basis in existing utility multiuse corridors and only if impacts are determined to have a negligible to minor effect on resources." The purple and green alternatives go right through the management area. BLM suggests using the Juan Bautista de Anza NHT Corridor instead for the map. Would need to be considered in Tier 2 analysis and may require BLM resource management plan amendment to authorize right-of-way within NHT management area.
19	3.4	3.4-7	Figure 3.4-3		Pike	The proposed routes would transect one of only two OHV race areas allocated in the Hassayampa Field Office Resource Management Plan (RMP 2010) and travel through the Vulture Mine Recreation Management Zone (RMZ). The RMP at Recreation Resources (RR) 37 states “ <i>Motorized competitive speed races are authorized only in Special Recreation Management Zones (SRMAs) or Recreation Management Zones (RMZs) where an allocation for such use has been made</i> ”. The Hassayampa SRMA and Castle Hot Springs RMZ (RMP at RR 116 and RR 87, respectively) are the only two such allocations. Therefore, the proposed route would potentially affect recreation that is relatively rare on the field office and highly sought after by the OHV race community and general public alike. There would also be potential effects to the Vulture Mine Recreation and Public Purposes Act Lease (R&PP) recently entered into with Maricopa County Parks Department, which formalizes the development of motorized and non-motorized recreation opportunities for the public over approximately 1000 acres adjacent to the proposed route.
20	3.7.3.1	3.7-8			D. Tersey	Section ignores Los Robles Archaeological District crossed by Segment D of the Green Alternative. District has high known archaeological site density.
21	3.7.3.1	3.7-8			D. Tersey	Suggest rewrite to better reflect that Green Alternative bisects Los Robles Archeological District
22	3.9	3.9-13		5-17	Cowger	Would be helpful to reviewers and public to clearly state in a table the acreage of BLM VRM classes (I through IV) crossed by each alternative.
23	3.9	3.9-13		16-17	Cowger	“VRM Class III areas are compatible with the BLM VRM objective.” This does not make sense. Suggest change to “Management objectives for VRM Class III lands include partially retaining their existing character and allow for moderate change to the subject landscape. Hence, BLM is unlikely to require amendment to their...” Here’s the full VRM III objective if needed to word this for ADOT/FHWA purposes- <ul style="list-style-type: none"> VRM Class III Objective: To partially retain the existing character of the landscape. Allowed Level of Change: The level of change to the characteristic landscape should be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Changes should repeat the basic elements

#	Section	Page	Paragraph/ Bullet/ Figure	Line	Reviewer	Comments
						found in the predominant natural features of the characteristic landscape.
24	3.9	3.9-16	Fig 3.9-7		Cowger	VRM designations only apply on BLM-administered lands. The VRM data displayed in this figure is on all ownerships. Only an issue for the northern portion of the project area- central and south look fine. Apologies if this was a function of the data shared by BLM. Change this map, others like 3.9-10 with similar scales, and full project area maps displaying VRM to reflect this. Fix: ensure all VRM data is clipped to BLM lands only
25	3.12				Plis	The proposed routes would have only a minimal impact on salable minerals in BLM's Lower Sonoran Field Office (LSFO). The green route, and to some extent the orange route, would impact the access road into the Kilauea Crushers/Pioneer Landscaping crushed stone pit in T2S, R3W, section 12. Otherwise, BLM sees no adverse impacts to any other LSFO salable minerals operations or potentially minable areas. The net effect of these new transportation routes will likely be beneficial to our salable minerals operations in that they will create demand for product used in constructing the routes, and thereafter the routes will enhance the ability to move sand & rock to other customers. Active mining operations will be analyzed in detail in the Tier 2 document, and so will stop here.
26	3.12				Plis	The proposed routes would have a negligible impact on locatable minerals in BLM's Lower Sonoran Field Office (LSFO). The purple route entirely avoids areas of high locatable mineral potential. The green and orange routes would cut across the area of high locatable mineral potential in the Buckeye Hills, but the impact to the locatable minerals resources there would be negligible because there are no active locatable minerals operations there, and the routes avoid creating significant new disturbance in previously mined and prospected locations within that high potential zone.
27	3.12	3.12-1		13	Cowger	US or United States Forest Service not "National" FS
28	3.14	3.14-13	Table 3.14-3 and	4	Cowger	For biological discussion and referenced table, please include BLM Sensitive Species. Link included with comprehensive list and more info on applicability. https://www.blm.gov/policy/az-im-2017-009
29	3.14	20			Daehler	BLM LSFO RMP has designated wildlife movement corridors. These corridors are sometimes similar to AGFD corridors but not always. These corridors should be considered and steps taken to ensure wildlife movement through these areas. Link to LSFO wildlife corridor map- https://eplanning.blm.gov/epl-front-office/projects/lup/11856/39910/42108/LSDA-Map-06_Wildlife_Special_Status_Species.pdf
30	3.14	21		29	Daehler	The text on page 3.14-21 references many studies and figures 3.14-5 to 3.14-7 depict "Detailed on other wildlife linkage designs" but the figures do not appear to accurately represent all of the wildlife movement corridors identified in these studies. For example, the Gila River is an important wildlife movement corridor identified in the Arizona Wildlife Linkages. This linkage and many others do not appear in any of the figures and the Gila River linkage is important considering that a new crossing is being proposed through this linkage area.
31	3.16	3.16-2		15-22	D. Tersey	Suggest splitting out impact summary discussion so each alternative is fully covered separately. An explanation of how much more resource impact the green alternative would have than the purple alternative would be helpful. Right now it is in the most basic relative terms.
32	3.17	3.17-15	Table 3.17-2		Cowger	Sonoran Valley Parkway ROD should be updated to 2019
33	4.3.1	4-12		24-32	D. Tersey	The entire IFNM (approximately 128,400 acres) is designated as a Special Recreation Management Area (SRMA). IFNM RMP Record of Decision page 69
34	4.3.1	4-12		24-32 and 38 through line 4 on pg 4-13	Cowger	BLM understands that impacts to Ironwood Forest NM and Sonoran Desert NM will be primarily indirect or otherwise limited because corridors either avoid (Ironwood) or collocate with existing infrastructure (Sonoran Desert) rather than cross or extensively develop these national monuments. However, it is incorrect to state that these national monuments do not function as or designated as a "significant recreation area" within its RMP as stated in Line 26 (IFNM) or implied in the SDNM discussion. Both of these national monuments include multiple Special Recreation Management

#	Section	Page	Paragraph/ Bullet/ Figure	Line	Reviewer	Comments
						<p>Area (SRMA) and/or Recreation Management Zone (RMZ) designations covering most or all of the BLM lands within them. Note that this is similar to the Vulture Mtn RMZ that is considered a 4(f) property, making the logic of not including these two monuments (or possibly the RMZs within them) while including Vulture Mtn very inconsistent.</p> <p>Regardless of 4(f) applicability, development of an interstate highway on or near these national monuments will impact the recreation that occurs on these monuments as well as the monument objects (i.e., ecological setting, cultural resources) justifying the designation of these monuments in the first place. At the very least, these impacts should be fully analyzed in the Tier 2 permitting for the project and avoidance, minimization, and mitigation appropriately used to decrease and ameliorate same.</p> <p>See extensive recreation discussion and designations in the RMPs for each monument</p> <p>Ironwood Forest NM RMP- https://eplanning.blm.gov/epl-front-office/projects/lup/78206/104878/128446/ROD_IFNM_Record_of_Decision_Approved_Resource_Management_Plan.pdf</p> <p>Sonoran Desert NM RMP- https://eplanning.blm.gov/epl-front-office/projects/lup/11856/40128/42157/01-SDNM_ROD-ARMP_FINAL_2012-09-19_web-with-Links_sans-map-pages.pdf</p>
35	4.3.2		Table 4-2		D. Tersey	Table and associated maps need to reflect 4(f) historic property- Los Robles Archaeological District. Crossed by Green Alternative.
36	4.6	4-99		10 and 20	Cowger	<p>BLM's Lower Sonoran Field Office has designated wildlife movement corridors that should be dealt with similar to the wildlife linkage discussed on lines 11 and 21 of this page. Map of these designated corridors is attached. Can also provide GIS data. More information on the corridor designations and restrictions is available in the Lower Sonoran RMP, linked above in these comments.</p> <p>Link to LSFO wildlife corridor map- https://eplanning.blm.gov/epl-front-office/projects/lup/11856/39910/42108/LSDA-Map-06_Wildlife_Special_Status_Species.pdf</p>
37	Appendix E12				Kilbey	There is no study area buffer zone in the northernmost part of the central section study area at purple route R portion, Orange and Green route portion Q3.
38	Appendix E12	E12-12	Table E12-2		Kilbey	The table lists route portion Q2 as having subsidence feature. This conclusion is incorrect because the route segment passes through area of shallow covered bedrock. Therefore, no potential for valley-fill subsidence.
39	Appendix E12	E12-12	Table E12-2		Kilbey	The Table lists route portion L has having no earth fissure analysis area, but an Analysis Area on Figure E12-6 occurs adjacent to northeast.
40	Appendix E12	E12-12	Table E12-2		Kilbey	The Table lists route portion L as not having land subsidence potential, L segment is entirely within valley fill, it would be prudent to list portion L as having land subsidence potential as was rational for segment I2 and I1.
41	Appendix F	2			D. Tersey	<p>Item (3) at the top of the page (consultation with management) has not occurred with the Ironwood Forest National Monument.</p> <p>Encourage ADOT/FHWA to discuss this directly with BLM Tucson Field Office and Ironwood Forests NM management as part of the Tier 2 analysis.</p>
42	Appendix F	2			D. Tersey	BLM has designated the entire IFNM as a Special Recreation Management Area. Allocate the entire IFNM (approximately 128,400 acres) as a Special Recreation Management Area (SRMA). IFNM RMP Record of Decision page 69
43	General				Cowger	<p>BLM directs you to its August 2018 comments on the ADEIS (included in Errata to Appendix H section in Errata to Draft Tier 1 DEIS). These comments still generally apply, particularly regarding BLM's preference for the orange alternative for the entire length of the project and reasoning therefore. The orange alternative minimizes new disturbance and collocates new facilities where possible, thereby minimizing impacts to BLM designations and uses and sensitive resources throughout the project area. These include:</p> <ul style="list-style-type: none"> -Avoids Vulture Mountain RMZ -Avoids additional impacts to Sonoran Desert National Monument -Avoids additional impacts to Ironwood Forest National Monument -Avoids additional impacts to wildlife connectivity in the Lower Sonoran and Tucson Field Offices/Central and South Project Sections -Avoids additional impacts to the Juan Batista De Anza National Historic Trail

#	Section	Page	Paragraph/ Bullet/ Figure	Line	Reviewer	Comments
						-Avoids additional impacts to the Lower Gila Terraces and Historic Trails ACEC -Avoidance of additional impacts to outdoor recreation on BLM lands throughout the project area
44	General-minerals				Ernst	There is no minerals section to review. There could be sand and gravel resources impacted as well as mining claims in the study area. An issue for Tier 2 specific analysis.
45	General-Grazing				Whitbeck	Livestock grazing is mentioned as a past and present action. Livestock grazing operations would be affected by all but the "no build" alternative. For the central section, impacts to grazing operations would be most with the purple alternative and least with the orange alternative. Issue for Tier 2 analysis.
46	General-Grazing				Holden	No rangeland management/livestock specific section. Project divides multiple allotments, potentially complicating livestock management. Issue for Tier 2 analysis.



Email from Bureau of Land Management, October 11, 2019



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Rietz, Jessica

From: Cowger, Lane <lcowger@blm.gov>
Sent: Friday, October 11, 2019 2:39 PM
To: Aryan Lirange
Cc: Jones, Laynee; Rietz, Jessica; Rebecca Yedlin; jayv@horrocks.com; jvanecho@azdot.gov
Subject: Re: [EXTERNAL] I-11 Tier 1 EIS BLM Comment Clarifications

Aryan,

One more item here. It is the Vulture Mine RMZ, not Vulture Mountain. This is an error on my part that became pervasive in our comments. Note that the Vulture Mine RMZ represents about half of the area that we had originally called out a that proposed cooperatively managed regional park in earlier comments. It does include the utility corridor and OHV areas that have been commented on .

https://eplanning.blm.gov/epl-front-office/projects/lup/1350/13340/13391/Map22_Hassayampa_Mgmt_Unit_Multiple_Resource_Allocations_Special_Designed_Areas.pdf

I still owe you answers on Ironwood NM access and geology buffers (whatever that means). That will take some coordination with other staff next week.

Thanks,

Lane Cowger
Project Manager
Bureau of Land Management- Arizona State Office
One N Central Avenue, Suite 800
Phoenix, AZ 85004
602-417-9612
lcowger@blm.gov

On Fri, Oct 11, 2019 at 2:10 PM Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov> wrote:

Thanks. Yes indeed, the zip was removed from the email for us at FHWA. Laynee/Jessica can you confirm receipt?

Aryan

Arizona FHWA – Senior Urban Engineer

(eMail) aryan.lirange@dot.gov

(602) 382 8973 | cell (602) 999 2921

From: Cowger, Lane [mailto:lcowger@blm.gov]

Sent: Friday, October 11, 2019 2:01 PM

To: laynee.jones@aec.com; Rietz, Jessica <Jessica.Rietz@aec.com>

Cc: Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov>; Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>

Subject: Fwd: [EXTERNAL] I-11 Tier 1 EIS BLM Comment Clarifications

The email message contained a ZIP attachment. The file was removed, as all ZIP files are temporarily blocked at this time. Other file types (e.g. Word, PowerPoint, PDF, etc.) can be received. If you recognize the sender and would like to view the attachment, please ask the sender to resend the message with a different file type, if possible.

Laynee and Jessica,

I've attached shapefiles requested by FHWA for the I-11 project. Aryan told me his government email will reject them, so looping you in.

This includes the Anza National Historic Trail Management Area, BLM wildlife corridors, and and special recreation management areas and recreation management zones for the Lower Sonoran Field Office and Sonoran Desert National Monument.

I'm working on a few more items to complete the request, but these should be all the shapefiles.

Thanks,

Lane Cowger

Project Manager

Bureau of Land Management- Arizona State Office

One N Central Avenue, Suite 800

Phoenix, AZ 85004

602-417-9612

lcowger@blm.gov

----- Forwarded message -----

From: Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov>

Date: Fri, Oct 11, 2019 at 1:51 PM

Subject: RE: [EXTERNAL] I-11 Tier 1 EIS BLM Comment Clarifications

To: Cowger, Lane <lcowger@blm.gov>

Sounds fine. I'll pass them along and let them know you are working on the rest. Are they in a ZIP format? Our servers will block those, so you can also send the files to the consultant (Layne or Jessica, and copy me).

Thx

Aryan

Arizona FHWA – Senior Urban Engineer

(eMail) aryan.lirange@dot.gov

(602) 382 8973 | cell (602) 999 2921

From: Cowger, Lane [mailto:lcowger@blm.gov]

Sent: Friday, October 11, 2019 1:11 PM

To: Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov>

Subject: Re: [EXTERNAL] I-11 Tier 1 EIS BLM Comment Clarifications

I'll shoot you a partial response shortly. I've got the shapefiles.

Lane Cowger

Project Manager

Bureau of Land Management- Arizona State Office

One N Central Avenue, Suite 800

Phoenix, AZ 85004

602-417-9612

lcowger@blm.gov

On Fri, Oct 11, 2019 at 1:05 PM Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov> wrote:

Lane... It has only been a week and a half. But the team would like to know if you have an eta for the feedback? Thanks. Have a nice long weekend.

Aryan

Arizona FHWA – Senior Urban Engineer

(eMail) aryan.lirange@dot.gov

(602) 382 8973 | cell (602) 999 2921

From: Cowger, Lane [mailto:lcowger@blm.gov]

Sent: Wednesday, October 2, 2019 8:47 AM

To: Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov>

Cc: Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>; jayv@horrocks.com; jvanecho@azdot.gov; Katie Rodriguez <KRodriguez@azdot.gov>; laynee.jones@aecom.com; jessica.rietz@aecom.com; i11doccontrol@aecom.com

Subject: Re: [EXTERNAL] I-11 Tier 1 EIS BLM Comment Clarifications

Thanks very much, Aryan. This beats me having to discern all of this from my notes. This will help in getting this item off of my to do list.

Lane Cowger

Project Manager

Bureau of Land Management- Arizona State Office

One N Central Avenue, Suite 800

Phoenix, AZ 85004

602-417-9612

lcowger@blm.gov



Bureau of Reclamation



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Cooperating Agency Meeting Notes, April 20, 2016



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MEETING PURPOSE: Pre-Scoping Meeting with Bureau of Reclamation
DATE & TIME: April 20, 2016, 9:00 AM
LOCATION: Bureau of Reclamation Phoenix Area Office, Glendale

ATTENDEES: Jay Van Echo (ADOT), Rebecca Yedlin (FHWA), Aryan Lirange (FHWA), Lisa Ives (AECOM), Douglas Smith (AECOM), Tab Bommarito (BOR), Sean Heath (BOR), Marcia Nesby (BOR), Mary Reece (BOR), Eve Halper (BOR)

MEETING NOTES

Purpose: Meet prior to formal scoping to present preliminary project information, answer questions, and discuss communication protocols going forward.	
Key Discussion Points/Action Items:	Responsible Party / Action Item
1. Jay van Echo provided a history of the I-11 Corridor.	N/A
2. The Notice of Intent (NOI) is expected to publish in May 2016, and public and agency scoping meetings will be scheduled. The Tier 1 EIS will build upon the prior studies.	N/A
3. Lisa Ives discussed the approach to a Tier 1 EIS and how it differs from the more typical NEPA processes; the purpose of Quantm; and how the team intends to combine FEIS with a ROD in accordance with MAP-21. The group discussed that the Tier 1 ROD would clear a 2000 foot corridor based on typical sections. The level of the analysis will match the level of project definition. During the Tier 1, the goal is to avoid as many impacts as possible. Areas with more sensitive resources may warrant more detailed analysis as part of the Tier 1 effort. A refined alignment within this corridor would be cleared as part of subsequent Tier 2 NEPA processes. It was pointed out that there is no funding currently designated to proceed beyond the Tier 1 EIS. Once the Tier 1 EIS is complete it will be possible to identify segments of independent utility. Future improvements would then proceed based upon need and the identification of funding sources.	N/A
4. Sean Heath discussed some of his experiences with Tier 1 type EISs, specifically programmatic EIS. One of the issues he ran into was with not adequately defining language used in the Programmatic EIS and subsequently having issues in follow-up studies knowing if that language was being used or interpreted in the same way it was in the original study.	N/A
5. Jay Van Echo expanded on the discussion of future funding. He indicated that in the southern and central sections of the corridor it is possible that the preferred alternative would be the widening and/improvements to existing I-19 and I-10. The northern segment, between Buckeye and Wickenburg, was more of a missing link with no major north-south highway corridor.	NA

Purpose: Meet prior to formal scoping to present preliminary project information, answer questions, and discuss communication protocols going forward.	
Key Discussion Points/Action Items:	Responsible Party / Action Item
6. Tab Bommarito lead a discussion about the Bureau of Reclamation's mitigation corridor in the South Tucson area. The mitigation corridor was established to mitigate impacts associated with the construction of the CAP Canal. It was pointed out that the current maps did not properly identify the area. He pointed out that Pima County Parks Department managed the areas. He also stressed the importance of the mitigation corridor, as well as the areas immediately adjacent to wildlife movement in the area. The area supports the largest number of mule deer in the state as well as desert big horn sheep.	NA
7. Lisa Ives indicated that the project team has been trying to obtain information on the managed by the Bureau of Reclamation but with little success. Sean Heath indicated that they could provide that information.	Bureau of Reclamation (Tab Bommarito) will provide GIS data showing Bureau of Reclamation lands.
8. Rebecca Yedlin asked whether the Bureau had a copy of the agreement that established the mitigation corridor. She would like to establish whether or not the area met the criteria for protection under Section 4(f). Based on the information provided, it would not meet the criteria as a public park or recreation area, but depending on how it was set up might meet the criteria for a wildlife refuge.	Bureau of Reclamation (Tab Bommarito) will provide a copy of the agreement establishing the mitigation corridor.
9. Tab Bommarito also discussed five wildlife crossings that have been constructed over the CAP Canal. There are a total of 24 crossings within the state. Wildlife in the area of the CAP Mitigation corridor are syphons that are used to convey natural drainages over the canal. These are also used by wildlife to cross the canal. Within the norther segment of the project corridor there are five wildlife crossings over the CAP Canal. Three are south of Wittmann, Arizona, near the former Luke Air Force Base Auxiliary Field. Two are approximately three to six miles west of west of Sun Valley Parkway. The northern segment also supports populations of desert tortoise. It is likely that the Bureau and other resource agencies would want additional wildlife crossings over the CAP Canal in this area.	NA
10. Sean Heath indicated that he felt that the Bureau would like agree to be a Cooperating Agency. Tab Bommarito will be the main point of contact for the project.	FHWA/ADOT to send letter in May to invite the Bureau of Reclamation to be a Cooperating Agency.
Next Meeting Date:	

Attachments: Agenda, Handout

PRE-SCOPING MEETING WITH U.S. BUREAU OF RECLAMATION (USBR)

WEDNESDAY APRIL 20, 2016
9:00 AM

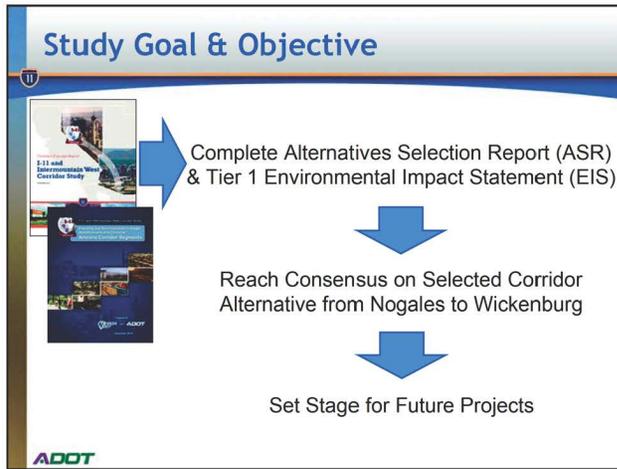
6150 W. THUNDERBIRD ROAD, GLENDALE, AZ

* * * AGENDA * * *

1. Introductions and Purpose of Meeting
2. History of I-11 Corridor
3. Overview of Environmental Review Process
 - a. Scoping
 - b. Alternatives Selection Report
 - c. Tier 1 Environmental Impact Statement (EIS)
 - d. Combined FEIS/ROD
4. Prior Experience with Other Tier 1 EIS
5. Discussion of I-11 Corridor Issues Relevant to USBR
6. On-Going Communication Protocols and Outreach Efforts
 - a. Coordination between FHWA/ADOT and USBR
 - b. Stakeholder Outreach and Involvement
7. Contact Information
 - a. Project E-Mail: I-11ADOTStudy@hdrinc.com
 - b. Toll Free Hotline: 1-844-544-8049 (Bilingual)
 - c. Website: <http://i11study.com/Arizona>
 - d. Mail: Interstate 11 Tier 1 EIS Study Team
c/o ADOT Communications
1655 W. Jackson St., MD 126F
Phoenix, AZ 85007
8. Other Issues or Items
9. Next Steps



Interstate 11 Corridor Tier 1 Environment Impact Statement OVERVIEW OF STUDY PROCESS



1

I-11 Corridor

- 280-Mile Study Area from Nogales to Wickenburg
- Initially Studied in Sections during ASR
 - ▶ South (Nogales to Casa Grande)
 - ▶ Central (Casa Grande to Buckeye)
 - ▶ North (Buckeye to Wickenburg)

2

Corridor Alternatives Studied in ASR

I-11 Corridor

Study Area varies in width from approximately 5 to 25 miles

280 Miles

I-11 Corridor Study Area (Nogales to Wickenburg)

Corridor Alternatives Studied within I-11 Corridor in ASR

Corridor Alternatives within the I-11 Corridor represent the approximate area needed to build & operate a proposed transportation facility, including potential highway, rail, & utility components.

3

Identifying Corridor Alternatives

STUDY AREA

Conduct Free-to-Roam Analysis Looking for Routes

ROUTE ANALYSIS

Identify Route Trends for Corridor Alternatives

Evaluate & Refine Corridor Alternatives

CORRIDOR ALTERNATIVE

Quantm will map potential routes for a proposed transportation facility within the I-11 Corridor between Nogales & Wickenburg. The proposed transportation facility could include potential highway, rail, & utility components.

Route trends will emerge for potential Corridor Alternatives. They will be analyzed & screened to reduce the number of recommended corridor alternatives that will advance into the Tier 1 EIS.

4

Recommended Corridor Alternatives Advance into Tier 1 EIS

2,000-Foot Corridor in Tier 1 EIS to Assess Social, Economic, & Natural Environment (i.e., Study Area)

Recommended Corridor Alternatives will advance into the Tier 1 EIS as "Build" Alternatives to compare against a "No Build" Alternative (i.e., do nothing alternative).

Build Alternatives will have smaller, individual projects (or SIUs).

Segments of Independent Utility (SIU)

Build Alternative

Proposed Transportation Facility

5

What Questions will Tier 1 EIS Answer?

- Primary Goal is to Reach Consensus on a Selected Corridor Alternative for the I-11 Corridor, including:
 - ▶ Defined Corridor between Nogales & Wickenburg for Proposed Transportation Facility
 - ▶ Type of Transportation Facility, including Potential Highway, Rail, & Utility Components
 - ▶ Footprint to Accommodate Proposed Transportation Facility
 - ▶ Smaller, Individual Projects (or SIUs) for Future Implementation

The Tier 1 EIS will Provide a Roadmap for Advancing These Individual Projects in the Future.

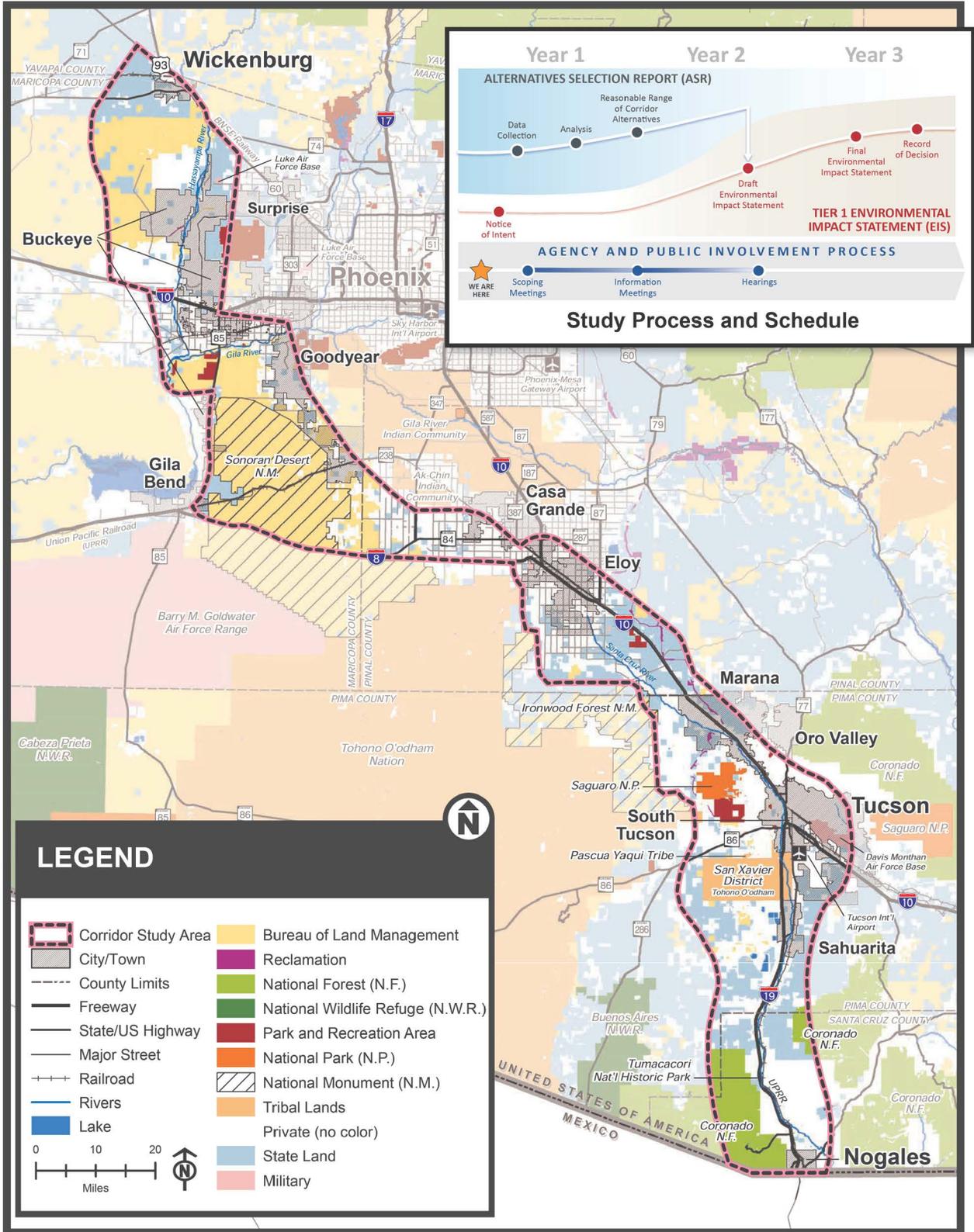
6





Interstate 11 Corridor Tier 1 Environment Impact Statement

I-11 CORRIDOR STUDY AREA



Project No. M5180 01P / Federal Aid No. 999-M[161]S



Interstate 11 Tier 1 EIS Study Team
 c/o ADOT Communications
 1655 W. Jackson Street, Mail Drop 126F
 Phoenix, AZ 85007

FOR MORE INFORMATION:
 1-844-544-8049
 i-11ADOTStudy@hdrinc.com
 i11study.com/Arizona



Letter from Bureau of Reclamation, July 8, 2016



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United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Region
Phoenix Area Office
6150 West Thunderbird Road
Glendale, AZ 85306-4001

IN REPLY REFER TO:
PXAO-1500
ENV-3.00

JUL - 8 2016

Interstate 11 Tier 1 EIS Study Team
c/o ADOT Communications
1665 West Jackson Street
Mail Drop 126F
Phoenix, AZ 85007

Subject: I-11 Corridor Tier One (1) Environmental Impact Statement (EIS) Scoping Comments

To Whom It May Concern:

The Bureau of Reclamation has reviewed the Federal Highway Administration (FHWA) and Arizona Department of Transportation's (ADOT) letter, dated May 23, 2016, requesting scoping comments and attended public meetings for the I-11 Corridor Tier 1 EIS. The following comments are provided for your consideration.

It is recommended that the EIS evaluate the potential impacts of the proposed I-11 corridor on Reclamation's wildlife and plant mitigation preserves, special-status species (including federally listed and Wildlife of Special Concern in Arizona), and migratory movement of wildlife.

Tucson Mitigation Corridor

The 2,514-acre Tucson Mitigation Corridor (Fig. 1) was established in 1990 for approximately \$4.4 million. The purchase and protection of these lands was a commitment made by Reclamation with the U.S. Fish and Wildlife Service (FWS) and the Arizona Game and Fish Department (AGFD) in the EIS for the Tucson Aqueduct. The Secretary of the Interior, Ms. Sally Jewell, signed a cooperative agreement to manage the property in accordance with the Master Management Plan, which prohibits any future development within the area other than existing wildlife habitat improvements or developments agreed to by Reclamation, AGFD, and FWS. This prohibition is intended to preserve habitat from urbanization while maintaining an open wildlife movement corridor. The property is also protected under Section 4(f) of the Department of Transportation Act of 1966, because it was "*acquired for mitigation purposes pursuant to the authority of the Fish and Wildlife Coordination Act, including general plan lands under Section 3(b) of that act*" (DOI 2014).

In order to maintain a functional wildlife movement corridor, Reclamation installed a series of seven Central Arizona Project (CAP) canal siphons for approximately \$3 million, which are concrete pipe sections that travel underneath desert washes. Wildlife frequently use desert washes as a means of migrating from one area to another. In March 2016, two desert bighorn sheep (*Ovis canadensis nelsoni*) were observed using one of the siphon crossings within the

Tucson Mitigation Corridor to migrate from the Ironwood National Monument to the Tucson Mountain District of Saguaro National Park. The construction of an I-11 travel corridor, either through the Tucson Mitigation Corridor or elsewhere within Avra Valley would have acted as a barrier that would have either severely restricted or prohibited their movement while also fragmenting habitat.

Reclamation has recorded 21 National Register eligible or unevaluated archaeological properties along the Central Arizona Project Canal (CAP) within the north and south ends of the I-11 study corridor. There are three eligible historic properties along the CAP in the northern end and 18 archaeological sites along the CAP in the southern portion. All historic properties are either Archaic or Hohokam prehistoric archaeological sites with some large villages located in the southern area. A few of the water oriented archaeological sites are considered Traditional Cultural Properties by southern Arizona Tribes.

Tumamoca Preserves

The tumamoc globeberry (*Tumamoca macdougallii*) is a cryptic perennial vine that was first listed as endangered on April 29, 1986. Suitable habitat and a large number of individuals were found along the proposed CAP canal route. In order to avoid a jeopardy decision Reclamation agreed to a number of conservation measures including the acquisition of approximately 181 acres to establish a preserve. The preserve is made up of seven parcels in Avra Valley that are close to the CAP canal alignment. As a result of that property acquisition and the discovery of additional populations in Mexico, the FWS delisted the tumamoc globeberry. The status of it may require reevaluation by the FWS if a portion of the preserve network is impacted by future development.

Hassayampa River Valley

The corridor study area passes through the Hassayampa River Valley between the Belmont and White Tank Mountains. Within that valley Reclamation has concerns about the impact it will have on local wildlife as it crosses the CAP canal. The canal is often a barrier to wildlife because of the limited ability different species have in crossing. As a result, the canal functions as a wildlife linkage by incidentally directing wildlife movement along its length. In order to help facilitate movement across the canal, Reclamation constructed and maintains 24 wildlife bridges that were strategically placed along its 336-mile length. Two of those bridges were placed between the Belmont Mountains and Hot Rock and Flatiron Mountains while a third was placed just north of the White Tank Mountain Regional Park (Fig. 2). The placement of I-11 within the valley will not only further fragment wildlife habitat and movement along the CAP canal, but it will reduce wildlife usage and access to the local wildlife bridges.

The Sonoran desert tortoise (*Gopherus morafkai*), a species cooperatively managed under the May 27, 2015, Candidate Conservation Agreement (CCA) has been documented north and south along the CAP canal within the Hassayampa River Valley. The construction of a new travel corridor through the Hassayampa River Valley would reduce tortoise access to nearby wildlife bridges. In order to minimize impacts to tortoises it is recommended that additional wildlife

crossing structures across and along the CAP be built to facilitate their movement as mitigation. As signatories of the CCA, both Reclamation and ADOT agreed to incorporate project design features that minimized and maintained tortoise habitat connectivity. The need to maintain connectivity in this valley through the use of bridges and culverts has been discussed with FWS and AGFD and both agencies support this mitigation recommendation.

Reclamation recommends the EIS evaluate the following concerns:

- 1) Loss of the Tucson Mitigation Corridor as an essential component of a wildlife movement corridor and its impact on desert bighorn sheep movement and other wildlife.
- 2) Acquisition of other intact wildlife movement corridors as mitigation that would allow Reclamation to maintain its environmental commitments with the FWS and AGFD.
- 3) Incorporation of wildlife overpasses and culverts that would allow wildlife passage across the proposed I-11 in Avra Valley.
- 4) Incorporation of additional wildlife bridges over the CAP canal and culverts along it to maintain connectivity for tortoises and other wildlife in the Hassayampa River Valley.
- 5) Evaluation of the tumamoc globeberry if the Tumamoca Preserves are impacted by the placement of the I-11 corridor.
- 6) Impact of noise and lighting from I-11 on wildlife connectivity within the Tucson Mitigation Corridor, Avra Valley, and the Hassayampa River Valley.
- 7) The impact of prospective community growth and development associated with I-11 on wildlife and wildlife connectivity in Avra Valley, the Hassayampa River Valley, and the Tucson Mitigation Corridor.

Thank you for the opportunity to provide Scoping Comments on the I-11 Corridor Tier 1 EIS. We look forward to having the opportunity to review the EIS. If you have any questions, please contact me at 623-773-6250 or Mr. Tab Bommarito at 623-773-6255, or via email at tbommarito@usbr.gov.

Sincerely,



Sean Heath
Chief, Environmental Resource
Management Division

References

Department of the Interior. (April 2014). Handbook on Departmental Review of Section 4(f) Evaluations at:

https://www.doi.gov/sites/doi.gov/files/migrated/pmb/oepec/nrm/upload/4f_handbook.pdf



Figure 1. The Tucson Mitigation Corridor and the nearby Tumamoca Preserves

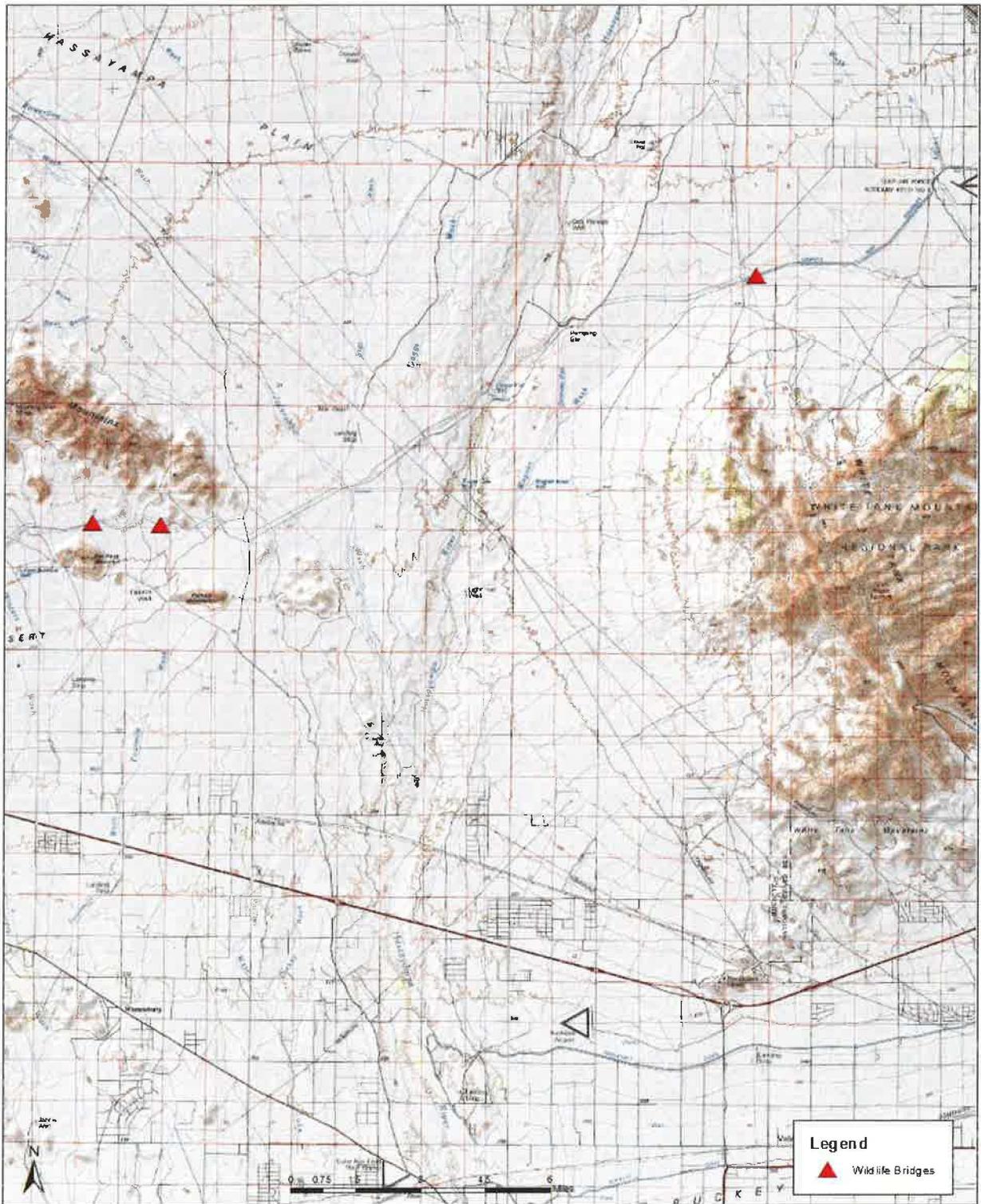


Figure 2. Location of CAP Wildlife Bridges within the Hassayampa River Valley



Letter from Bureau of Reclamation, Cooperating Agency Acceptance, July 8, 2016



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United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Region
Phoenix Area Office
6150 West Thunderbird Road
Glendale, AZ 85306-4001

IN REPLY REFER TO:
PXAO-1500
ENV-3.00

JUL - 8 2016

Ms. Rebecca Yedlin
FHWA Environmental Coordinator
4000 North Central Avenue, Suite 1500
Phoenix, AZ 85012

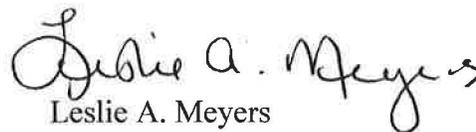
Subject: Cooperating Agency for the I-11 Corridor Tier One (1) Environmental Impact Statement (EIS)

Dear Ms. Yedlin:

The Bureau of Reclamation has reviewed the Federal Highway Administrations (FHWA), May 23, 2016, letter inviting Reclamation to be a Cooperating Agency in the Tier 1 EIS process for the I-11 Corridor. Reclamation accepts the invitation and appreciates the opportunity to work with the FHWA and the Arizona Department of Transportation on assessing a range of corridor alternatives. Reclamation also agrees to the roles and responsibilities outlined in the Cooperating Agency invitation letter, dated May 23, 2016. We understand that as a Cooperating Agency, Reclamation will be asked to provide meaningful and early input on the proposed action, participate in meetings and field visits, provide timely review and comments on documents, and assist in the identification of impacts and important issues related to Reclamation's jurisdiction and expertise.

Reclamation appreciates the FHWA's coordination and the opportunity to be a Cooperating Agency. We look forward to working with you as this project progresses. If you have any questions, please contact Mr. Sean Heath at 623-773-6250 or email at sheath@usbr.gov.

Sincerely,



Leslie A. Meyers
Area Manager

ASR will assess a wide range of corridor alternatives through a robust evaluation process that uses various topographical, environmental, and other planning information to help identify opportunities and constraints. The number of corridor alternatives will then be reduced to a reasonable range and carried forward into the Draft Tier 1 EIS along with the No Build Alternative (i.e., do-nothing option). The Tier 1 EIS will continue to assess in more detail the potential social, economic, and natural environmental impacts of the No Build Alternative and remaining corridor alternatives (i.e., Build Alternatives). Phased Implementation Plans will be developed for the Build Alternatives, which will be comprised of smaller proposed projects that could be implemented in the future following completion of the Tier 1 EIS. The primary goal of the ASR and Tier 1 EIS is to reach consensus on a Selected Corridor Alternative (2,000 feet wide) from Nogales to Wickenburg.

In accordance with Title 40 Code of Federal Regulations (CFR) 1501.6 and 23 CFR 771.111(d), your agency has been identified as one that has jurisdiction in the I-11 Corridor due to the Reclamation lands within the study area. Accordingly, you are being extended this invitation to serve as a Cooperating Agency in the Tier 1 EIS process. As a Cooperating Agency, you would be requested to provide the following during the development of the Tier 1 EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings, and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS pertaining to the intersection of the alternatives with the resource(s) in your jurisdiction.

If your agency does not wish to be a Cooperating Agency, you will have the opportunity to become a Participating Agency. If you would like to become either a Cooperating Agency or Participating Agency, the FHWA respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Rebecca Yedlin, FHWA Environmental Coordinator, at rebecca.yedlin@dot.gov or by mail to 4000 N. Central Ave., Suite 1500, Phoenix, AZ 85012.

The FHWA and ADOT greatly appreciate your input, and we invite you to participate in any of the following Agency Scoping Meetings for the Tier 1 EIS:

Tuesday, June 7, 2016 from 1:30 to 3:30 PM

Arizona Department of Transportation
Leadership and Employee Engagement Conference Room
2739 East Washington Street, Phoenix, Arizona

Wednesday, June 8, 2016 from 1:30 to 3:00 PM

Dorothy Powell Senior Adult Center, Dining Room
405 East 6th Street, Casa Grande, Arizona

Wednesday, June 22, 2016 from 10:00 to 11:30 AM

Pima Association of Governments, Large Conference Room
1 East Broadway Boulevard, Suite 401, Tucson, Arizona

If you are not able to attend any of these Agency Scoping Meetings in person, we will also set up a webinar so you can join the meetings on-line. The information is as follows:

Click Here: <https://www.connectmeeting.att.com>
Meeting Number/Call-In: 1-888-369-1427; Access Code: 6874525#

In addition, we invite you to attend the Public Scoping Meetings that will also be held for the I-11 Corridor Tier 1 EIS. Information on these meetings can be found on-line at <http://i11study.com/Arizona>.

In order to give your agency adequate opportunity to weigh the relevance of your participation as either a Cooperating Agency or Participating Agency in this environmental review process, a written response to accept or decline this invitation is not due until the **end of the scoping period on Friday, July 8, 2016**.

If you have any questions or would like additional information, please contact Rebecca Yedlin, FHWA Environmental Coordinator, at 602-382-8979 or rebecca.yedlin@dot.gov. Thank you for your cooperation and interest in the I-11 Corridor Tier 1 EIS.

Sincerely,

Rebecca Yedlin

Karla S. Petty
Division Administrator

Enclosures

cc:

Tab Bommarito, U.S. Bureau of Reclamation, 6150 West Thunderbird Road, Glendale, Arizona 85306
Rebecca Yedlin, FHWA Environmental Coordinator
Jay Van Echo, ADOT Project Manager, MD T100
Lisa Ives, AECOM Consultant Team Project Manager
RYedlin:cdm



Assessment (Final EA) for the project, approved in the Finding of No Significant Impact (FONSI) issued on April 26, 2016, and in other documents in the TxDOT administrative record. The Final EA, FONSI, and other documents in the administrative record file are available by contacting TxDOT at the address provided above. The Final EA and FONSI can be viewed on the project Web site at www.183north.com.

This notice applies to all TxDOT decisions and Federal agency decisions as of the issuance date of this notice and all laws under which such actions were taken, including but not limited to:

1. General: National Environmental Policy Act (NEPA) [42 U.S.C. 4321-4351]; Federal-Aid Highway Act [23 U.S.C. 109].

2. Air: Clean Air Act [42 U.S.C. 7401-7671(q)].

3. Land: Section 4(f) of the Department of Transportation Act of 1966 [49 U.S.C. 303]; Landscaping and Scenic Enhancement (Wildflowers) [23 U.S.C. 319].

4. Wildlife: Endangered Species Act [16 U.S.C. 1531-1544 and Section 1536]; Fish and Wildlife Coordination Act [16 U.S.C. 661-667(d)]; Migratory Bird Treaty Act [16 U.S.C. 703-712].

5. Historic and Cultural Resources: Section 106 of the National Historic Preservation Act of 1966, as amended [16 U.S.C. 470(f) et seq.]; Archeological Resources Protection Act of 1977 [16 U.S.C. 470(aa)-11]; Archeological and Historic Preservation Act [16 U.S.C. 469-469(c)]; Native American Grave Protection and Repatriation Act (NAGPRA) [25 U.S.C. 3001-3013].

6. Social and Economic: Civil Rights Act of 1964 [42 U.S.C. 2000(d)-2000(d)(1)]; American Indian Religious Freedom Act [42 U.S.C. 1996]; Farmland Protection Policy Act (FPPA) [7 U.S.C. 4201-4209].

7. Wetlands and Water Resources: Clean Water Act [33 U.S.C. 1251-1377]; Land and Water Conservation Fund (LWCF) [16 U.S.C. 4601-4604]; Safe Drinking Water Act (SDWA) [42 U.S.C. 300(f)-300(j)(6)]; Rivers and Harbors Act of 1899 [33 U.S.C. 401-406]; Wild and Scenic Rivers Act [16 U.S.C. 1271-1287]; Emergency Wetlands Resources Act [16 U.S.C. 3921, 3931]; TEA-21 Wetlands Mitigation [23 U.S.C. 103(b)(6)(m), 133(b)(11)]; Flood Disaster Protection Act [42 U.S.C. 4001-4128].

8. Executive Orders: E.O. 11990, Protection of Wetlands; E.O. 11988, Floodplain Management; E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations; E.O. 11593, Protection and Enhancement of Cultural Resources; E.O. 13007, Indian Sacred Sites; E.O. 13287, Preserve America; E.O. 13175, Consultation and Coordination with Indian Tribal Governments; E.O. 11514, Protection and Enhancement of Environmental Quality; E.O. 13112, Invasive Species; E.O. 12372, Intergovernmental Review of Federal Programs.

The environmental review, consultation, and other actions required

by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

Authority: 23 U.S.C. 139(l)(1).

Issued on: May 5, 2016.

Michael T. Leary, Director, Planning and Program Development, Federal Highway Administration.

[FR Doc. 2016-11060 Filed 5-19-16; 8:45 am]

BILLING CODE 4910-22-P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Tier 1 Environmental Impact Statement for Interstate 11 Corridor Between Nogales and Wickenburg, Arizona

AGENCY: Federal Highway Administration (FHWA), Arizona Department of Transportation (ADOT), DOT.

ACTION: Notice of intent to prepare a Tier 1 Environmental Impact Statement (EIS).

SUMMARY: The FHWA, as the Federal Lead Agency, and the ADOT, as the Local Project Sponsor, are issuing this notice to advise the public of our intention to prepare a Tier 1 EIS for the Interstate 11 (I-11) Corridor between Nogales and Wickenburg, AZ (I-11 Corridor). The Tier 1 EIS will assess the potential social, economic, and natural environmental impacts of a vehicular transportation facility and potential multimodal facility (rail and utility) opportunities in the designated I-11 Corridor across a range of alternatives, including a "No Build" alternative. The Tier 1 EIS will be prepared in accordance with regulations implementing the National Environmental Policy Act (NEPA), and provisions of Fixing America's Surface Transportation Act (FAST) Act.

FOR FURTHER INFORMATION CONTACT: For FHWA, contact Mr. Aryan Lirange, Senior Urban Engineer, Federal Highway Administration, 4000 North Central Avenue, Suite 1500, Phoenix, AZ 85012, telephone at 602-382-8973, or via email at Aryan.Lirange@dot.gov. Regular office hours are from 7:30 a.m. to 4:30 p.m., Monday through Friday, except Federal holidays. For ADOT, contact Mr. Jay Van Echo, I-11 Corridor Project Manager, Arizona Department of Transportation, 206 South 17th Avenue, Mail Drop 310B, Phoenix, AZ 85007, telephone at 520-400-6207, or via email at JVanEcho@azdot.gov. Regular office

hours are from 8:00 a.m. to 5:00 p.m., Monday through Friday, except Federal holidays. Project information can be obtained from the project Web site at <http://www.i11study.com/Arizona>.

SUPPLEMENTARY INFORMATION: The purpose of this notice is to: (1) Alert interested parties to FHWA's plan to prepare the Tier 1 EIS; (2) provide information on the nature of the proposed action; (3) solicit public and agency input regarding the scope of the Tier 1 EIS, including the purpose and need, alternatives to be considered, and impacts to be evaluated; and (4) announce that public and agency scoping meetings will be conducted. The FHWA intends to issue a single Final Tier 1 EIS and Record of Decision (ROD) document pursuant to FAST Act Section 1311 requirements, unless FHWA determines statutory criteria or practicability considerations preclude issuance of a combined document.

The Tier 1 EIS will build upon the prior I-11 and Intermountain West Corridor Study (IWCS) completed in 2014. This Planning and Environmental Linkages study was a multimodal planning effort that included ADOT, Federal Railroad Administration, FHWA, Maricopa Association of Governments, Nevada Department of Transportation, Regional Transportation Commission of Southern Nevada, and other key stakeholders. The I-11 and Intermountain West Corridor was identified as a critical piece of multimodal infrastructure that would diversify, support, and connect the economies of Arizona and Nevada. The I-11 and Intermountain West Corridor could also be connected to a larger north-south transportation corridor, linking Mexico and Canada.

On December 4, 2015, the President signed into law the FAST Act, which is a 5-year legislation to improve the Nation's surface transportation infrastructure. The FAST Act formally designates I-11 throughout Arizona, reinforcing ADOT's overall concept for the Arizona I-11 Corridor that emerged from the IWCS study. The FHWA and ADOT continue to advance the I-11 Corridor in Arizona for the approximately 280-mile section between Nogales and Wickenburg with this Tier 1 EIS study.

The FHWA and ADOT will undertake a scoping process for the I-11 Corridor that will allow the public and interested agencies to comment on the scope of the environmental review process. The FHWA and ADOT will invite all interested individuals, organizations, public agencies, and Native American Tribes to comment on the scope of the

Notice of Intent

32008

Federal Register / Vol. 81, No. 98 / Friday, May 20, 2016 / Notices

Tier 1 EIS, including the purpose and need, alternatives to be studied, impacts to be evaluated, and evaluation methods to be used. The formal scoping period is from the date of this notice until July 8, 2016. Six public scoping meetings and three interagency scoping meetings for Federal, State, regional and local resource and regulatory agencies will be held during the formal scoping period. In addition, cooperating and participating agency invitation letters will be sent to agencies that have jurisdiction or may have an interest in the I-11 Corridor.

The buildings used for the meetings are accessible to persons with disabilities. Any person who requires special assistance, such as a language interpreter, should contact the Interstate 11 Tier 1 EIS Study Team at telephone 844-544-8049 or via email at I-11ADOTStudy@hdrinc.com at least 48 hours before the meeting.

Written comments on the scope of the Tier 1 EIS should be mailed to: Interstate 11 Tier 1 EIS Study Team, c/o ADOT Communications, 1655 West Jackson Street, Mail Drop 126F, Phoenix, AZ 85007; sent via email to I-11ADOTStudy@hdrinc.com; or submitted on the study's Web site at <http://www.i11study.com/Arizona>.

The Paperwork Reduction Act seeks, in part, to minimize the cost to the taxpayer of the creation, collection, maintenance, use dissemination, and disposition of information. Accordingly, unless a specific request for a complete hardcopy of the NEPA document is received before it is printed, the FHWA and ADOT will distribute only electronic versions of the NEPA document. A complete copy of the environmental document will be available for review at locations throughout the study area. An electronic copy of the complete environmental document will be available on the study's Web site at <http://www.i11study.com/Arizona>.

Authority: 23 U.S.C. 315; 23 CFR 771.123.

Issued on: May 11, 2016.

Karla S. Petty,

Arizona Division Administrator, Federal Highway Administration.

[FR Doc. 2016-11694 Filed 5-19-16; 8:45 am]

BILLING CODE P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

Agency Information Collection Activities: Information Collection Renewal; Submission for OMB Review; Consumer Protections for Depository Institution Sales of Insurance

AGENCY: Office of the Comptroller of the Currency (OCC), Treasury.

ACTION: Notice and request for comment.

SUMMARY: The OCC, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on a continuing information collection, as required by the Paperwork Reduction Act of 1995 (PRA).

In accordance with the requirements of the PRA, the OCC may not conduct or sponsor, and the respondent is not required to respond to, an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number.

The OCC is soliciting comment concerning the renewal of its information collection titled, "Consumer Protections for Depository Institution Sales of Insurance." The OCC also is giving notice that it has sent the collection to OMB for review.

DATES: Comments must be received by June 20, 2016.

ADDRESSES: Because paper mail in the Washington, DC area and at the OCC is subject to delay, commenters are encouraged to submit comments by email, if possible. Comments may be sent to: Legislative and Regulatory Activities Division, Office of the Comptroller of the Currency, Attention: 1557-0220, 400 7th Street SW., Suite 3E-218, Mail Stop 9W-11, Washington, DC 20219. In addition, comments may be sent by fax to (571) 465-4326 or by electronic mail to prainfo@occ.treas.gov. You may personally inspect and photocopy comments at the OCC, 400 7th Street SW., Washington, DC 20219. For security reasons, the OCC requires that visitors make an appointment to inspect comments. You may do so by calling (202) 649-6700 or, for persons who are deaf or hard of hearing, TTY, (202) 649-5597. Upon arrival, visitors will be required to present valid government-issued photo identification and submit to security screening in order to inspect and photocopy comments.

All comments received, including attachments and other supporting materials, are part of the public record

and subject to public disclosure. Do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

Additionally, please send a copy of your comments by mail to: OCC Desk Officer, 1557-0220, U.S. Office of Management and Budget, 725 17th Street NW., #10235, Washington, DC 20503, or by email to: oir_submission@omb.eop.gov.

FOR FURTHER INFORMATION CONTACT: Shaquita Merritt, Clearance Officer, (202) 649-5490 or, for persons who are deaf or hard of hearing, TTY, (202) 649-5597, Legislative and Regulatory Activities Division, Office of the Comptroller of the Currency, 400 7th Street SW., Suite 3E-218, Mail Stop 9W-11, Washington, DC 20219.

SUPPLEMENTARY INFORMATION: The OCC is proposing to extend OMB approval of the following information collection:

Title: Consumer Protections for Depository Institution Sales of Insurance.

OMB Control No.: 1557-0220.

Type of Review: Extension, without revision, of a currently approved collection.

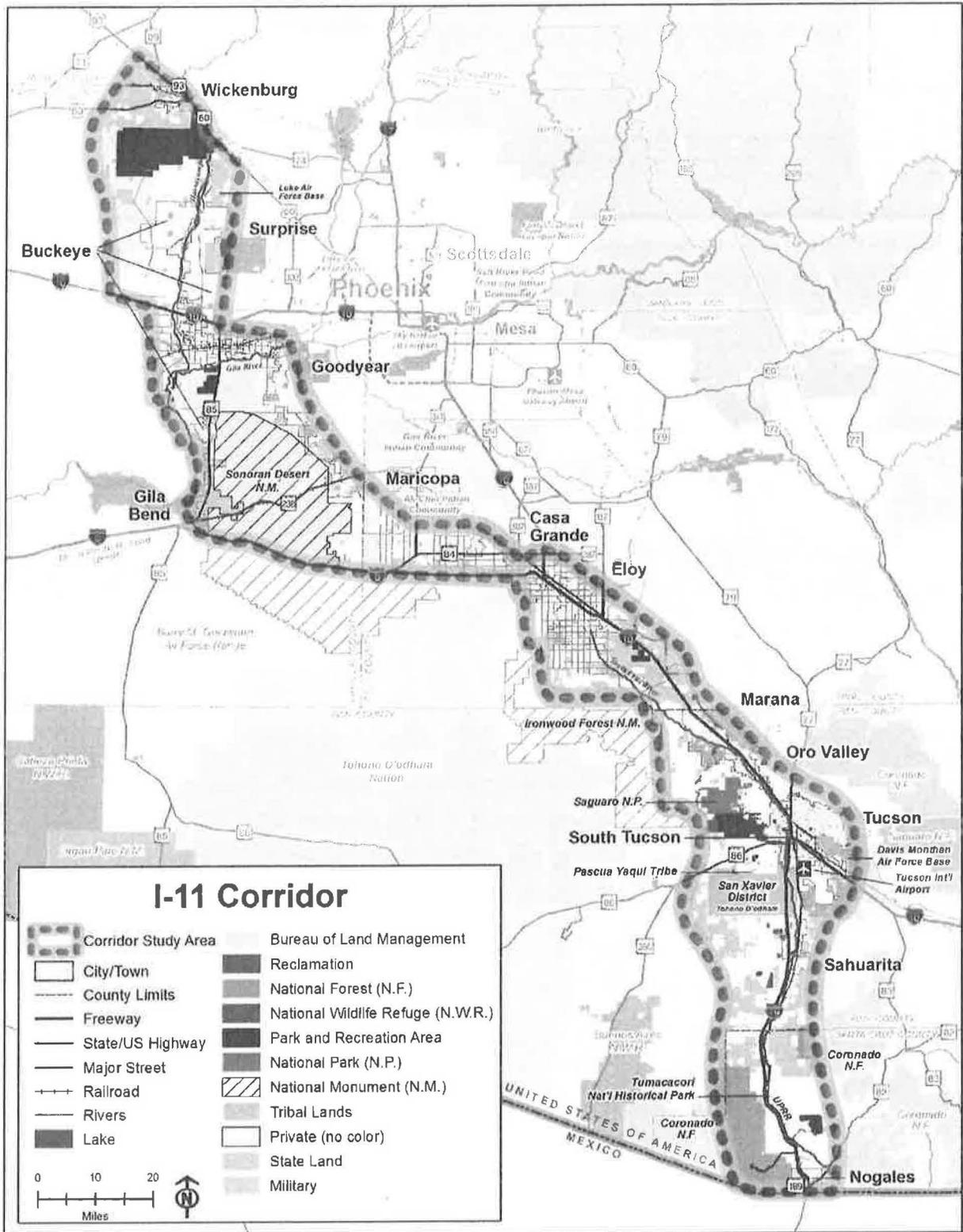
Description: This information collection is required under section 305 of the Gramm-Leach-Bliley Act (GLB Act), Public Law 106-102. Section 305 of the GLB Act requires the OCC, the Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation (collectively, the Agencies) to prescribe joint consumer protection regulations that apply to retail sales practices, solicitations, advertising, and offers of any insurance product by a depository institution or by other persons performing these activities at an office of the institution or on behalf of the institution (other covered persons). Section 305 also requires those performing such activities to disclose certain information to consumers (e.g., that insurance products and annuities are not FDIC-insured).

This information collection requires national banks, Federal savings associations, and other covered persons, as defined in 12 CFR 14.20(f) and 136.20, involved in insurance sales to make two separate disclosures to consumers. Under §§ 14.40 and 136.40, a national bank, Federal savings association, or other covered person must prepare and provide orally and in writing: (1) Certain insurance disclosures to consumers before the completion of the initial sale of an insurance product or annuity to a consumer and (2) certain credit

999-M(161)S
I-11, I-19/SR 189 to US 93/SR 89
TRACS No. 999 SW 0 M5180 01P
I-11 Corridor Tier 1 EIS

Notice of Intent

999-M(161)S
I-11, I-19/SR 189 to US 93/SR 89
TRACS No. 999 SW 0 M5180 01P
I-11 Corridor Tier 1 EIS



I-11 Corridor Study Area

999-M(161)S
 I-11, I-19/SR 189 to US 93/SR 89
 TRACS No. 999 SW 0 M5180 01P
 I-11 Corridor Tier 1 EIS



Cooperating Agency Meeting Notes, November 3, 2016



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MEETING PURPOSE: Cooperating Agency Coordination Meeting #1
DATE & TIME: Thursday, November 3, 2016, 1:00 PM (AZ Time)
LOCATION: ADOT Enforcement Office, 5th Floor Conference Room
 3838 N Central Avenue
 Phoenix, AZ

ATTENDEES: (*Participated via teleconference)
 Rebecca Yedlin, Aryan Lirange: Federal Highway Administration (FHWA)
 Jay Van Echo, Joanie Cady, Carlos Lopez*: Arizona Department of Transportation (ADOT)
 Dana Warnecke, Cheri Boucher*, Scott Sprague, Kristin Terpening*: Arizona Game and Fish Department (AGFD)
 Lane Cowger: US Bureau of Land Management (BLM)
 Clifton Meek*: US Environmental Protection Agency (USEPA)
 Don Swann*, Scott Stonum*: US National Park Service (NPS)
 Tab Bommarito, US Bureau of Reclamation (Reclamation)
 Bob Lehman*, US Fish and Wildlife Service (USFWS)
 Lisa Ives, Jennifer Pyne, Kimberly Bodington: AECOM

MEETING NOTES

Purpose:	
Monthly coordination meeting between the FHWA, ADOT, and Cooperating Agencies for the I-11 Corridor Alternatives Selection Report (ASR) and Tier 1 Environmental Impact Statement (EIS).	
Key Discussion Points/Action Items:	Responsible Party / Action Item
1. Introductions and Agenda Review Aryan Lirange, FHWA, Rebecca Yedlin, FHWA, and Jay Van Echo, ADOT, welcomed the group to the meeting.	No action.
2. Recap of Major Deliverable(s) The 30-day review of the draft Public Outreach and Agency Coordination Plan is complete. The project team has been following up with agencies that did not respond to be a Participating Agency or Section 106 Consulting Party and incorporating this into the plan (and Scoping Summary Report) accordingly. Once finalized, the Plan will be posted to the study website and an email with the link will be distributed to the agencies. Comments on the Scoping Summary Report were due Thursday, November 3, 2016. FHWA and ADOT are finalizing the report, and then will distribute to agencies by posting the report to the Study Website and emailing the link to agencies.	FHWA and ADOT to finalize follow-up with agencies that did not respond and post Plan to Study Website. FHWA and ADOT to finalize Scoping Summary Report and post to Study Website.
3. Current Major Deliverable(s) The Purpose and Need Memorandum is currently being reviewed by the FHWA legal department. The memorandum will be distributed to	FHWA and ADOT will distribute Purpose and Need

Purpose:	
Monthly coordination meeting between the FHWA, ADOT, and Cooperating Agencies for the I-11 Corridor Alternatives Selection Report (ASR) and Tier 1 Environmental Impact Statement (EIS).	
Key Discussion Points/Action Items:	Responsible Party / Action Item
the agencies in November, giving a 30-day comment period following the distribution.	Memorandum to agencies.
4. Next Major Deliverable(s) Jay Van Echo presented an overview of the Alternatives Selection Report Evaluation Methodology and Criteria for discussion purposes. The draft ASR Methodology and Criteria Report is currently being reviewed by ADOT and will be the next major deliverable distributed to the agencies following Purpose and Need.	No action at this time.
5. Upcoming Major Deliverables and Discussion Topics Aryan Lirange reported that the Alternatives Selection Report and Tier 1 EIS Annotated Outline and Methodology are the next major deliverables that will be distributed to the Cooperating Agencies in the coming months.	No action at this time.
6. Upcoming Agency and Public Outreach Jay Van Echo and Aryan Lirange discussed the upcoming agency and public outreach efforts for the ASR process. Key Milestone Agency Meetings are targeted for early 2017, along with a webinar for those who cannot attend in person. Public Information meetings will be held thereafter in early 2017.	FHWA and ADOT to hold Key Milestone Agency meetings and then Public Information meetings in early 2017.
7. Other Issues or Items Aryan Lirange and Tab Bommarito, Reclamation, discussed an issue that has evolved about clarifying legal language in the local and federal designation of land associated with the Tucson Mitigation Corridor. Appropriate agencies will hold a meeting Thursday, November 10, 2016 to identify correct designation, authority, and language.	Agencies to organize and hold meeting associated with Tucson Mitigation Corridor.
8. Next Meeting Date Jay Van Echo confirmed the next Cooperating Agency Coordination Meeting will be held on Wednesday, December 7, 2016 at 1 PM in Wickenburg, AZ.	No action.

c Document Control

Attachments:

- (1) Sign In Sheet
- (2) Agenda

Meeting Purpose: Monthly Cooperating Agency Coordination

Location: ADOT Enforcement Office, 5th Floor Conference Room, 3838 N. Central Avenue, Phoenix AZ

Date: Thursday, November 3, 2016 Time: 1:00 PM

SIGN-IN SHEET

Name	Organization	Phone	E-mail	Address
Kimberly Bodington	AECOM	602.448.2580	kimberly.bodington@aecom.com	7720 N. 16 th St., Suite 100 PHX 85020
Lane Cowger	BLM	602-417-9612	lcowger@blm.gov	1 N Central Ave #800 Phoenix AZ 85013
Lisa Ives	AECOM			
Jen Pyne	AECOM			
Cheri Boucher	AGFD			
Clifton Meek	EPA			
Rebecca Yedlin	FHWA			
Anyah Lirange	FHWA			
Joanie Cady	ADOT			
Jay Van Echo	ADOT			
Scott Sprague	AGFD			
Dana Warnecke	AGFD			

ph
ph

SIGN-IN SHEET

	Name	Organization	Phone	E-mail	Address
ph	Bob Lehman	FWS			
	Scott Stonum				
ph	Don Swahn	NPS			
ph	Carlos Lopez	ADOT			
	Tab Bommerito	BOR			
ph	SCOTT Stonum	AGFD			
	Donna				

COOPERATING AGENCY COORDINATION MEETING #3

**** NOTE CHANGE IN MEETING DATE AND LOCATION ****

THURSDAY, NOVEMBER 3, 2016

1:00 PM (AZ TIME)

ADOT ENFORCEMENT OFFICE, 5TH FLOOR CONFERENCE ROOM

3838 N. CENTRAL AVENUE, PHOENIX AZ

OR

CLICK HERE: [HTTPS://WWW.CONNECTMEETING.ATT.COM](https://www.connectmeeting.att.com)

MEETING/CALL-IN NUMBER: 1-888-369-1427; ACCESS CODE: 6874525#

* * * AGENDA * * *

1. Introductions and Agenda Review
2. Recap of Major Deliverable(s) Reviewed
 - a. Public Outreach and Agency Coordination Plan
 - b. Scoping Summary Report
3. Current Major Deliverable(s)
 - a. Purpose and Need Memorandum
4. Next Major Deliverable(s)
 - a. Alternatives Selection Report Evaluation Methodology
5. Upcoming Major Deliverables and Discussion Topics
 - a. Tier 1 EIS Annotated Outline and Methodology
6. Upcoming Agency and Public Outreach
 - a. Key Milestone Agency Meetings
 - b. Public Information Meetings
7. Other Issues or Items
8. Next Meeting Date: 12/7/16 at 1 PM (AZ Time) in Wickenburg or via Conference Call



Letter from Bureau of Reclamation, ASR Report, March 16, 2017



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United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Region
Phoenix Area Office
6150 West Thunderbird Road
Glendale, AZ 85306-4001

IN REPLY REFER TO:
PXAO-1500
ENV-3.00

Mr. Jay Van Echo
ADOT I-11 EIS Project Manager
1221 South 2nd Avenue
Mail Drop T100
Tucson, AZ 85713

Subject: Alternatives Selection Report: Evaluation Methodology and Criteria Report

Dear Mr. Van Echo:

The Bureau of Reclamation (Reclamation) is submitting this letter in response to a February 15, 2017 request for comments on the draft Alternatives Selection Report Evaluation Methodology and Criteria Report. The ASR phase process will enable the Federal Highway Administration and Arizona Department of Transportation to identify a comprehensive range of corridor alternatives that meet the Purpose and Need, and assess these alternatives through an evaluation process that uses public and agency input, as well as various topographical, environmental, and other planning information to help identify opportunities and constraints. The following comments and recommendations are provided for your consideration.

Reclamation has concerns about the effectiveness and detail of the Evaluation Measure and Scale of Impact when assessing impacts to the Tucson Mitigation Corridor (TMC). As you know, the 2,514-acre TMC was established in 1990 for the purpose of preserving wildlife connectivity from the Tucson Mountain Park (TMP) across Avra Valley to the Ironwood Forest National Monument and adjacent areas. Therefore, the TMC was not just purchased for the property and the physical features on it but for the critical role it plays for wildlife connectivity across the valley. The Evaluation Measure and Scale of Impact assessment for the TMC should evaluate the functional value of the property which goes well beyond its boundaries. The TMC was purchased to maintain connectivity to the TMP which borders it to the east, but it also provides the same critical ecological benefits for Saguaro National Park (SNP). Both parks have been secluded, creating a detrimental island effect as a result of being almost completely surrounded by development along with the Central Arizona Project Canal to the west.

A travel corridor through a portion of the TMC would not just impact its 2,514-acre footprint, it would also impact approximately 44,818-acres (TMP 20,000-acres and SNP 24,818-acres) of two ecologically sensitive and unique parks. Even with mitigation in place such as multiple wildlife overpasses, a travel corridor would further isolate them. The existing wildlife linkage would be impaired and its ecological functions suppressed. There would be less genetic interchange, dispersal from maternal ranges and recolonization, movement in response to

environmental changes, and long-term maintenance of metapopulations, community stability, and ecosystem processes would degrade.

A letter from the Arizona Game and Fish Department to the Federal Highway Administration dated February 1, 2017, explains the challenges desert bighorn sheep face in southeast Arizona. In 2016, sheep from the Silver Bell Mountains were documented within the TMP and SNP. If the Waterman and Roskrige Mountains were part of their journey east, then they likely traveled a minimum of 20-miles before they made it to one of the TMC siphons. Facilitating dispersal of this magnitude shows how critical of a role the TMC plays. Its high functional value when compared to other resources makes it more sensitive to change from detrimental features such as a new travel corridor.

Thank you for the opportunity to provide comments on the Alternatives Selection Report Evaluation Methodology and Criteria Report. If you have any questions, please contact me at 623-773-6250 or Mr. Tab Bommarito at 623-773-6255, or via email at tbommarito@usbr.gov.

Sincerely,



Sean Heath
Chief, Environmental Resource
Management Division



BOR-FHWA-ADOT Agency Leadership Meeting Notes, September 18, 2017



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MEETING PURPOSE: BOR-FHWA-ADOT Agency Leadership Meeting
DATE & TIME: Monday, September 18, 2017, 1:00 PM (AZ Time)
LOCATION: BOR Large Conference Room
 6150 W. Thunderbird Road, Phoenix, AZ

ATTENDEES:

Tab Bommarito, Sean Heath, Eve Halper, Peter Castaneda, Alexander Smith: Bureau of Reclamation (BOR)

Karla Petty, Rebecca Yedlin, Aryan Lirange, Alan Hanson: Federal Highway Administration (FHWA)

Dallas Hammit, Carlos Lopez, Jay Van Echo, Greg Byres: Arizona Department of Transportation (ADOT)

MEETING NOTES

Purpose:	
I-11 agency leadership coordination meeting between the FHWA, ADOT, and Cooperating Agency BOR for the I-11 Corridor Alternatives Selection Report (ASR) and Tier 1 Environmental Impact Statement (EIS).	
Key Discussion Points/Action Items:	Responsible Party / Action Item
1. Introductions and Agenda Review Jay Van Echo, ADOT, welcomed the group to the meeting.	No Action
2. I-11 Project Status Jay Van Echo discussed the project status including NOI in May 2016; last 18 months completing scoping, agency coordination plan, draft Alternative Selection Report (ASR), and two rounds of public informational meetings. While the draft ASR is an ADOT report, it sets the stage to bring the 'universe of alternatives' to a reasonable range of alternatives to study in the draft EIS, our NEPA document. Jay mentioned that the nine (9) Cooperating Agencies have been meeting monthly and we have been functioning at a high level of cooperation and information sharing.	No Action

Purpose:	
I-11 agency leadership coordination meeting between the FHWA, ADOT, and Cooperating Agency BOR for the I-11 Corridor Alternatives Selection Report (ASR) and Tier 1 Environmental Impact Statement (EIS).	
Key Discussion Points/Action Items:	Responsible Party / Action Item
<p>3. Tucson Mitigation Corridor (TMC)</p> <p>4. Other Reclamation Properties in Study Area</p> <p>Aryan Lirange, FHWA discussed the summary of alternatives as affecting the TMC. Maps showing in blue the 2 alternatives developed by the team and shown to the public and the addition of a 'green' alternative adjacent to the CAP within the TMC boundaries.</p> <p>Alex mentioned that there are other CAP I-11 interfaces along the corridor in SoAZ (near tangerine Road siphon at I-10 and north of I-10 in the north section.</p> <p>Aryan discussed the 3 (2 blue and 1 green) alternatives in Avra Valley and the alternative that will include looking at the existing I-10 corridor through Tucson. The blue alternatives would be along the existing Sandario corridor, both within the existing 80- of right-of-way and an expanded version. Aryan displayed potential cross sections.</p> <p>Also looking to co-exist with existing facilities, hence the green alternative adjacent to the CAP.</p> <p>Alex mentioned that BOR has historically opposed to any development (as a response to co-existing with utilities) within the CAP right-of-way for purpose other than for the canal. Typically BOR does not like facilities parallel to the canal due to maintenance issues. And to limit development up to the canal. FHWA/ADOT acknowledges the BOR need for room to operate and maintain the canal system, and plan to locate I-11 corridor alternatives with enough offset that preserves the BOR needs.</p> <p>Tab discussed the Sonoran Institute meeting with BOR briefly and the opportunity to be adjacent to the canal pending environmental studies. He also mentioned that a simplistic point of view to be a good idea but how the wildlife uses it is a complex issue. i.e.: 90% of the mule deer use the TMC corridor and as such the BOR installed 7 siphons in this area. Tab mentioned that the parallel I-1 could reduce this TMC from 2-1/2 miles to 60-80 meters.</p> <p>Aryan questioned the 80 meters and Karla suggested that we are not that deep into design to look at final cross sections of parallel facilities. Jay also produced a sample 1st cut cross section to begin the conversation. Ultimately, the 60-80 meter width described above may be a miscommunication with the Sonoran Institute's understanding of what could be constructed by ADOT to ensure that all 7 siphon crossings are not reduced, and possibly enhanced.</p>	<p>BOR to have internal meeting and additional meeting(s) with TMC partners (AZG&F, USFW, and Pima County) to discuss opportunities.</p> <p>Tab to report back to FHWA/ADOT on outcome of BOR internal meeting and opportunities for joint-planning to study additional I-11 options in the vicinity of the TMC.</p> <p>Letter of agreement between BOR and FHWA regarding Cooperating Agency co-planning and concurrence required prior to administrative Draft EIS.</p>

Purpose:	
I-11 agency leadership coordination meeting between the FHWA, ADOT, and Cooperating Agency BOR for the I-11 Corridor Alternatives Selection Report (ASR) and Tier 1 Environmental Impact Statement (EIS).	
Key Discussion Points/Action Items:	Responsible Party / Action Item
<p>Alex mentioned that BOR needs to coordinate with their tribal (TON) partner.</p> <p>Jay mentioned that FHWA and ADOT have had in-depth conversations with the TON and the local TON District regarding tribal lands and habitat connectivity.</p> <p>Aryan interjected that parallel routes with appropriate cross sections may even enhance connectivity with similarly located I-11 crossing near canal siphons.</p> <p>Alex noted that if Sandario Road along the 2-1/2 mile TMC could also be co-located with I-11 and the canal we could eliminate yet another linear facility and barrier to wildlife. Jay noted that the team can look at this if so directed. FHWA felt that a collocated facility with all three linear features has great merit.</p> <p>Alex asked how noise is addressed. Rebecca stated that the Tier 1 addresses noise (and air and other issues) at a tiered level more qualitative in the Tier 1 and the next phase as any Tier 2 would be more qualitative.</p> <p>Sean opened with 2 observations; one that a new interstate anywhere near the TMC would not be beneficial to the TMC and two, loss of habitat lands due to a new transportation facility would require mitigation.</p> <p>Aryan asked if mitigation would include requirement to supplant any I-11 lands with new habitat mitigation lands. Discussion then ensued into what and where these lands could be. All agreed that this could be part of the analysis, agreement, and EIS study.</p> <p>Aryan asked if bridging over the canal for habitat connectivity is easier than under. Aryan also pointed out pictures of crossings at other locations, discussed briefly ADOT's crossing installations at other locations. Pete mentioned that over or under are significant construction issues but can be accomplished.</p> <p>Alex mentioned that I-11 may impact the canal at other locations including near the Pima-Pinal county border along the Santa Rosa portion of the CAP and in the north section north of I-10 west of the White Tanks. Tab navigated google maps and conversations ensued. Jay and Pete discussed standard perpendicular crossings of the canal with linear transportation facilities can be accomplished fairly routinely.</p> <p>Pete also mentioned trail designations along the canal and that the ROW</p>	

Purpose:	
I-11 agency leadership coordination meeting between the FHWA, ADOT, and Cooperating Agency BOR for the I-11 Corridor Alternatives Selection Report (ASR) and Tier 1 Environmental Impact Statement (EIS).	
Key Discussion Points/Action Items:	Responsible Party / Action Item
<p>fence may not necessarily be the ROW boundary. I-11 will need to account for existing and future trail plans along the canal, especially in S AZ area.</p> <p>Karla and Rebecca discussed 'joint planning', 4(f) processes and considerations and the need to have a letter of agreement to further the green I-11 alternative adjacent to the canal in the TMC. If we have concurrence and co-planning with Cooperating Federal Agencies (FHWA and BOR) it may not be a 4(f) issue through use of the 4(f) exception. Collocating I-11 and the canal in lieu of being located along the western edge of the TMC (either completely within the existing 80' Sandario ROW and into the TMC boundaries depending on the EIS analysis may be a more prudent and feasible alternative. Additionally the analysis will include the alternative along the existing I-10 corridor through Tucson.</p> <p>Jay mentioned that 'time is of the essence' to have an agreement from BOR and their TMC partners to begin the analysis and the science to add the 'green' alternative to the 2 blue and the existing I-10 alternative analysis.</p> <p>Alex requested some time for BOR to meet internally and with their TMC partners to discuss all opportunities and constraints to co-planning and concurrence and report back to FHWA and ADOT.</p> <p>Jay described that the administrative Draft EIS is due in December 2017 with a DEIS to the public in the summer of 2018. Jay was questioned and asked if the recommended alternative is required for the administrative draft. He said no, but does need to be in the DEIS.</p> <p>Aryan followed up that the plan is to have a 'recommended' alternative in the DEIS, a 'preferred' in the FEIS and a "Selected" Alternative in the ROD. Since the bifurcation of the FEIS and ROD, we have the opportunity to go from recommended to preferred to selected and vet with all (cooperating, participating and the public) several times.</p>	
<p>5. Other Issues or Items: Aryan Lirange asked the group if anyone had any other issues or items to discuss. There were none.</p>	No Action
<p>6. Next Meeting Date: Aryan Lirange confirmed that another TMC specific meeting may be required and suggested after we hear back from BOR for Jay and ADOT's consultant to arrange.</p>	Jay and ADOT will send out necessary meeting invites.

cc: Document Control
Attachments:
(1) Sign-in Sheet

Meeting Purpose: Tier 1 EIS - Cooperating Agency Meeting
 Location: ADOT Enforcement
 Date: 8/2/17 Time: 1:00 pm

SIGN-IN SHEET

Name	Organization	Phone	E-mail	Address
<u>Jenlyne</u>				
<u>Kimberly Bodington</u>	<u>AECOM</u>	<u>602-648-2580</u>		
<u>Carla Richardson Frijia</u>	<u>AECOM</u>	<u>602-648-2498</u>		
<u>Katie Rodriguez</u>	<u>ADOT</u>	<u>602-712-8858</u>	<u>KRodriguez@azdot.gov</u>	
<u>ARYAN LIRANGE</u>	<u>FHWA</u>	<u>602-382-8973</u>		
<u>Rebecca Yedlin</u>	<u>FHWA</u>	<u>602-382-8979</u>	<u>rebecca.yedlin@dot.gov</u>	
<u>Jay Van Echo</u>	<u>ADOT</u>	<u>520-400-6207</u>	<u>jvanecho@azdot.gov</u>	
<u>Lane Couger</u>	<u>BLM</u>	<u>602-477-9612</u>	<u>lcouger@blm.gov</u>	
<u>GREG BYRES</u>	<u>ADOT</u>	<u>602-712-8140</u>	<u>gbyses@azdot.gov</u>	

SIGN-IN SHEET

Name	Organization	Phone	E-mail	Address
Phone Callers:				
✓ Tab Bowmanito	BOR			
✓ Charí Bencheá	AGFD			
✓ Clifton Meek	EPA			
✓ Scott Spornum	NPS			
✓ Scott ^{Adam} Spradger	"			
✓ Jaraa Raymond	FAH			
✓ Krista Temping	AGFD			
Scott Sprague	NPS			
✓ Julie	AGFD			
✓ Bill Knowles	AGFD			



Bureau of Reclamation, TMC Meeting Notes, March 5, 2018



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MEETING PURPOSE: Bureau of Reclamation (BOR), Tucson Mitigation Corridor

DATE & TIME: March 5th, 2018 at 1pm

LOCATION: FHWA Arizona Office

ATTENDEES: Karla Petty, FHWA
 Alan Hansen, FHWA
 Aryan Lirange, FHWA
 Rebecca Yedlin, FHWA
 Anthony Sarhan, FHWA
 Alex Smith, BOR
 Sean Heath, BOR
 Greg Byres, ADOT
 Jay Van Echo, ADOT
 Carlos Lopez, ADOT

MEETING NOTES

Purpose:	
I-11 Tier 1 Environmental Impact Statement (EIS) and BOR discussion of study process, issues and concerns, and opportunities related to the Tucson Mitigation Corridor	
Key Discussion Points/Action Items:	Responsible Party / Action Item
1. Introductions led by Aryan Lirange, FHWA. Aryan presented the I-11 Alternatives near the Tucson Mitigation Corridor, Alternatives 1 to 6.	
2. BOR explained they need to coordinate the alternatives (Alternatives 1 to Alternative 6) near the TMC with the Central Arizona Project (CAP) operator, Central Arizona Water Conservation District (CAWCD).	
3. BOR's preference is to combine Sandario Rd, CAP and Interstate 11 and matching the existing siphons and maintaining wildlife connectivity. Since the timeline of I-11 is unknown and land uses may change over time keep alternatives flexible for future accommodation.	

Purpose:	
I-11 Tier 1 Environmental Impact Statement (EIS) and BOR discussion of study process, issues and concerns, and opportunities related to the Tucson Mitigation Corridor	
Key Discussion Points/Action Items:	Responsible Party / Action Item
4. BOR explained that adding a crossing (siphon) may not be needed.	
5. An area of concern for BOR is wildlife connectivity between the Tucson Mountains and Ironwood Forest National Monument. Given uncertainty BOR suggested having a general description of a “wildlife corridor.” At the tier 1 study level, FHWA and ADOT are not able to identify specific wildlife corridor location but can describe wildlife corridor that fits Net Benefit program and is in line with the purpose of the TMC. Subsequent project specific environmental studies would identify specific locations.	
6. The TMC managing agencies (BOR, Pima County, Arizona Game and Fish Department, US Fish and Wildlife Service) are meeting on March 26, 2018 along with FHWA and ADOT to coordinate on the Net Benefit program and define the criteria that will be used for wildlife crossing locations and attributes to be used in subsequent tier 2 environmental studies.	
7. BOR anticipates providing a letter discussing the Net Benefit Program and tier 2 considerations to FHWA following the meeting with the TMC managing agencies on March 26, 2018. BOR suggestions on Net Benefit included matching the existing siphons along CAP, wildlife crossing north of TMC, consolidation of Sandario Road and identification of future environmental studies including biology.	
Next Meeting Date: TBD	

c Document Control

Attachments:

Lyles, Judy

From: Pyne, Jennifer
Sent: Thursday, April 26, 2018 7:27 AM
To: AMER-US-AZ Phoenix-i11doccontrol
Subject: FW: BOR - TMC follow up for March 26th meeting
Attachments: I-11 Tier 1 EIS_ASR_ BOR Notes 03-05-18.docx

For Admin Record

Jennifer Pyne, AICP
Associate Vice President
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From: Carlos Lopez [<mailto:CLopez@azdot.gov>]
Sent: Tuesday, March 13, 2018 7:37 AM
To: Yedlin, Rebecca (FHWA); Aryan Lirange; Jay Van Echo; Jay Van Echo
Cc: Katie Rodriguez; Joshua Fife; Pyne, Jennifer
Subject: RE: BOR - TMC follow up for March 26th meeting

Thanks Rebecca and Aryan for your comments. Attached is an updated version.

I recall discussion about a potential follow up meeting to the March 26 meeting but I am not sure it was confirmed with FHWA/ADOT. I removed the reference of the follow up and added the BOR letter is anticipated.

Thanks,

Carlos D. Lopez, PE
Project Manager
206 S. 17th Avenue
Mail Drop 310B
Phoenix, AZ 85007
602.712.4786



From: Yedlin, Rebecca (FHWA) [<mailto:Rebecca.Yedlin@dot.gov>]
Sent: Tuesday, March 13, 2018 5:42 AM
To: Aryan Lirange; Carlos Lopez; Jay Van Echo; Jay Van Echo
Cc: Katie Rodriguez; Joshua Fife; Pyne, Jennifer
Subject: RE: BOR - TMC follow up for March 26th meeting

Please see my additional comments. - Rebecca

From: Lirange, Aryan (FHWA)
Sent: Monday, March 12, 2018 1:35 PM
To: Carlos Lopez <CLopez@azdot.gov>; Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>; Jay Van Echo <jayv@horrocks.com>; Jay Van Echo <JVanEcho@azdot.gov>
Cc: Katie Rodriguez <KRodriguez@azdot.gov>; Joshua Fife <JFife@azdot.gov>; Pyne, Jennifer <jennifer.pyne@aecom.com>
Subject: RE: BOR - TMC follow up for March 26th meeting

Some edits and input.

Aryan

Arizona FHWA – Senior Urban Engineer
(eMail) aryan.lirange@dot.gov
(602) 382 8973 | cell (602) 999 2921

From: Carlos Lopez [<mailto:CLopez@azdot.gov>]
Sent: Monday, March 12, 2018 9:57 AM
To: Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>; Jay Van Echo <jayv@horrocks.com>; Jay Van Echo <JVanEcho@azdot.gov>; Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov>
Cc: Katie Rodriguez <KRodriguez@azdot.gov>; Joshua Fife <JFife@azdot.gov>; Pyne, Jennifer <jennifer.pyne@aecom.com>
Subject: RE: BOR - TMC follow up for March 26th meeting

Hi All,

Please see the attached meeting notes and handouts on the FHWA, ADOT and BOR meeting held on March 5, 2018. Feel free to provide comments or modify as needed.

Let me know if you have any questions.

Thanks,

Carlos D. Lopez, PE
Project Manager
206 S. 17th Avenue
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602.712.4786



From: Yedlin, Rebecca (FHWA) [<mailto:Rebecca.Yedlin@dot.gov>]
Sent: Monday, March 12, 2018 5:52 AM
To: Jay Van Echo; Jay Van Echo; Aryan Lirange
Cc: Carlos Lopez; Katie Rodriguez; Joshua Fife; Pyne, Jennifer
Subject: RE: BOR - TMC follow up for March 26th meeting

Please see my responses below. – Rebecca

From: Jay Van Echo [<mailto:jayv@horrocks.com>]

Sent: Friday, March 09, 2018 12:35 PM

To: Jay Van Echo <JVanEcho@azdot.gov>; Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov>; Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>

Cc: Carlos Lopez <CLopez@azdot.gov>; Katie Rodriguez <KRodriguez@azdot.gov>; Joshua Fife <JFife@azdot.gov>; Pyne, Jennifer <jennifer.pyne@aecom.com>

Subject: BOR - TMC follow up for March 26th meeting

Thanks....I see I was not on the invite list....(and is there? Will there? be a meeting before the meeting with Tab? I believe Aryan spoke with Tab about having a mid-level leadership representative for each of the 4 TMC management agencies at the meeting if possible. I think Tab is still working on identifying those folks so I don't know how successful we will be.what is end game of this meeting This could vary depending upon who participates. FHWA's hope is that BOR can hear whatever input the other 3 agencies provide during the meeting and shortly thereafter provide their letter/doc that details the support of a Net Benefit Prog. + whatever mitigation or strategies FHWA/ADOT will need to commit to. If the meeting doesn't go as planned or if there are not leadership participants, I don't know how that will affect BOR's decision to submit the letter to us. It may require a follow-up meeting which I tried to discourage with BOR when we met due to the schedule impacts.....I have asked AECOM to put together a net-benefit white paper to talk:

1. Matching siphons
2. Stay out of up slope
3. Follow CAP alinement
4. Lay lightly on the land alternative with our requirement for future expansion (we will not get another bite of the apple)
5. Relocate Sandario (Alternative 5A)
6. Eliminate fencing where possible
7. Existing Sandario road as a local access to Garcia Farms (if appropriate (see ROW easement agreement with TON aka Papago Tribe at the time of the agreement)
8. Avoid CAP operations (may need to talk to CAWCD re:)
 - a. ROW
 - b. Upslope
 - c. Rider road
 - d. Fence line
 - e. Clearances
 - f. Trails (remember that from a long meeting ago)
9. Address the existence of the BOR-TON-SXD EA (I have not read it yet) and incorporate as necessary any statutory requirements
10. Work with biologists to develop now a 'generalized' "wildlife Corridor" between Tucson's and Ironwood National Monument to be studied and implemented at an I-11 Tier 2 stage
 - a. Be general
 - b. Not location specific – not exactly, but enough so that it fits the Net Benefit Prog and is in line with the purpose of the TMC
 - c. Species
 - d. Width, length of crossings at I-11 CAP
 - e. Side boards
 - f. Etc. Need the biologists help in defining the criteria for Tier 2 (which would include the items above plus more)
11. Plans to work in Tier 1 with 'other' participating agencies to honor the ideas of an E-W wildlife corridor
 - a. Pima County, State lands, TON-SXD-Garcia Community, etc.
 - b. Sonoran Desert Conservation Document
 - c. Local governments responsibility for land use, zoning issues, etc.
12. Studies needed to support the above in a Tier 2 study

13. Incorporate examples of highway over drainages at appropriate opening length, widths, and heights to match siphons (need biologists input here very much too)
14. Address proximity of wildlife corridor to TMC (as opposed or not to say the connectivity outlined by BOR at Picacho's)

All this will be in the 4(f) discussion.....at some level.

My understanding that it was/would be BOR's duty to sell it to their partners.....

Carlos is putting some notes together....what did I miss. **While BOR did acknowledge our need to have the letter from them by early April, it is something that we may need to follow-up on shortly after the March 26th meeting.**

Jay

From: Jay Van Echo [<mailto:JVanEcho@azdot.gov>]
Sent: Friday, March 9, 2018 9:41 AM
To: Aryan Lirange <Aryan.Lirange@dot.gov>; Rebecca.Yedlin@dot.gov
Cc: Jay Van Echo <jayv@horrocks.com>
Subject: I do not have the March 26th....

....BOR meeting invite...can you send it to me please....

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Bureau of Reclamation, TMC Meeting Notes, March 26, 2018



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Tucson Mitigation Corridor and I-11

AZ Game and Fish Department (Host)
555 N Greasewood Rd, Tucson AZ 85745
March 26th @ 10AM-12PM

1-866-830-3963
Leader: 2763945
Participant: 2763950

Introductions

Additional Agenda Items

Tucson Mitigation Corridor

1. 4(f) Evaluation
 - a. Net Benefit – How did we get here?
 - i. De Minimis, Programmatic, and Individual Evaluation
 - ii. How do we achieve a net benefit long term?
2. Tucson Mitigation Corridor
 - a. 7 siphon crossings and 7 overpasses
 - b. Colocation of Sandario Road
3. Second Corridor
 - a. Crossing over CAP and overpass over I-11
 - b. Acquisition of property for connectivity to Ironwood Forest National Monument
 - i. Timing?
4. Future development
 - a. Influence on mitigation and minimization measures
 - b. Will development degrade a Net Benefit?
5. Wildlife studies
 - a. Pre-construction
 - i. Baseline inventory
 - b. Second corridor location and size
6. Questions...

Final Discussions

March 26, 2018

Tucson Mitigation Corridor

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Craig (phone)

Scott (phone)

Tab Bommari

BOR

(see over →)

Karen Simms

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I-11 - USBR Tucson Mitigation Corridor 4(f) Use Discussion

Purpose of this Paper: presents available information to be used in the discussion of the potential use of part of the Tucson Mitigation Corridor (TMC) 4(f) parcel by I-11 and possible solutions to mitigate impacts/use. Figure 1 depicts the area being discussed.

Proposed I-11 Alternatives in the Tucson Mitigation Corridor (TMC) Area (Figure 2):

- Four I-11 Options occur within the TMC area, all of which impact between 454 and 559 acres of the TMC with 2,000' corridor:
 - Option C is mostly collocated with Sandario Road south of the TMC, then traverses the Sandario Road alignment after clipping the western edge of the TMC.
 - Option D which runs parallel but east of Sandario Road south of the TMC, but rejoins Sandario Road and matches Option C through the TMC.
 - Option C (CAP) which leaves the Sandario Road alignment just south of the TMC and travels northeast to run adjacent to the CAP canal through the TMC before returning to the original Option C alignment.
 - Option D (CAP) which leaves its original alignment to the east of Sandario Road and joins the Option C (CAP) alignment paralleling the CAP through the TMC before returning to its original alignment.

Existing Protected Wildlife Corridors in Area

- Tohono O'odham (TON) Wildlife Corridor (Figure 1)
 - EA of the Schuk Toak Development Plan describes fenced wildlife corridor as mitigation.
 - Approx. 500 to 950 foot wide, 2.5 mile long corridor from Sandario Road west to TON and Ironwood Forest N.M.
 - The TON agreed to use fencing that excludes cattle, discourages off-roading, but is compatible with wildlife passage, in response to AGFD concerns.
 - Unknown whether this actually happened and is being maintained. Fencing is visible in Google along the corridor, although difficult to see if the 0.3 miles west of Sandario Road still have fencing.
 - Reclamation was to pursue agreement with City of Tucson to guarantee that city-owned retired farmland in Section 8 and the NW 1/4 of section 9, T-14-S, R-11-E does not become developed in the future (depicted in Figure 3).
 - The City of Tucson developed the area in Section 8 with recharge basins (CAVSARP) – see below, and set aside the NW ¼ of Section 9 for wildlife.
- TMC
 - 2,716 acre parcel bordered on the east by Tucson Mountain Park and to the west by Sandario Road/TON
 - Includes six siphons/openings in the CAP canal for wildlife movement
 - Additional CAP siphon just north of the TMC boundary may also be part of the CAP mitigation

- CAVSARP recharge basin restrictive covenant (see Figure 1)
 - Designed to allow for wildlife movement between basins
 - Appears from aerial that only basins are fenced, not areas in between
 - Adds an additional 0.5 mile to the TON corridor if assume wildlife will move through between the basins
 - No known studies or anecdotal information on whether wildlife actually move through this area
- Other City of Tucson properties covered in Avra Valley HCP (see Figures 6 through 8)
City-owned land set aside for protected species and wildlife management

Documented Wildlife Use of the TMC and Protected Corridors

- Deer use of CAP siphons in research by Tull and Krausman (2001). This work was conducted in the late 90's
- No known documented use of TON corridor that we know of
- Lack of additional research on the use of the TMC siphons, TON, and CAVSARP by dispersing wildlife.

Potential/Proposed Wildlife Corridors in Area as Potential Mitigation (Figures 4 and 5)

Establishment of a wildlife corridor from Saguaro National Park to the north towards Picacho Peak (Figure 5) is untenable due to distance and the amount of planned development around Marana.

Establishment of a wildlife corridor from northern Saguaro National Park due west to Ironwood Forest National Monument is also untenable due to the distance between unfragmented habitat and the amount of private property.

There are four possible corridor solutions based on the AGFD Coyote-Ironwood-Tucson Linkage Design (Figure 4). The purpose of these potential corridors is not to replace the function of the TMC but to add wildlife connectivity to the area as mitigation to potentially offset impacts to the TMC.

Solution 1: Via the northern-most branch of the Linkage Design

- Goes through BLM, State Trust Land (potential acquisition/easement in Section 36), City of Tucson land (Figure 3)
- However, some private land other than City of Tucson is present east of Brawley Wash
- CAP canal would need new wildlife crossing areas. There is a large gap in the CAP at Mile Wide road, but development at this location likely makes it unfit as a wildlife crossing.
- This solution does not use the TMC to cross the CAP

Solution 2: Immediately north of the CAVSARP, Mile Wide Road.

- Goes through City of Tucson land (including Section 8), State Trust Land (potential acquisition/easement in Section 32) (Figure 3)
- However, some private land east of State trust land.

- CAP canal would need wildlife crossing areas. There is a large gap in the CAP at Mile Wide road, but development at this location makes it unfit as a wildlife crossing.
- This solution does not use the TMC to cross the CAP

Solution 3: Immediately south of the CAVSARP

- Widening the existing TON corridor
- Mostly lies within TON reservation (Figure 3), uses the already-existing wildlife corridor established as mitigation for the farm project. Through City of Tucson land (Section 8 and Section 9)
- Would provide direct access to the TMC, which has CAP canal crossings which would need to be matched by I-11 crossings
- Requires tribal coordination

Solution 4: Immediately south of the Tohono O’odham farm project and north of the Southern Avra Valley Storage and Recovery Project (SAVSARP)

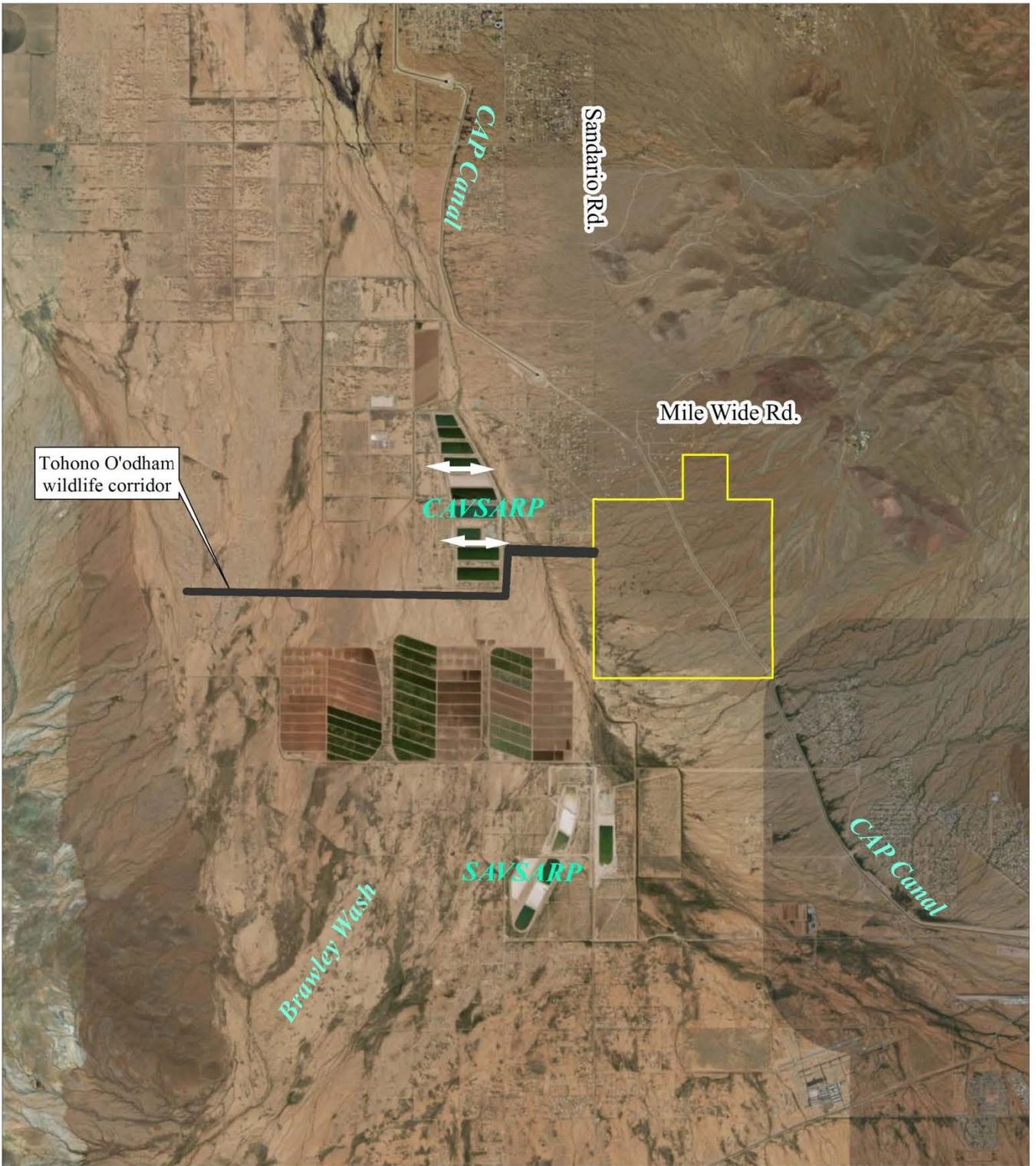
- Goes through City of Tucson land, then into State Trust land (Brawley Wash Pima County Wildlife Corridor), and north into the TMC, which has CAP canal crossings which would need to be matched by I-11 crossings

Other Potential Mitigation Measures to Improve Wildlife Movement

- Match I-11 designed wildlife crossings with existing CAP siphons
- Replace non-game fencing along Tucson Mountain Park and TMC boundary with game fencing
- Agreement with TON for maintaining existing corridor in perpetuity
 - According to the USBR EA of the Schuk Toak Development Plan, “The Nation is committed to maintaining the fence (of the wildlife corridor) as part of the project and for the life of the project”.
- Construct wildlife bridge over CAP to connect other potential corridors?
- Re-aligning Sandario Road with the CAP and I-11 to create one facility corridor
- Species-specific landscape features and crossing designs
- Conduct wildlife movement studies

Development (Figures 9-10)

- Existing development in the TMC area consists of Tribal, Unclassified, Vacant, and Commercial lands.
- Rural residential land uses are planned but specific development is not anticipated in the immediate future in the area north and south of the TMC.



Data Sources:
 ESRI ArcGIS Online
 World Imagery

Map Disclaimer:
 This product contains GIS data for general
 siting purposes only. All boundaries are
 approximate, and cannot be used for
 authoritative location purposes.

 TMC (BOR)

 Wildlife Movement Between Basins



CAVSARP= Central Avra Valley Storage
 and Recovery Project

SAVSARP= Southern Avra Valley Storage
 and Recovery Project

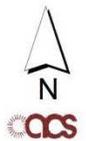
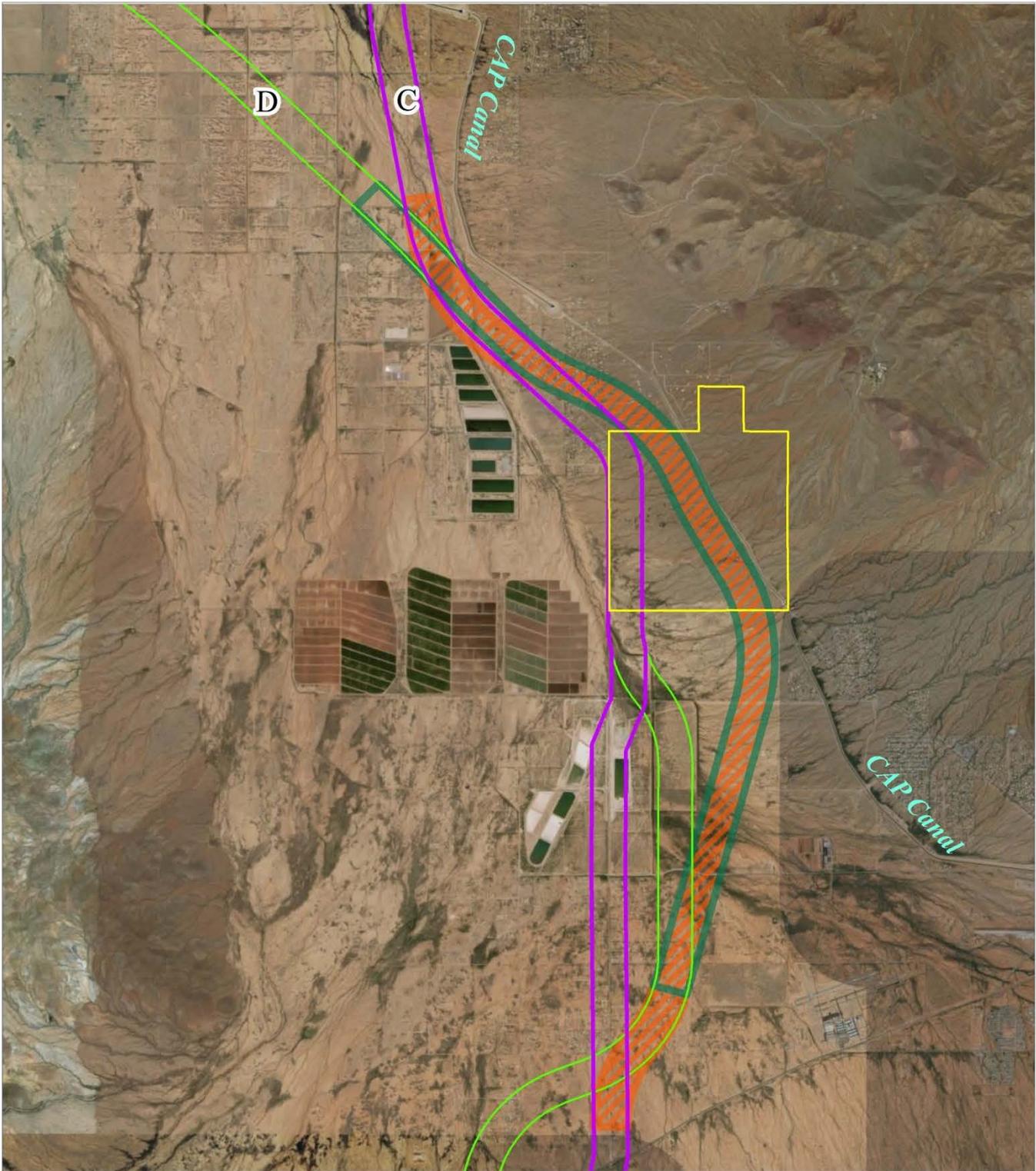


Figure 1: Area of Interest with Existing Protected Wildlife Corridors



Data Sources:
 ESRI ArcGIS Online
 World Imagery



Map Disclaimer:
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 siting purposes only. All boundaries are
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 authoritative location purposes.

- Purple Alternative
 - Green Alternative
 - CAP (C)
 - CAP (D)
 - TMC (BOR)
- C Option



Figure 2: Proposed I-11 Alternatives in the Tucson Mitigation Corridor (TMC) Area

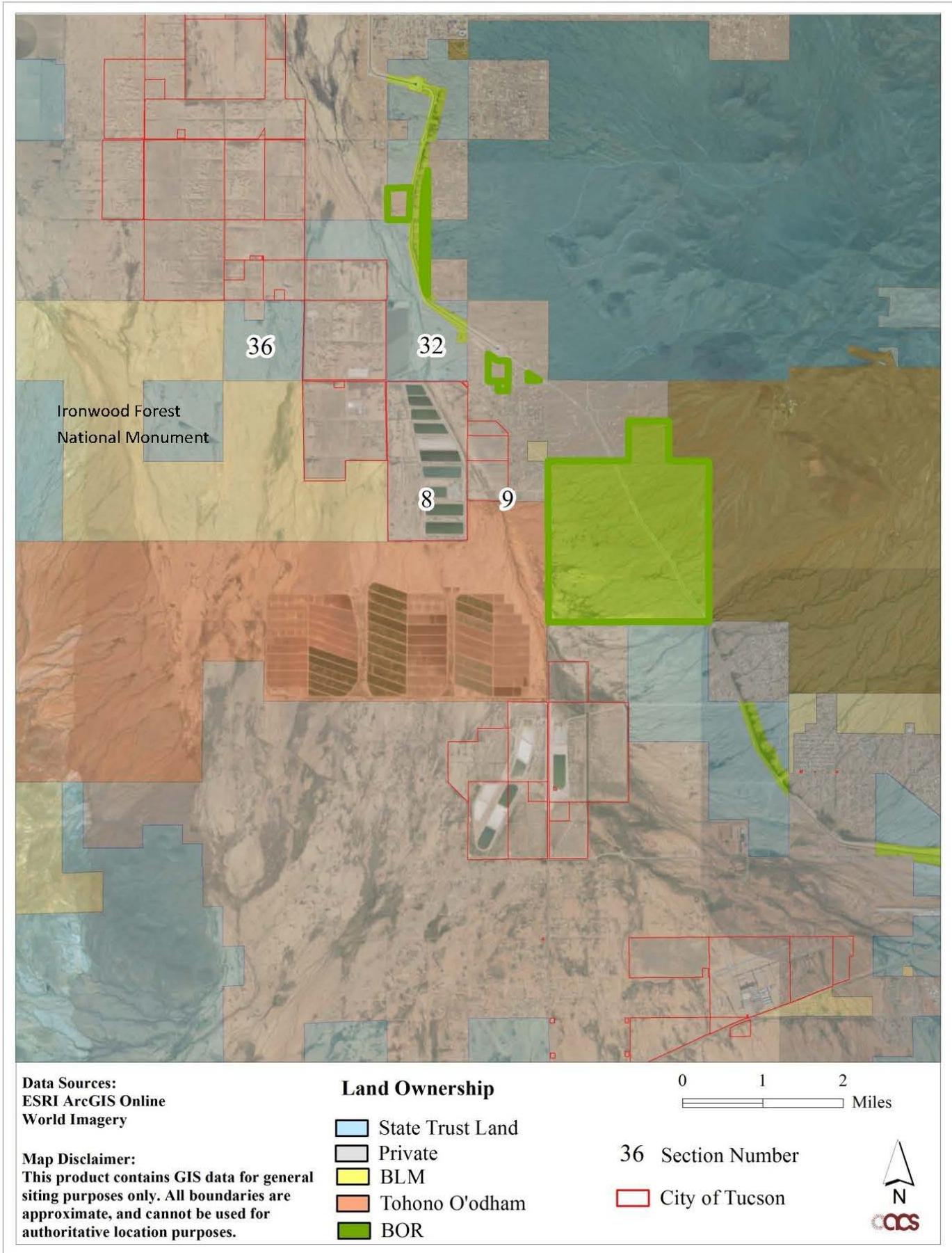
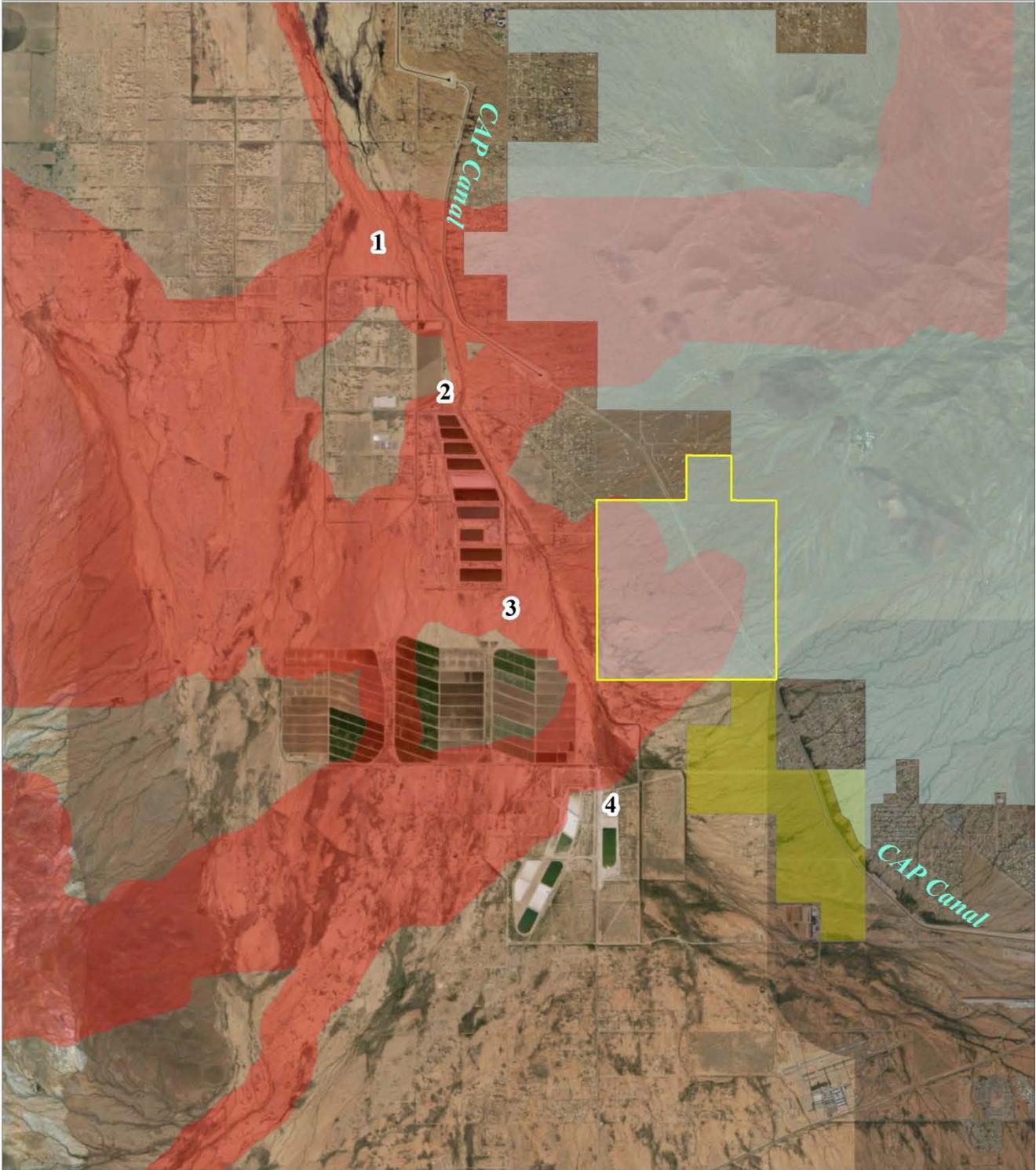


Figure 3: Land Ownership with Some Sections Relevant to Existing or Potential Wildlife Corridors



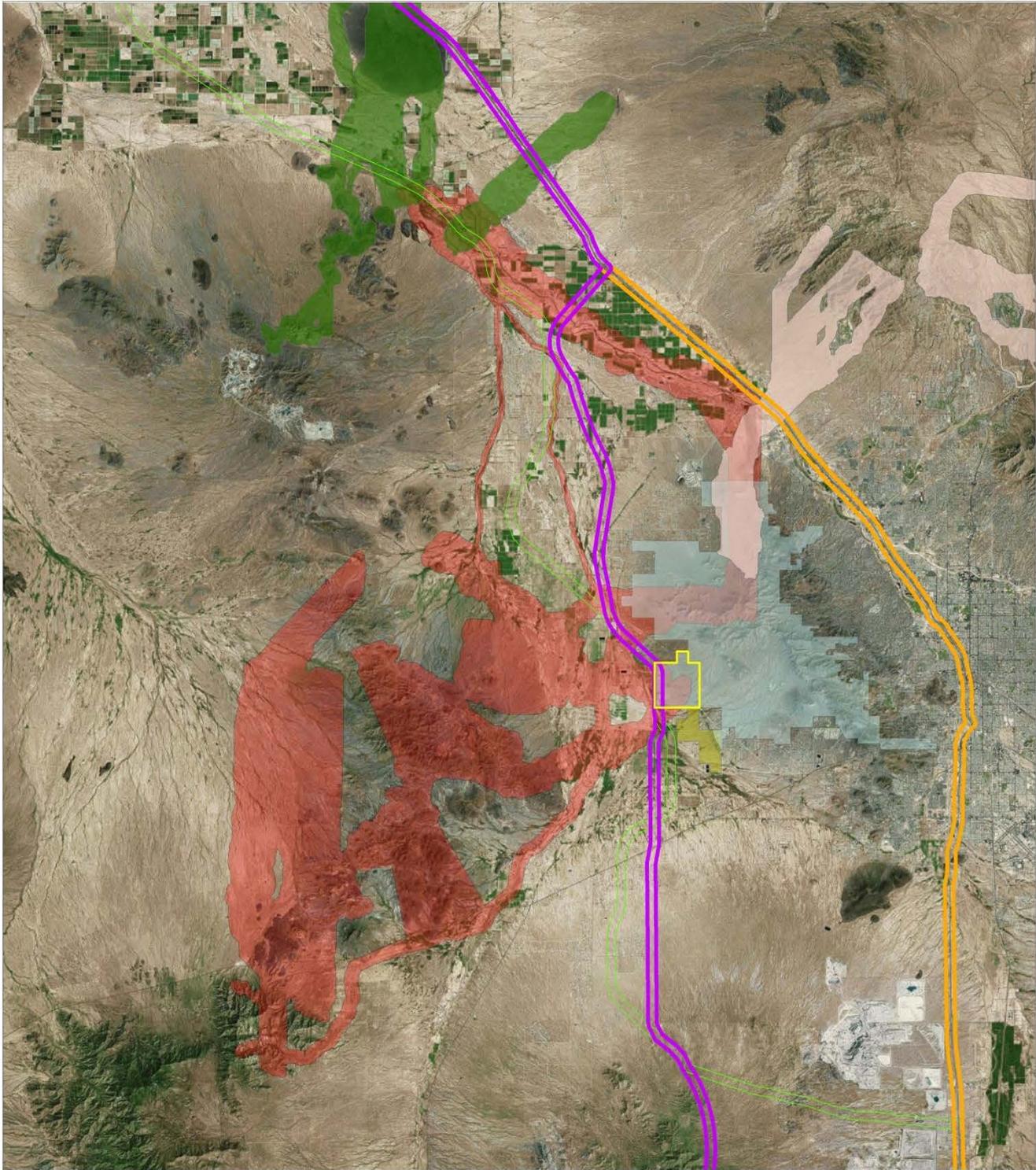
Data Sources:
 ESRI ArcGIS Online
 World Imagery

Map Disclaimer:
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- Tucson Mountains IBA
- Brawley Wash Pima County Wildlife Corridor
- Coyote-Ironwood-Tucson Linkage Design
- TMC (BOR)
- 3** Potential Wildlife Corridor



Figure 4: Special Conservation Areas with Four Potential Wildlife Corridors with Enhancement Possibilities



Data Sources:
 ESRI ArcGIS Online
 World Imagery

Map Disclaimer:
 This product contains GIS data for general siting purposes only. All boundaries are approximate, and cannot be used for authoritative location purposes.

- Ironwood-Picacho Linkage Design
- Tucson-Tortolita-Santa Catalina Linkage Design
- Coyote-Ironwood-Tucson Linkage Design
- Tucson Mountains IBA
- Brawley Wash Pima County Wildlife Corridor
- TMC (BOR)

0 2 4
 Miles



Figure 5: Special Conservation Areas in the Area of Interest

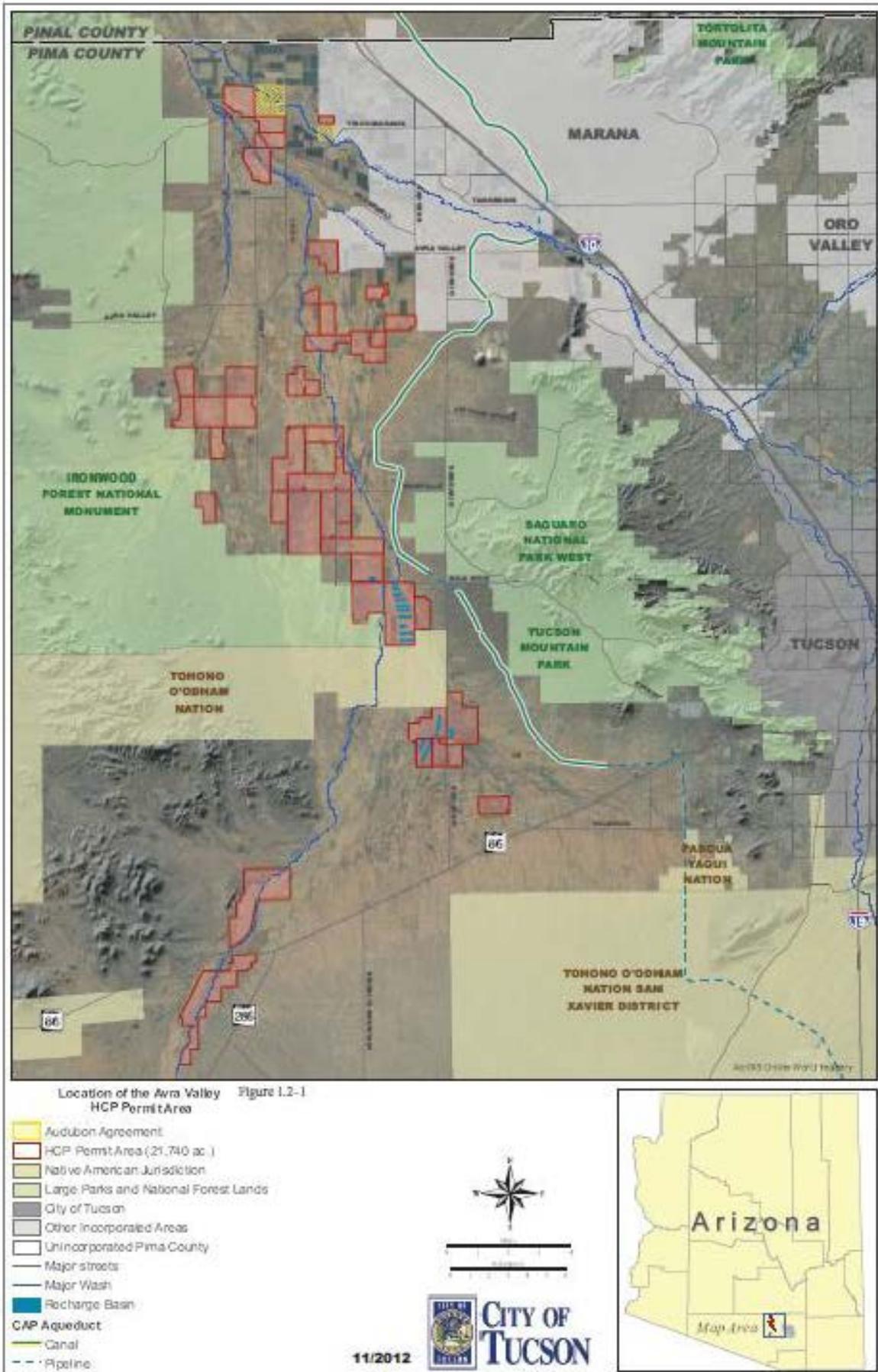


Figure 6: City of Tucson Properties Covered in the Avra Valley HCP to be Managed for Protected Species/Wildlife

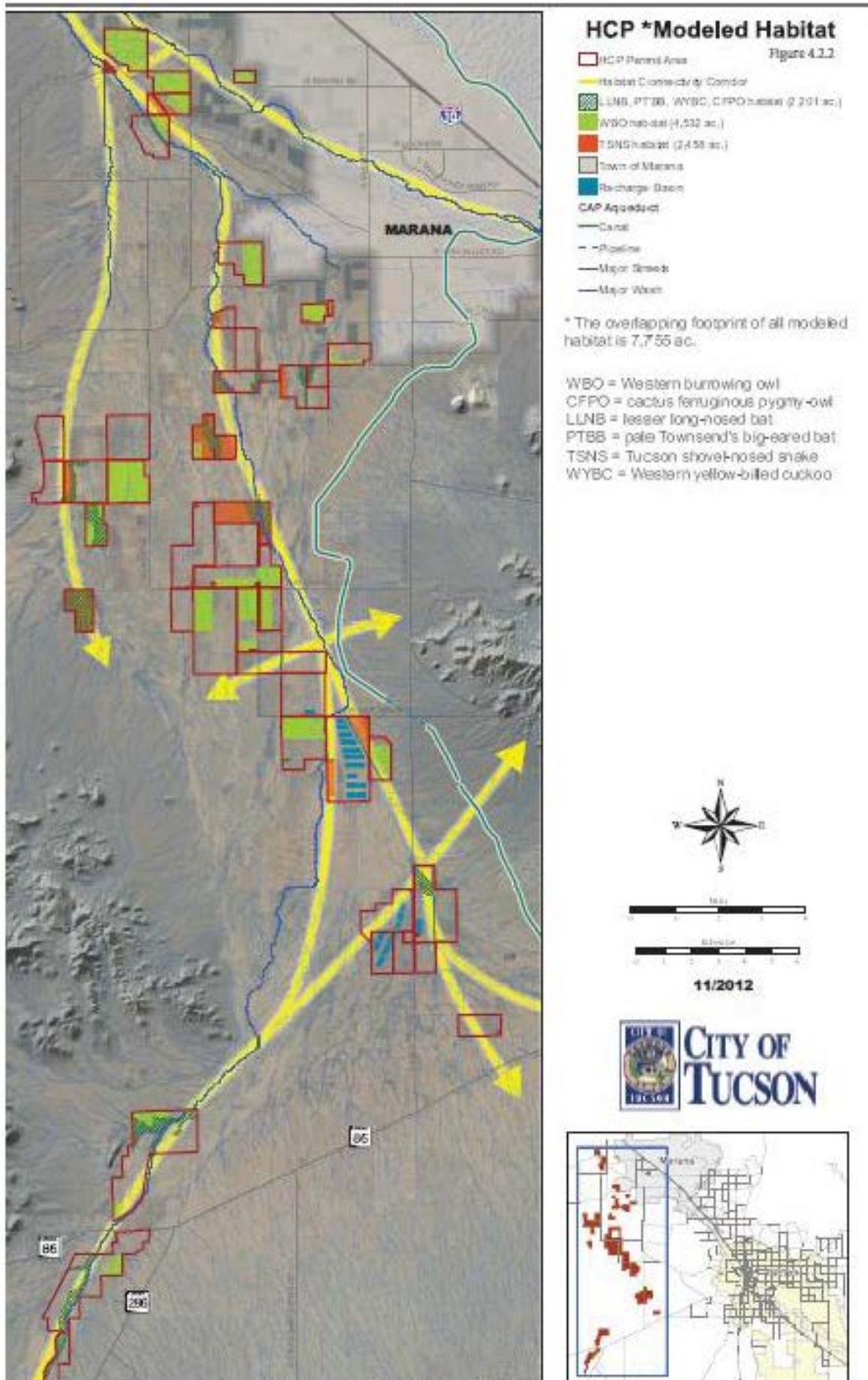


Figure 7: City of Tucson Avra Valley HCP Modeled Habitat Connectivity

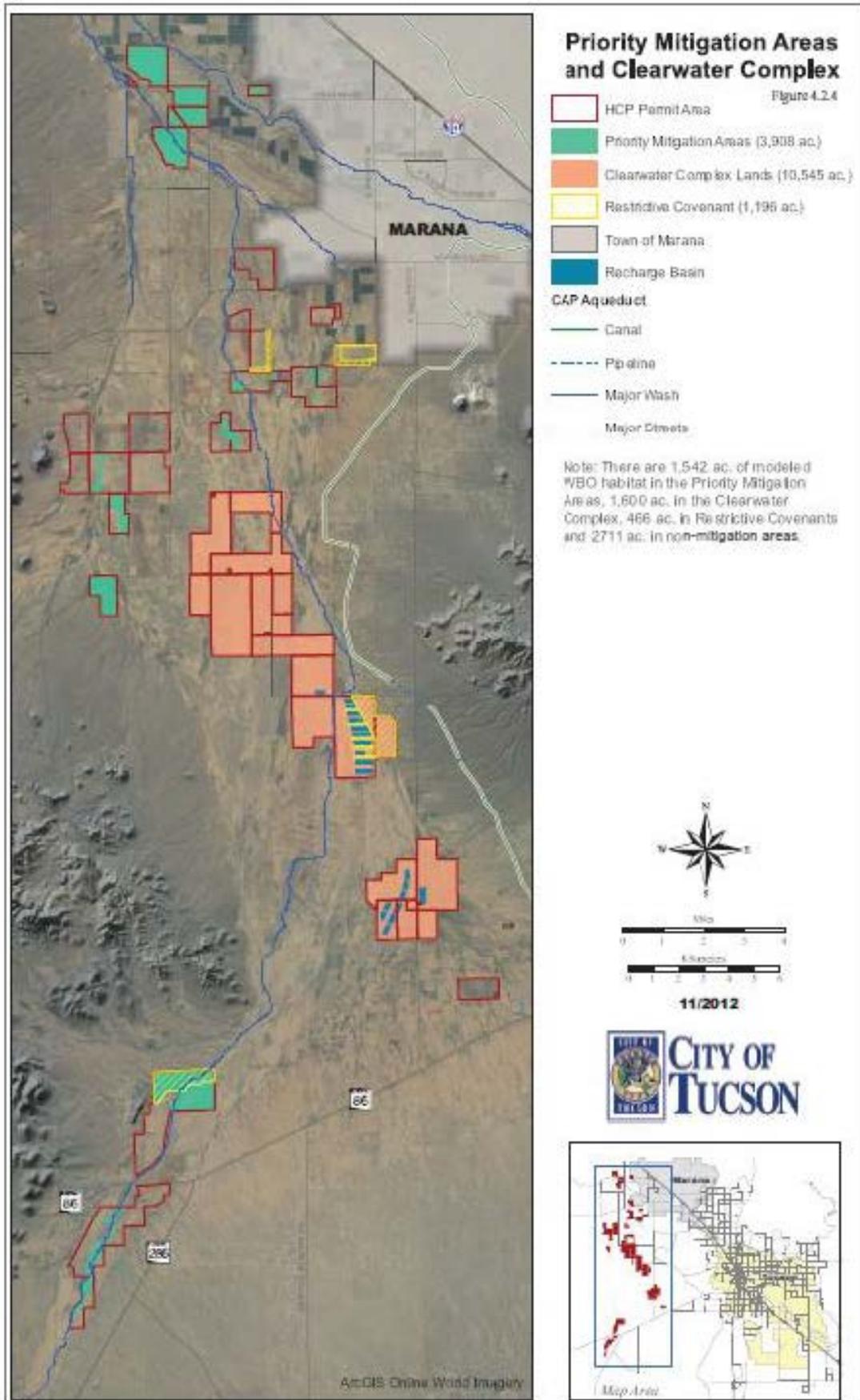


Figure 8: City of Tucson Avra Valley HCP Priority Mitigation Areas

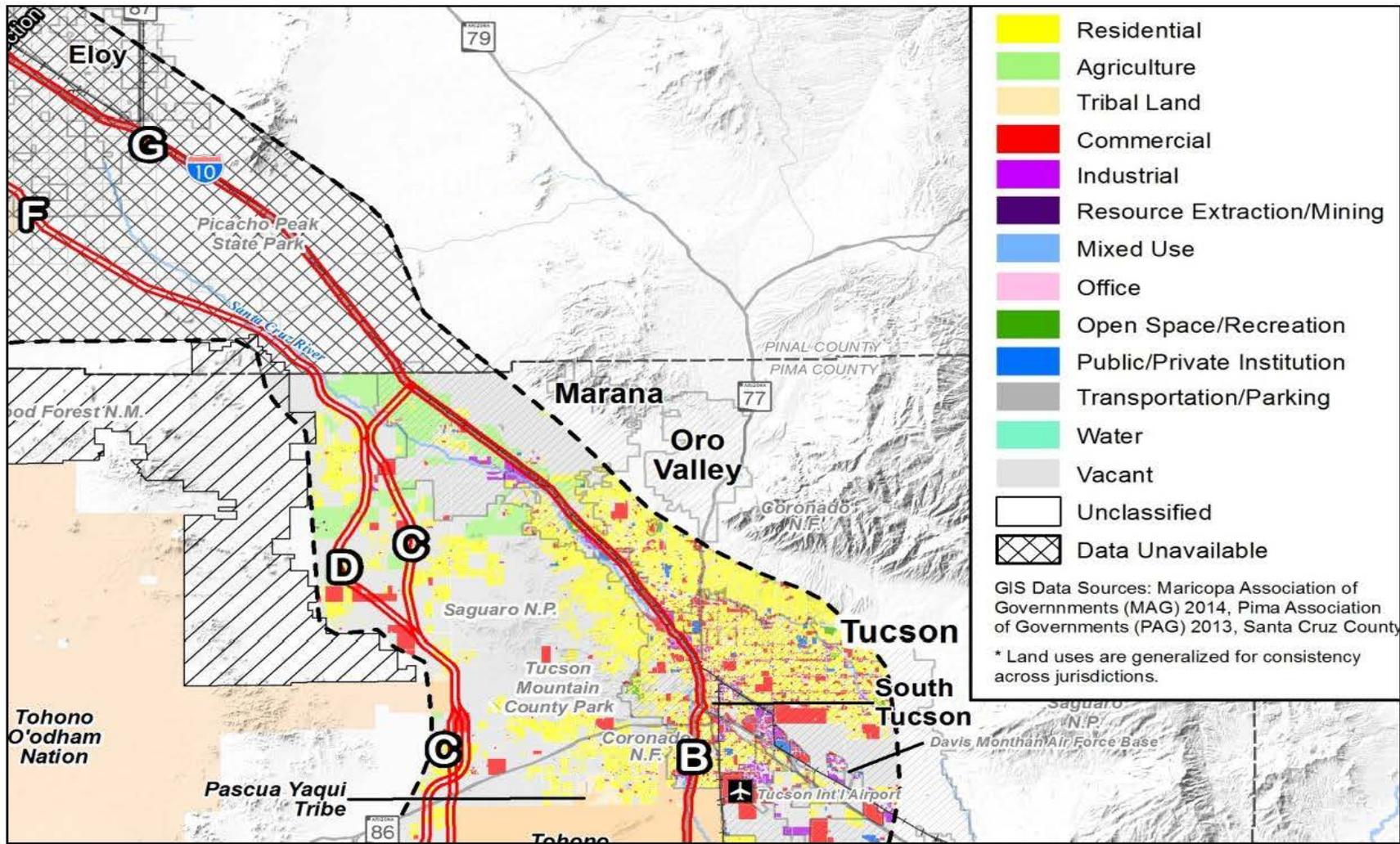


Figure 9: Existing development (map from I-11 EIS, Land Use Section)

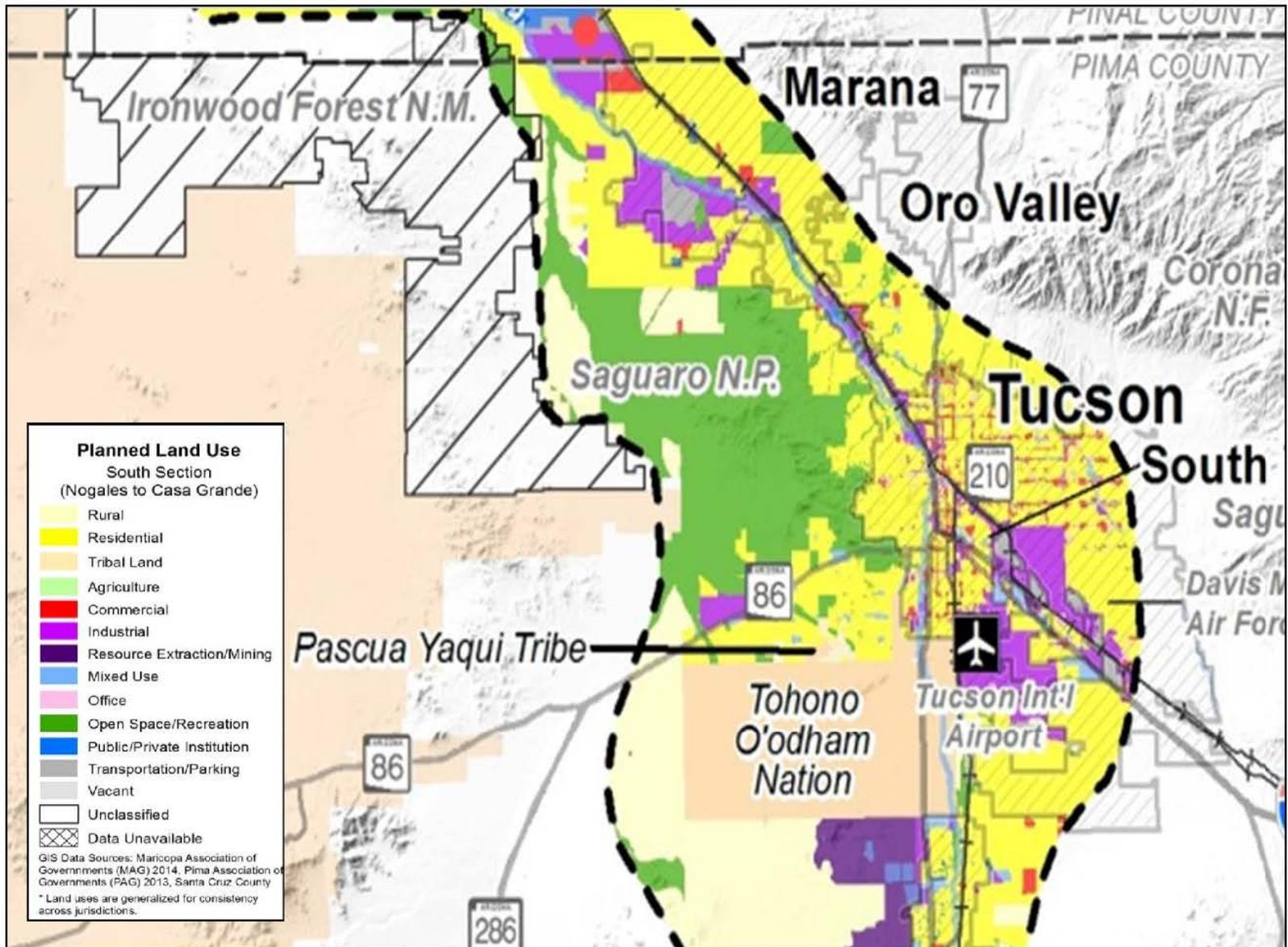


Figure 10: Planned development (map from I-11 EIS, Land Use Section)



Letter from Bureau of Reclamation, June 8, 2018



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United States Department of the Interior

BUREAU OF RECLAMATION

Lower Colorado Region

Phoenix Area Office

6150 West Thunderbird Road

Glendale, AZ 85306-4001

IN REPLY REFER TO:

PXAO-1500

2.1.4.13

JUN 08 2018

Ms. Karla Petty
Division Administrator
Federal Highway Administration
4000 North Central Avenue, Suite No. 1500
Phoenix, AZ 85012

Subject: Section 4(f) Evaluation for the Tucson Mitigation Corridor

Dear Ms. Petty:

This letter is in response to the Federal Highway Administration's (FHWA) request for the Bureau of Reclamation's input and consultation on a Section 4(f) evaluation for the Tucson Mitigation Corridor (TMC). The Section 4(f) evaluation is part of the Interstate 11 (I-11) Tier 1 Environmental Impact Statement (EIS) from Nogales to Wickenburg. Among the alternatives are two prospective alignments within Avra Valley that would fragment, and substantially impact the TMC, and the role it serves.

The 2,514-acre TMC was established in 1990 for a present-day cost of approximately \$15 million. It was acquired as mitigation for the construction of the Tucson Aqueduct of the Central Arizona Project (CAP) canal. Additionally, Reclamation modified the designs of the CAP placing a substantial portion within underground siphons. This modification was intended to increase wildlife movement in Avra Valley, but came at a significant cost. Reclamation has long considered and managed the TMC, as a wildlife refuge of significance, because of the critical role it serves for maintaining wildlife connectivity from the isolated Tucson Mountain Park, and Saguaro National Park across Avra Valley, to the Ironwood Forest National Monument, Roskrige Mountains, and adjacent areas. In 1990, Reclamation entered into a Cooperative Agreement (CA) with Pima County, Arizona Game and Fish Department (AGFD), and U.S. Fish and Wildlife Service (USFWS), for management and oversight of the TMC (hereafter collectively referred to as the TMC Working Group). Within the CA it states: "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)]." The existing Master Management Plan also prohibits any future developments within the TMC, other than wildlife habitat improvements.

Following a September 18, 2017 meeting, Reclamation worked to develop a Preliminary Mitigation and Minimization Plan for an I-11 route alternative through the TMC. The TMC Working Group will continue to coordinate and review information as both Tiers of the EIS

progress. Through the Tier 1 process, members of the TMC Working Group will continue to review draft and final documents. Prior to, and during, the Tier 2 process, the TMC Working Group will develop a scope of work for proposed wildlife studies, and continue to participate in the EIS review process.

To use a Section 4(f) property such as the TMC, the FHWA is traditionally required to determine that: 1. there is no “feasible and prudent avoidance alternative” to the use of the 4(f) property; and that 2. the action includes all possible planning to minimize harm to the property resulting from such use (23 CFR § 774.3.). We understand that FHWA is proposing to apply the Nationwide Programmatic Section 4(f) Evaluation and Approval for Transportation Projects That Have a Net Benefit to a Section 4(f) Property. According to the FHWA Environmental Toolkit:

“A "net benefit" is achieved when the transportation use, the measures to minimize harm and the mitigation incorporated into the project results in an overall enhancement of the Section 4(f) property when compared to both the future do-nothing or avoidance alternatives and the present condition of the Section 4(f) property, considering the activities, features and attributes that qualify the property for Section 4(f) protection. A project does not achieve a “net benefit” if it will result in a substantial diminishment of the function or value that made the property eligible for Section 4(f) protection.”

As part of the NEPA process, impact analysis and potential mitigation measures for an Avra Valley alternative will need to be identified. If one of the proposed alignments within the TMC is selected, mitigation and minimization of impacts will be needed to achieve a net benefit. Therefore, we recommend a process as part of the Tier 1 EIS that commits to the implementation of wildlife studies to identify and develop mitigation and conservation measures necessary to reach a net benefit. This process will continue through the Tier 2 process where those mitigation and conservation measures will be identified to ensure there is an overall enhancement of the features and values of the TMC.

For an I-11 alignment through the TMC, we recommend it temporarily parallel the CAP canal, and allow for the placement of concurrent wildlife crossings that match up with each of the existing siphon crossings. As part of this parallel alignment, North Sandario Road should be realigned with the I-11 alignment so that all wildlife structures (over and under to be determined during the Tier 2 process) cross both roads. Having North Sandario Road closely aligned with I-11 avoids greater fragmentation of wildlife crossing areas. Developing a termination point on the existing North Sandario Road will prevent through traffic, but ensure local access is maintained. The abandoned portion of the existing Sandario Road would be removed, and reclaimed by native habitat. This concept would create a cul-de-sac, and remove a section of the existing North Sandario Road, which will eliminate a barrier to wildlife movement that exists today.

Before effective mitigation can be designed, studies to understand east-west wildlife movement needs within Avra Valley should be conducted. These studies should gather baseline wildlife data, including evaluation of historic and current movement data, and surveys of existing populations. Using the baseline data, the studies should next identify the extent, location, requirements, target species, expected benefits, etc., of additional wildlife movement corridor(s) and supporting structures. To provide a net benefit this should focus on corridor(s) that enhance the features and values of the TMC, including providing a complete path for east-west wildlife movement from Saguaro National Park and Tucson Mountain Park, to the Ironwood Forest National Monument, Roskrige Mountains, and adjacent areas. Finally, the studies should identify an approach for perpetual management and protection of any acquired lands, as well as any adaptive management thresholds and likely actions. Identification of the entity responsible for future management, and agreements with the entity, would occur during the Tier 2 process.

These studies shall be developed and completed, in coordination with Reclamation, prior to the Tier 2 EIS, to ensure adequate data is available for that process. AGFD and USFWS, as recognized authorities on wildlife, with coordination and input from the TMC Working Group, should use these studies to identify the Tier 2 preferred wildlife corridor location and design. FHWA and the Arizona Department of Transportation (ADOT) would consult with the TMC Working Group to develop the recommended approach, prior to Reclamation's concurrence on a Tier 2 final Net Benefit Programmatic determination.

Based on this proposed process to identify, evaluate, and implement potential mitigation measures, Reclamation believes that a net benefit could be achieved, and Reclamation would concur with the application of the Net Benefit Programmatic Evaluation to the TMC. When appropriate, we look forward to reviewing the 4(f) Programmatic Evaluation report.

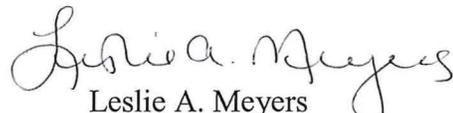
Reclamation also has the Tumamoca Preserves, which Reclamation understands FHWA and ADOT plan on avoiding. If this decision changes please notify us so we may review the proposal. In order to avoid a jeopardy decision on the tumamoc globeberry (*Tumamoca macdougali*) for the Tucson aqueduct of the CAP canal, Reclamation acquired approximately 181 acres to establish preserves. The preserves are made up of seven parcels in Avra Valley, with some extremely close to the proposed I-11 alignment.

Reclamation and the Central Arizona Water Conservation District (CAWCD) have design standards for facilities that encroach on CAP lands. These design standards protect the CAP facilities, and the ability to perform Operation and Maintenance of project facilities. As I-11 reaches the design phase, please coordinate with CAWCD, and Reclamation on the applicable design standards.

Thank you for the opportunity to provide comments and propose a path forward to minimize impacts to the TMC, and the features and values for which the property was established. Reclamation personnel would like to meet with you to clarify any of our recommendations, and

further assist the FHWA and ADOT with identification of appropriate measures for the benefit of wildlife. We look forward to having the opportunity to work with the FHWA and ADOT. If you have any questions, please contact Leslie Meyers, Area Manager, at 623-773-6218, or via email at lmeyers@usbr.gov. Additionally, you may contact Mr. Sean Heath, Manager, Environmental Resources Management Division, at 623-773-6250, or via email at sheath@usbr.gov.

Sincerely,


Leslie A. Meyers
Area Manager

cc: Acting Field Supervisor,
U.S. Fish and Wildlife Service
9828 North 31st Avenue No. C3
Phoenix, Arizona 85051-2517

Ty Gray
Director
Arizona Game and Fish Department
5000 West Carefree Highway
Phoenix, Arizona 85086-5000

C. H. Huckelberry
County Administrator
Pima County
Pima County Governmental Center
130 West Congress, Floor 10
Tucson, Arizona 85701-1317

Lyles, Judy

From: Pyne, Jennifer
Sent: Friday, June 08, 2018 4:44 PM
To: AMER-US-AZ Phoenix-i11doccontrol
Subject: FW: [EXTERNAL] RE: Tucson Mitigation Corridor/I-11 Net Benefit Discussion Draft
Attachments: FHWA I-11 Discussion Letter-Distribution Copy.pdf

Please include in the Admin Record.

Jennifer Pyne, AICP
Associate Vice President
D 602-648-2335 C 602-799-2231 **Please note: updated cell phone number**
jennifer.pyne@aecom.com

AECOM
7720 North 16th Street, Suite 100, Phoenix, Arizona 85020
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www.aecom.com

[Twitter](#) | [Facebook](#) | [LinkedIn](#) | [Google+](#)

From: Jay Van Echo [mailto:JVanEcho@azdot.gov]
Sent: Friday, June 08, 2018 3:59 PM
To: Pyne, Jennifer; Rietz, Jessica
Subject: FW: [EXTERNAL] RE: Tucson Mitigation Corridor/I-11 Net Benefit Discussion Draft

fyi

Jay Van Echo, PE
ADOT I-11 Study Manager
jvanecho@azdot.gov
520-388-4224 office
520-400-6207 cell

From: Heath, Sean [mailto:sheath@usbr.gov]
Sent: Friday, June 08, 2018 3:32 PM
To: Aryan Lirange
Cc: Jay Van Echo; Alan Hansen; tbommarito@usbr.gov
Subject: Re: [EXTERNAL] RE: Tucson Mitigation Corridor/I-11 Net Benefit Discussion Draft

Aryan,

Here you go, sorry its been a busy week. Just signed this afternoon.

Sean Heath
Manager, Environmental Division
Phoenix Area Office, Bureau of Reclamation
6150 W. Thunderbird Road
Glendale AZ 85306-4001
623-773-6250 (office)
623-208-2690 (cell)
sheath@usbr.gov

On Fri, Jun 8, 2018 at 3:17 PM, Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov> wrote:

Sean... I had meant to touch base with you earlier this week, but time slipped away to other projects.

Can you provide any news on the status of the TMC letter?

Since, I will be out of office next week, and Rebecca will be on maternity leave (baby isn't here quite yet), can you be sure to send an electronic copy to the team (especially jvanecho@azdot.gov) so the team can get to work incorporating the details into the Admin DEIS as soon as you send it out?

We are still targeting the end of June (maybe early July) for submittal to the Cooperating Agencies, this BOR piece is a critical part of it and will take some time to incorporate properly. We definitely would like to include it in the DEIS instead of using a placeholder.

Thanks. Have a nice weekend (if you aren't already).

Aryan

Arizona FHWA – Senior Urban Engineer

(eMail) aryan.lirange@dot.gov

(602) 382 8973 | cell (602) 999 2921

From: Heath, Sean [mailto:sheath@usbr.gov]

Sent: Wednesday, May 30, 2018 4:46 PM

To: Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov>

Cc: Jay Van Echo <JVanEcho@azdot.gov>; Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>; Hansen, Alan (FHWA) <Alan.Hansen@dot.gov>; tbommarito@usbr.gov

Subject: Re: [EXTERNAL] RE: Tucson Mitigation Corridor/I-11 Net Benefit Discussion Draft

Aryan,

We have gone through all of the comments and are finalizing the letter. We should have it signed by Monday or Tuesday. The direction in the letter remained the same, we added some clarification language or additional information, where appropriate and based on comments.

Thanks

Sean Heath
Manager, Environmental Division
Phoenix Area Office, Bureau of Reclamation
[6150 W. Thunderbird Road](#)
[Glendale AZ 85306](#)-4001
623-773-6250 (*office*)
623-208-2690 (*cell*)
sheath@usbr.gov

On Wed, May 30, 2018 at 11:18 AM, Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov> wrote:

Sean... I was wondering if you could provide a short update on the status of your review/revision/submittal of the letter. As you know we are preparing the Draft EIS document for Cooperating Agency review and we have several places in the document that are placeholders for your input on the net benefit. We expect that it may take some time to incorporate (placeholders are good but not perfect, as it would be naïve to presume we can just drop in the text of the letter).

Thanks...

Aryan

Arizona FHWA – Senior Urban Engineer

(eMail) aryan.lirange@dot.gov

(602) 382 8973 | cell (602) 999 2921

From: Lirange, Aryan (FHWA)

Sent: Thursday, May 17, 2018 12:14 PM

To: 'sheath@usbr.gov' <sheath@usbr.gov>

Cc: Jay Van Echo <JVanEcho@azdot.gov>; Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>; Smith,

Alexander <alexandersmith@usbr.gov>; Petty, Karla (FHWA) <Karla.Petty@dot.gov>; Hansen, Alan (FHWA) <Alan.Hansen@dot.gov>

Subject: RE: Tucson Mitigation Corridor/I-11 Net Benefit Discussion Draft

Sean, please see the attached WORD document with 'track changes' enabled. We inserted some wording suggestions where we thought appropriate and few comments asking for clarity in other areas.

Please let us know if you require clarification on these comments.

Rebecca may be on maternity leave in the near future. Please cc myself and Alan Hansen to be sure we receive your inquiries.

Aryan

Arizona FHWA – Senior Urban Engineer

(eMail) aryan.lirange@dot.gov

(602) 382 8973 | cell (602) 999 2921

From: Petty, Karla (FHWA)

Sent: Thursday, May 17, 2018 9:52 AM

To: Smith, Alexander <alexandersmith@usbr.gov>

Cc: Jay Van Echo <JVanEcho@azdot.gov>; Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov>; Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>

Subject: RE: Tucson Mitigation Corridor/I-11 Net Benefit Discussion Draft

Good Morning Alex,

I appreciated the opportunity to talk with you last week and thank you for the reminder. It was very timely as I had just concluded a discussion with my staff on this topic.

FHWA is in the process of finalizing the consolidation of the Project Team's comments on the Draft BOR letter and proposed approach. These comments will be sent by Aryan Lirange to Sean Heath with a cc: to you

today. Aryan will be copying Jay Van Echo (Project Manager), Rebecca Yedlin and myself. With our comments, we are offering suggested language for your consideration and in some instances, are suggesting clarification on the approach/process.

Please let me know if you have questions or concerns with our approach to responding.

Karla

Karla S. Petty | Division Administrator

Federal Highway Administration | Arizona Division

[4000 N. Central Ave., Suite 1500 | Phoenix, AZ 85012](#)

[Office: 602.379.3725](#) | Cell: 602-448-7285

Email: karla.petty@dot.gov

From: Smith, Alexander [<mailto:alexandersmith@usbr.gov>]

Sent: Thursday, May 17, 2018 8:10 AM

To: Petty, Karla (FHWA) <Karla.Petty@dot.gov>; JVanEcho@azdot.gov; Debra Bills <debra_bills@fws.gov>; Chuck.Huckelberry@pima.gov; chh@pima.gov; ccrowder@azgfd.gov; Raul Vega <RVega@azgfd.gov>

Cc: Julia.Fonseca@pima.gov; Cat Crawford <cat_crawford@fws.gov>; Scott Richardson <scott_richardson@fws.gov>; Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>; cboucher@azgfd.gov; Sean Heath <sheath@usbr.gov>; Bommarito, Thomas <tbommarito@usbr.gov>

Subject: Re: Tucson Mitigation Corridor/I-11 Net Benefit Discussion Draft

Hello All,

This is just a reminder that we would like any comments or no comments statements that you may have regarding this proposed approach by COB tomorrow. This will allow us to finalize this letter to FHWA so they can proceed with their documentation. Thanks for your willingness to work together on this. As always feel free to reach out to me if there is anything we can do.

Thanks,

Alex

Alexander Smith

Deputy Area Manager

Bureau of Reclamation, Phoenix Area Office

[6150 West Thunderbird Road](#)

[Glendale, Arizona 85306-4001](#)

623-773-6215 (office)

alexandersmith@usbr.gov

On Fri, May 4, 2018 at 2:44 PM, Smith, Alexander <alexandersmith@usbr.gov> wrote:

Hello all,

Due to miscommunications, some parties have objected to the perceived approach of Reclamation regarding the Tucson Mitigation Corridor and "net benefit." While we feel that the determination of "net benefit" is a determination reserved primarily to Reclamation it is also not a decision that we would ever make in isolation without you our partners in the TMC being on board.

Reclamation did temporarily pull back from the direction of the large group meetings that were attempting to fully define every aspect of the proposed mitigation measures. As you can see from the attached discussion draft Reclamation feels that there currently is insufficient information to fully define what is required to reach a conclusive "net benefit" determination. Instead we are proposing a framework for a process that we feel would yield a "net benefit." As such we are proposing the fully defined mitigation plan be developed by AGFD and FWS based on future wildlife movement studies. Once this plan is developed by the wildlife agencies it would be reviewed and approved by all the parties.

To that end and through this entire process we have intended on circulating a working draft of the attached letter to you our partners for your review and comment. Please provide any comment you may have to Sean Heath with a cc: to myself. If you see any red flags with this general direction please give me a ring next week. Barring any red flags we would like your comments on this letter in the next two weeks.

As always, if you ever have any questions or feel that Reclamation is being anything other than fully

cooperative in this relationship please do not hesitate to just pick up the phone and call me directly.

Thank you,

Alex

Alexander Smith

Deputy Area Manager

Bureau of Reclamation, Phoenix Area Office

[6150 West Thunderbird Road](#)

[Glendale, Arizona 85306-4001](#)

623-773-6215 (office)

alexandersmith@usbr.gov

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Bureau of Reclamation, TMC Coordination Meeting Summary, October 18, 2018



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TUCSON MITIGATION CORRIDOR (TMC) COORDINATION MEETING

THURSDAY, OCTOBER 18, 2018
12:30 PM

BUREAU OF RECLAMATION (RECLAMATION) OFFICE
6150 WEST THUNDERBIRD ROAD
GLENDALE, AZ 85306-4001

* * * MEETING SUMMARY * * *

1. Introductions

Sean Heath, BOR
Alex Smith, BOR
Karla Petty, FHWA
Aryan Lirange, FHWA
Alan Hansen, FHWA
Rebecca Yedlin, FHWA (*via telephone*)
Jay Van Echo, ADOT
Katie Rodriguez, ADOT
Carlos Lopez, ADOT
Greg Byres, ADOT

2. General I-11 Tier 1 EIS Status Update

Aryan provided a general status update of the I-11 Tier 1 EIS project and the process that has been followed to address the Reclamation and other Cooperating Agency comments on the ADEIS.

The project team has been revising the ADEIS to address the comments Reclamation provided on the ADEIS and other questions regarding the process and determination of a Net Benefit Programmatic. The team has worked to address these comments and ensure the Chapter 4 (Section 4(f)) has addressed all of Reclamations input and recommendations. ADOT and FHWA also want to discuss the process and timeline to ensure that there is agreement.

Overview (Section 4(f) Programmatic Evaluation, Integration of June 2018 Reclamation Letter into DEIS)

Revisions to Chapter 4 were discussed and the project team provided an update on the changes that Reclamation will see in the new Chapter that will be provided to them prior to the public distribution of the DEIS.

Alex communicated that one of Reclamation's perspectives on the Net Benefit Programmatic determination was that the concurrence for the determination would be provided at Tier 2; however, the ADEIS language reads that concurrence would be needed at Tier 1. Reclamation believes a path forward with the TMC Partners is needed for agreement on the mitigation measures and process to achieve a concurrence by Reclamation at Tier 1 (prior to the Tier 1 ROD).

Aryan discussed the revised Chapter 4 and how the study team has directly drawn language from the June 2018 letter that Reclamation provided to ensure that Reclamation's requests were directly incorporated into the DEIS.

Alex communicated that although the June 2018 was from Reclamation, the letter incorporated recommendations from the TMC partners, who they have contractual responsibilities to. Reclamation recommended that ADOT and FHWA coordinate with the TMC partners on the mitigation to achieve consensus from the group so that the process at this Tier 1 stage is not stalled. Reclamation noted that process to a net benefit determination in both the Tier 1 (preliminary evaluation) and Tier 2 (net benefit concurrence) is as important as the specific mitigation strategies presented.

Aryan and Rebecca noted that coordination would occur with Reclamation and the TMC partners throughout the process, and that at this Tier 1 stage ADOT and FHWA need preliminary concurrence on the process of how a Net Benefit determination will be achieved at Tier 2. ADOT and FHWA would need concurrence again at the final Tier 2 stage that the Net Benefit Programmatic determination has been reached.

Alex responded that the process of a preliminary approval at Tier 1 and a final approval at Tier 2 is more in line with what their perspective was when they provided the letter in June 2018. At this Tier 1 stage, Reclamation agreed that they could concur on the process to achieving a Net Benefit Programmatic if the DEIS includes more of a focus on the outline of the process and commitment by ADOT and FHWA.

Aryan restated the importance of outlining the process, mitigation strategies identified, and commitment to engage with the appropriate stakeholders in the DEIS.

3. Schedule

Jay and Rebecca discussed options for coordination with the TMC partners through the monthly Cooperating Agency meetings, and after the release of the DEIS for public review.

The team discussed the following action items that will be needed moving forward:

- 1) Reclamation to provide revised language regarding the process that can be incorporated into Chapter 4.

- 2) ADOT to provide revised Chapter 4 of the ADEIS for Reclamation to review and comment on.
- 3) Discussion with TMC Partners to be planned following the DEIS public review and leading into the FEIS. Reclamation to be an active participant with TMC Partners in future coordination and communication efforts regarding net benefit and 4(f) process, schedule, and mitigation strategies, however, it was asked that FHWA and ADOT lead the coordination and communication efforts with the group.
- 4) Following the coordination of the TMC Partners and Reclamation, Reclamation would provide a letter of preliminary concurrence for the Section 4(f) Net Benefit Programmatic determination for the Tier 1 EIS.

Meeting Adjourned.

DRAFT



Letter from Department of the Interior with Bureau of Reclamation DEIS Comments, July 8, 2019



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United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
333 Bush Street, Suite 515
San Francisco, California, 94104

July 8, 2019

In Reply Refer To:
19/0143
Filed Electronically

Ms. Karla Petty
Division Administrator
Federal Highway Administration
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Subject: Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona, dated March 2019.

Dear Ms. Petty:

The Department of the Interior (Department) has reviewed the *Draft Tier 1 Environmental Impact Statement (EIS) and Preliminary Section 4(f) Evaluation for the Interstate 11 Corridor in Santa Cruz, Pima, Pinal, Maricopa, and Yavapai Counties, Arizona*, dated March 2019 and provides the following comments on behalf of its bureaus; the U.S. Bureau of Reclamation (Reclamation), the U.S. Fish and Wildlife Service (FWS), the U.S. Bureau of Land Management (BLM), and the U.S. National Park Service (NPS).

General Section 4(f) Comments

The Tucson Mitigation Corridor (TMC) is a 2,514-acre 4(f) designated property purchased in 1990 for approximately \$15 million. The land was purchased to partially mitigate biological impacts from the Central Arizona Project (CAP) Tucson Aqueduct-Phase B. Additionally, the CAP was modified to accommodate the TMC. In the Final EIS for the CAP Tucson Aqueduct-Phase B, Reclamation identified specific environmental commitments and mitigation measures to reduce project impacts. In accordance with the Fish and Wildlife Coordination Act of 1958 (PL 85-624, 16 U.S.C. 661 et seq.), Reclamation, Arizona Game and Fish Department (AGFD), FWS, and several public conservation groups agreed on a specific parcel (i.e., TMC) for mitigation. In 1990, Reclamation, FWS, AGFD, and Pima County signed a Cooperative Agreement. The Cooperative Agreement states:

"WHEREAS, 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)]".

[Type here]

The Master Management Plan (attached to Cooperative Agreement) prohibits any future development within the area other than existing wildlife habitat improvements or developments agreed to by Reclamation, AGFD, FWS, and Pima County.

In an effort to work with the Federal Highways (FHWA) and to accommodate FHWA's Programmatic EIS schedule, Reclamation identified preliminary conditions for a potential path to a programmatic Net Benefit determination for the TMC in a letter dated June 8, 2018. This letter stated that, "*Based on the proposed process to identify, evaluate, and implement potential mitigation measures, Reclamation believes that a net benefit could be achieved, and Reclamation would concur with the application of the Net Benefit Programmatic Evaluation to the TMC.*" Our understanding is that FHWA is requesting a higher level of commitment than what was provided in the June 8, 2018 letter prior to the Tier 1 EIS Record of Decision. Based on the lack of specificity and qualitative analysis inherent in a Programmatic EIS, Reclamation would not be able to provide a higher level of commitment on our concurrence for a 4(f) net benefit determination for the TMC.

After continued consultation with our TMC partners, the Department is requesting FHWA prepare an Individual Section 4(f) Evaluation for the TMC. Based on discussions with FHWA, it is our understanding that this change will not affect the overall EIS schedule.

The true value of the TMC is the functional and critical role the property plays in maintaining the primary wildlife movement corridor between the Roskrige Mountains, Ironwood Forest National Monument and west across Avra Valley to the Tucson Mountains and Saguaro National Park (SNP). The corridor supports multiple biological processes that are critical to the ecological health of SNP and Tucson Mountain Park, both Section 4(f) properties found within the Tucson Mountains that total approximately 44,818-acres. As a result of this role, Reclamation has viewed and managed the TMC as a Section 4(f) property of unique significance and critical importance.

General EIS Comments

Recommended Alternative

The Department continues to be concerned that the analysis at the Tier 1 level is insufficient to determine a Recommended Alternative or a Preferred Alternative in the Final EIS. The Recommended Alternative, which is 0.3 miles from SNP and 0.6 miles from Wilderness, should include the necessary studies to illustrate and further quantify the impacts the highway and cumulative effects of future multi-modal transportation and reasonably foreseeable subsequent development would have to park resources and visitors; specifically to wildlife movement and park wilderness values; impacting the view shed, diminishing natural sounds; diminishing night sky darkness and increasing air pollution.

The Tucson Mountain District of SNP was established to protect its natural resources, scenic beauty, and habitat from various threats associated with the growth of metropolitan Tucson. Because many wildlife species rely on the ability to move in and out of SNP to meet their water needs throughout the year, SNP works closely with adjacent land managers and neighbors to assist in providing habitat (and water sources) that maintain healthy wildlife populations.

These needs have been recognized and formalized through federal and local efforts. As mentioned above, Reclamation established the TMC to protect a critical wildlife corridor. Additionally, Pima County established the Pima County Buffer Overlay Zone, in part to: “3. Establish mechanisms that will protect the public preserves and result in an ecologically sound transition between the preserves and more urbanized development; 4. Assure the continued existence of adequate wildlife habitat and foster the unimpeded movement of wildlife in the vicinity of Pima County's public preserves...” (Pima County Code of Ordinances § 18.67). Finally, the Sonoran Desert Conservation Plan has identified critical wildlife corridors within the project study area which connect the park to other adjacent conservation lands.

The Recommended Alternative directly impacts all three of these properties: it bisects the TMC, it overlaps 916 acres of the Buffer Overlay Zone, and “most of the corridor (94%) impacts one or more categories of the Conservation Land System” identified in the Sonoran Desert Conservation Plan (Pima County DOT Report, Appendix F, p. 267).

Based on the potential for significant adverse impacts to SNP, TMC, Ironwood National Monument, and Pima Pineapple Cactus (PPC), the Department recommends the Orange Alternative for the southern section of the corridor. Additionally, the Orange Alternative better serves planned growth areas, freight industry focus areas, and economic activity centers while still reducing travel time over the no build alternative. Our determination is based on an analysis of the potential impacts and the EIS which states the Orange alternative best responds to continued population and employment growth in the South Section; provides the most access to economic activity centers; reduced impact to wildlife corridors and linkages; and, would have fewer impact to PPC and its habitat.”

Overall the environmental impact under Segment B is less severe to wildlife connectivity and the federally endangered PPC. Therefore, as identified above, Segment B is the ideal selection for the southern end of the study area.

Pima Pineapple Cactus

The Department recommends that FHWA develops a preliminary effects analysis and mitigation strategy for the federally endangered PPC (*Coryphantha scheeri* var. *robustispina*) before Option D of the recommended alternative is finalized in the Record of Decision. If the effects analysis and mitigation strategy are deferred until Tier II, we recommend that all options for aligning I-11 through Pima County remain open.

Of all listed species that may be affected by the I-11 project, FWS is most concerned about effects to the PPC. Unlike other listed species that occur in the I-11 study area—which tend to occur in small numbers in restricted or relatively inaccessible habitats—the PPC occurs in significant numbers within all three of the I-11 build corridor alternatives. The recommended alignment for I-11 will bisect the PPC’s entire known range from south to north and will affect possibly hundreds of individual cactus plants. The proportion (percent) of the known range-wide population that will be affected is unknown but is likely to be significant.

FWS is currently aware of fewer than 8,000 extant PPC individuals across the range of the taxon. In addition, 1,837 are known to no longer exist, primarily due to development and mining.

A primary concern is to assure that a path to avoid Endangered Species Act Section 7(a)(2) prohibitions against jeopardy is available before formal section 7 consultation on the cactus occurs during or after Tier II. That assurance can be provided only if PPC numbers and distribution within the build corridor alternatives, or at least the recommended alternative, have been assessed in advance, and only if I-11 planners and FWS are confident that project affects to those populations can effectively be avoided or mitigated.

There is currently insufficient information to determine whether impacts to the PPC that may result from the I-11 project can be mitigated or to assure that a jeopardy opinion from the FWS would not occur during formal consultation on the PPC. A potential jeopardy decision for the PPC due to potentially large losses of this endangered species is critical and poses a serious challenge to I-11 planners.

Central Arizona Project

Reclamation and the Central Arizona Water Conservation District (CAWCD) have design standards for facilities that encroach on CAP lands. These design standards protect the CAP facilities and the ability to perform Operation and Maintenance of project facilities. As I-11 reaches the design phase, we recommend coordination with CAWCD and Reclamation on the applicable design standards.

Segment U of the recommended alternative which spans north through the Hassayampa Plain and Tonopah Desert study area has the potential to affect wildlife movement over two concrete wash overchutes and a wildlife bridge. While the primary intent of overchutes is to maintain hydrological connectivity, wildlife use was considered in their design. Reclamation has performed long-term monitoring of multiple CAP wildlife bridge and concrete wash overchutes. Some overchutes currently being monitored have recorded total individual crossings by mule deer as high as 380 a month. It is expected that Segment U would devalue and reduce the wildlife utilization of the overchutes and the wildlife bridge in the surrounding area. Replacement of multiple wildlife crossing structures should be included as mitigation in Segment U.

Summary Comments

As Cooperating Agencies, we value our cooperative relationship and believe an Individual Section 4(f) Evaluation is the most appropriate evaluation moving forward. At its conclusion, if Segment D is still chosen as part of the preferred alternative, then the Department still believes the same conditions identified in Reclamation's June 8, 2018 letter are still applicable to accomplish the required minimization under 23 CFR 774.3(a)(2) and the appropriate mitigation required to compensate for the loss and "use" of 453-acres (18% of the TMC) and all necessary measures to avoid defeating the initial purpose of its acquisition [16 U.S.C., section 663(d)]. The Department continues to be committed to consulting and collaborating on the analysis necessary to determine the best way to minimize and mitigate the effects of the proposed I-11.

Thank you for the opportunity to provide comments and a path forward to minimize impacts to the TMC and the features and values for which the property was established. The Department and bureaus would be available to meet to clarify any of our recommendations, and further assist the FHWA and ADOT with identification of appropriate measures for the benefit of wildlife.

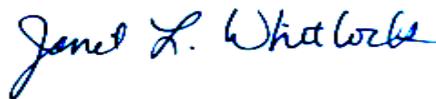
For additional comments from BLM, please see **Attachment 1** – *Additional Comments from the BLM on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

For additional comments from Reclamation, please see **Attachment 2** – *Additional Comments from Reclamation on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

For additional comments from NPS, please see **Attachment 3** – *Additional Comments from NPS on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

Thank you for the opportunity to provide comments, and we look forward to continued work with the FHWA and ADOT. For questions regarding specific comments please contact: Mr. Lane Cowger with BLM at 602-417-9612 or via email at lcowger@blm.gov; Mr. Bob Lehman with FWS at 602-242-0210 or via email at Robert_lehman@fws.gov; Mr. Jeff Conn with NPS at 623-773-6250 or via email at jeffery_conn@nps.gov; Mr. Sean Heath with Reclamation at 623-773-6250 or via email at sheath@usbr.gov. For all other comments or questions please contact me at 415-420-0524 or via email at janet_whitlock@ios.doi.gov.

Sincerely,



Janet Whitlock
Regional Environmental Officer
Office of Environmental Policy and Compliance

Attachments

Cc

Shawn Alam, DOI

Jeff Conn, NPS

Lane Cowger, BLM

Sean Heath, BOR

Courtney Hoover, DOI

Robert Lehman, FWS

Joseph Mathews, SOL

Roxanne Runkel, NPS

Attachment 2 – Additional Comments from Reclamation on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.

#	Section	Page	Paragraph/Bullet/Figure	Line(s)	Reviewer	Comments
1	Overall comment				Reclamation	Please characterize the impacts as to their context and intensity. For example, in the document the term “impacts” is used instead. This does not tell the reader if the effects are adverse or beneficial.
2	Overall comment				Reclamation	Reclamation feels that additional analysis would be helpful to completely evaluate the potential effects of the proposed action. The DEIS should provide sufficient detail to foster an informed decision and not preclude corridor choices in the future when that information is available. A ROD will be signed at the end of this NEPA process for a specific corridor that is based on a broad, programmatic approach. Put another way, by the time the Tier II NEPA analysis occurs the corridor has already been selected and the Tier II site specific analysis will not be used to make a truly informed decision on the corridor, only on the alignment within the chosen corridor. Selection of a corridor in the Tier I EIS deprives the decision maker and the public of evaluating the true impacts of the proposed action and alternatives. Recommend carrying multiple corridors forward to the Tier II NEPA analysis, particularly where the environmental impacts are controversial or additional information would facilitate an informed decision.
3	Overall comment				Reclamation	Use of “could” throughout document. For the environmental effects section, “could” is often used to characterize the potential for an impact to occur. For example, on page 3.9-33 line 27 “The visual intrusions related to the Build Corridor Alternatives could impact the visual resources and result in unsatisfactory visitor experiences.” In most cases, the document could be a little more definitive. In this instance, the build corridor alternatives would impact visual resources.
4	3.2	3.2-3	Table 3.2-1	Purple alt, corridor option C, 4 th bullet	Reclamation	If this alternative is chosen, FHWA’s proposal to address disproportionate impacts to Environmental Justice populations is “targeted outreach”? At the Tier II level, the corridor decision has already been made so the potential menu of mitigation options is reduced.
5	3.2, 3.8.4	3.2-4, 3.8-11	Table 3.2-1, Table 3.8-4		Reclamation	“Potential for substantial noise impacts (15-dBA increase from existing).” On page 3.8-8 (line 2) it states there could be a 33 dBA difference between a low use area and a point near an existing interstate. This seems like it should be the baseline, or at least the worst-case scenario for the NEPA analysis.
6	3.2	3.2-4	Table 3.2-1	Purple alt, corridor option G, 1 st bullet	Reclamation	“Better avoids impacts on Santa Cruz River in Pinal County” This statement is an outlier compared to the rest of the table. It would better avoid impacts compared to? Does this table compare environmental affects among alternatives and against the no action alternative?
7	3.2	3.2-5	Table 3.2-1	Purple alt, corridor option II, 5 th bullet	Reclamation	Suggest delete “avoid” and just state minimize and mitigate for impacts since 99% of the soils have been mapped as prime and unique.
8	3.3.1.3	3.3-2			Reclamation	Wherever appropriate in this section, please include the CAP trail, a National Recreational Trail. The trail has only been partially completed but it is designated and included in CAP NEPA evaluations.
9	3.3.1.3	3.3-8			Reclamation	Land Management and Special Designated Lands Section Please describe all existing management plans (e.g., RMP, FMP, trail mgmt. plan, etc.) and evaluate consistency with those plans (40 CFR §1502.16(c))
10	3.3.1.4	3.3-21		31-35	Reclamation	Option X (and all alternatives) would cross the CAP and impact mitigation land on the north side of the canal.
11	3.3.5	3.3-47	Table 3.3-8, overall land use considerations		Reclamation	Under the purple alternative, it states that the corridor is “generally consistent with adopted plans”. It is not consistent with the Master Management plan for the TMC. Is it “generally” consistent with RMPs, FMPs, HCPs, and local plans? (i.e., SNP, Ironwood NM, Avra Valley HCP, etc.)
12	3.4.2	3.4-2	Table 3.4-1		Reclamation	SNP also has a Comprehensive Trail Management Plan

13	3.4.2	3.4-2	1 st para	2-9	Reclamation	Please add the CAP National Recreational Trail
14	3.4.6	3.4-13	Table 3.4-5, Federal Resource topic		Reclamation	Please add Saguaro National Park under the purple and green alternative. Both alternatives would affect recreation in the park.
15		3.7-2		39-40	Reclamation	Reword discussion of indirect effects. ACHP guidance posted on June 10, 2019 considers indirect effects to be caused later in time; therefore, visual and atmospheric effects from highway construction would be considered direct effects, not indirect effects. Link provided https://www.achp.gov/news/court-rules-definitions-informs-agencies-determining-effects
16		3.7-7		13	Reclamation	Given the considerable backlog in AZSITE (some 8,000 records) and the scale of the EIS, recommend supplementing this analysis with a records check from the ASM Archaeological Records Office, and updating the tables and counts throughout the EIS to reflect this addition. Additionally, FHWA should consider conducting a spatial search using tDAR to gain access to records that might not otherwise be available from the ARO.
17		3.7-7		42-45	Reclamation	Why did FHWA exclude GLO maps as part of their identification process? These records will likely contain named structures not visible on modern aerials.
18		3.7-8		1-2	Reclamation	Was the preliminary classification submitted to anyone for consultation? SHPO? Tribes?
19		3.7-8		24-25	Reclamation	It would be useful to provide an estimation of how much of the alternatives have been surveyed in the last 10 years in addition to the total survey coverage provided. This will give the public an idea of how reliable the survey data are.
20		3.7-13		Table 3.7-4	Reclamation	Would be helpful to add a column or text in the header column for each alternative and show again the percent surveyed, so that readers don't have to go back 5 pages to find it and they can properly understand the site frequency in relation to percentage of land covered. For example, the orange alternative has almost twice as many sites, but also almost twice as much percentage surveyed.
21		3.7-15		Table 3.7-6	Reclamation	Why are the NRHP evaluations of archaeological sites not presented in a similar table to this one? I think that would be very helpful!
22		3.7-17		15-16	Reclamation	Why does FHWA not consider increased traffic from I-11 traffic to have the potential to adversely affect sites adjacent to highways that won't need new lanes added?
23		3.7-17		38	Reclamation	Why does FHWA not include known TCPs along the alignment as something that might be considered to have high impacts?
24		3.7-18		12-13	Reclamation	It seems unwise to identify non-surveyed areas as having moderate potential for unrecorded sites to be placed in the Low impact column. Many professionals can attest to finding substantial subsurface intact deposits in areas where they didn't expect to find much, especially in southern Arizona. Recommend reclassifying moderate potential to the moderate impact section.
25		3.7-18		25-28	Reclamation	Doesn't this methodology skew the data to over-represent areas with more survey coverage?
26		3.7-20		16-19	Reclamation	The EIS did not have a sentence about the Purple Alternative but did include Orange and Green. Please add Purple.
27		3.7-22		1-26	Reclamation	This discussion seems to consider adverse effects to historic properties that have not previously been affected and adverse effects to historic properties that have been previously mitigated on equal footing. Some would argue that it makes more sense to favor impacting sites that have already been effected, rather than putting unaffected sites at risk of adverse effects. For example, the Dairy Site is already compromised, so why not impact it further rather than impacting a site that hasn't been compromised yet? Why not allow previous investigations in southern Arizona to carry some of the mitigation burden for FHWA?
28		3.7-22		37	Reclamation	Tables showing the number of sites that will be impacted by Options B, G, and Q3 would be helpful to give a sense of scale. You could also consider showing the values in previous tables in parentheses so people know these sites will be impacted no matter which alternative is selected.

29		3.7-29		15-29	Reclamation	Would it be possible to protect deeply buried deposits on the Santa Cruz by building over them, and not exposing them at all? Or is that not feasible given the scope of earthwork in these areas?
30		3.7-30		13	Reclamation	Why is there not discussion of cumulative effects in the text, but only bullet points in tables? Why is there no consideration of proposed projects that cross these alternatives, like Sun Zia and TEP lines, San Carlos Irrigation Project Rehab, or the expansion of wells and mines in these areas?
31	3.8.4.1	3.8-9		1	Reclamation	Stating a difference of 15 dBA seems an understatement since at the top of page 3.8-8 it says there could be a difference of 33 dBA.
32	3.8.4.1	3.8-9	2 nd paragraph	7-12	Reclamation	The statement regarding noise impacts occurring out to 250 feet is not the case for Saguaro National Park. In the park where noise is an unwanted intrusion the effects would occur much farther out. How far into the park would visitors hear traffic from I-11?
33	3.8.4.1	3.8-9	3 rd paragraph	23	Reclamation	Does the sensitive receptor count include visitors to SNP? The baseline for sensitive receptors along segment B of the orange alternative includes existing interstate traffic noise, segments C and D of the purple and green alternatives do not.
34	3.8.4.2	3.8-12	Table 3.8-5		Reclamation	The dBA numbers in this table are much different than the numbers in Table 3.8-3. Why are the noise levels so much lower for I-11 than existing interstates? Would the projected traffic levels on I-11 be much less than SR 85?
35	3.9.4.5	3.9-33		39-	Reclamation	<p>“Build Corridor Alternatives on new alignments where no road currently exists would increase sky glow the most because they would:</p> <ul style="list-style-type: none"> * Introduce new sources of light. * Provide transportation corridor access to the adjacent areas, which could encourage adjacent development based on local zoning.” <p>It is identified that segment D or C would result in High potential for light pollution because new segments would bring additional vehicles into the area but also attract residential and commercial development. It is expected that additional night lighting on the west side of the TMC would devalue and reduce wildlife utilization of the existing 7 siphon crossing structures and constructed highway overpasses. Artificial night lighting is known to adversely impact the behavior, foraging, movement, and predation of wildlife (Beier 2006). Artificial lighting can alter the light-sensitive cycle of different species and impair an individual’s ability to navigate through an area through disorientation from and attraction to that artificial light source (Beier 2006). The attraction of wildlife to artificial light sources varies by species, but it has been identified as a cause of decline in reptile populations (Perry and Fischer 2006). It is anticipated that a freeway that is artificially illuminated along with vehicle lights would obstruct individual animals from accessing and departing the Tucson Mountain Park and Saguaro National Park from the west.</p>
36	3.12.3	3.12-10	Table 3.12-9		Reclamation	The large number of acres for prime and unique farmlands for the southern section of the orange alternative does not seem possible. In this section it would be co-located with I-10 but segments C and D of the purple and green alternative would be breaking new ground.
37	3.13.4	3.13-20	1 st para	5-7	Reclamation	Is this percentage of corridor approach consistently used for all resource topics? Or, is there a specific reason why it could only be applied here?
38	3.14	3.14.30		1-15	Reclamation	Bureau of Reclamation biologists have been performing long-term monitoring of multiple Central Arizona Project Canal wildlife bridge and concrete wash overchutes. Segment U of the recommended alternative which spans north through the Hassayampa Plain and Tonopah Desert study area comes within approximately 450 feet of a concrete wash overchute that is located north east of the proposed Segment U. While the primary intent of overchutes is to maintain hydrological connectivity, wildlife use was considered in their design. Some overchutes currently being monitored have recorded total individual crossings by mule deer as high as 380 a month. It is expected that Segment U would

					<p>devalue and reduce the wildlife utilization of that overchute and the surrounding area. Devaluing that overchute would be coupled with the proposed Belmont development to the south and Douglas Ranch to the north. Two large scale communities that if built to full design would by themselves also devalue and reduce its use by wildlife. However, it is expected that a new major travel corridor would also attract additional businesses, residential development, and increase public access to these now secluded structures. As a result of that anticipated development and increased access it is expected that an additional CAP overchute and wildlife bridge approximately 1.2 and 2.4 miles to the west would also be devalued and their wildlife utilization reduced. Therefore the following mitigation for wildlife connectivity is being requested.</p> <p>The primary purpose of the concrete overchutes is for hydrological connectivity, but their secondary design consideration was wildlife movement so their recommended mitigation replacement is 1:1. Which is 1 replacement structure for each overchute that is expected to be permanently and significantly devalued by a project such as the proposed I-11. Due to the proximity of Douglas Ranch and Belmont development the recommended mitigation for the overchute east of the proposed segment is reduced to 0.5:1. Therefore the overchute found approximately 1.2 miles west also has a recommended mitigation replacement of 0.5:1. The wildlife bridge found 2.4 miles west is a mitigation structure designed and solely built for wildlife connectivity. It has a wildlife mitigation replacement value of 2:1. As with the overchutes the proximity of both planned developments has reduced the replacement value to 1:1. In the end the total requested mitigation replacement for dedicated and secondary CAP canal wildlife crossing structures is <u>2 total</u>.</p>
39	3.14	3.14-57	Tucson Mitigation Corridor	Reclamation	<p>Specific mitigation related to the TMC includes: (1) relocating and reclaiming Sandario Road; (2) conducting wildlife studies prior to the Tier 2 process; (3) aligning I-11 wildlife crossing structures to match the existing CAP canal siphons (7 crossings total); (4) <u>creating an additional wildlife crossing near the TMC, depending on the results of wildlife studies</u>; (5) acquiring property (<u>at a 1:1 ratio</u>) to support additional wildlife connectivity corridors within Avra Valley for the number of acres of the TMC that will be impacted by I-11; and (6) implementing design restrictions, such as no interchanges in the TMC or immediate area, and minimizing the width of I-11 to limit the I-11 footprint in the TMC area (see Chapter 4 [Preliminary Draft Section 4(f) Evaluation] for more detail on these mitigation strategies).</p> <p>As previously mentioned, please make the following edit to number 4. <u>(4) creating an additional wildlife crossing(s) near the TMC, depending on the results of wildlife studies</u>. Crossings needs to be plural by incorporating an S because no studies have been done that have identified how many new wildlife corridors would be needed to reach a Net Benefit.</p> <p>Item number 5 also requires that the reference to a 1:1 ratio be removed. Reclamation has not agreed to a 1:1 ratio and provided past written and verbal communication that it should be removed. A Net Benefit could not be accomplished with a 1:1 replacement ratio. The recommended replacement ratio would be based on the results of the proposed wildlife studies.</p>
40	4	4-7, 4-94	First Bullet	4-94	<p><u>23 CFR 774.3(d) Programmatic Section 4(f) evaluations are a time-saving procedural alternative to preparing individual Section 4(f) evaluations under paragraph (a) of this section for certain minor uses of Section 4(f) property. Programmatic Section 4(f) evaluations are developed by the Administration based on experience with a specific set of conditions that includes project type, degree of use and impact, and evaluation of avoidance alternatives.</u></p> <p>Based on the language above, the document does not explain how an interstate through the TMC can qualify as a “certain minor use”. It is a loss of 453-acres (18%)</p>

						(Page 4-44) How is bisecting the entire length of a wildlife movement corridor considered a minor use?
41	4	4-44	22		Reclamation	Reclamation requests the acreage totals for the TMC be corrected to 2,514-acres and identify the acreage loss as 18% from both the purple and orange alternatives. A loss of 453-acres from 2,514-acres is 18%.
42	4	4-55, 4-72, 4-73, 4-89, 4-95	Table 4-5	12, 4, 11-19	Reclamation	<p>The summary of use of the El Paso and Southwestern Greenway Trail should be categorized as <u>No Use</u> on page 4-55 due to information provided on page 4-72. It identifies the trail and states the following: <u>These properties can be avoided through grade-separation or other means.</u></p> <p>Additionally, the El Paso and Southwestern Greenway Trail should also be removed from the bulleted list on Page 4-73 and the total number of Section 4(f) properties be reduced to 6 or 7 (depending on Manning house) in the text on lines 26 and 28.</p> <p>Additionally on page 4-95 it states: “Downtown Tucson: There are seven Section 4(f) properties that fall within 120’ of either side of I-10. I-11 would expand the ROW 60 feet of either side, or 120 feet on one side or the other. There are 7 properties at risk, but a smaller number would be impacted.”</p> <p>When evaluating the Levi H. Manning House, a 120’ expansion from the east side of I-10 would only utilize a section of the parking lot while leaving the house unaffected and intact. Is this still a use? How far out does the 4(f) property extend?</p> <p>The EIS does not address whether FHWA evaluated other Net Benefit opportunities along Segment B. At a May 22, 2019 Cooperating Agency Meeting FHWA was asked and they stated they had not pursued a Net Benefit option with any other Section 4(f) properties including David G. Herrera and Ramon Quiroz Park. During that meeting they were informed an opportunity exists at Estevan Park located approximately 0.2-miles north. A Net Benefit can be achieved by relocating at the larger park and installing and upgrading newer and additional facilities for the local community. Only a Net Benefit was pursued by FHWA and ADOT on Segment D. “Section 4(f) properties should be identified as early as practicable in the planning and project development process in order that complete avoidance of the protected resources can be given full and fair consideration (23 CFR 774.9(a))”. By not considering and pursuing a Net Benefit for the Herrera and Ramon Quiroz Park, FHWA and ADOT did not give full and fair consideration to the TMC.</p> <p>Based on information provided in Chapter 4, only 6 Section 4(f) properties are at risk in Tucson area. Please update page, 4-75 and 4-95.</p>
43	4	4-60	Table 4-5		Reclamation	<p>Reclamation requests that FHWA include the following italicized and underlined summary quantification in the results section of Table 4-5 to show total impact from use. The following information should be provided in the table summary and discussed further to properly identify use of Section 4(f) properties in Avra Valley and Tucson.</p> <p><u>Use (total acres): 453-acres (Purple), 453-acres (Green), 234-acres (Orange)</u></p>
44	4	4-77		41	Reclamation	<p>Please incorporate the following italicized and underlined edits which identifies and clarifies the extent of use of the TMC.</p> <p>In the Preliminary Draft Section 4(f) Evaluation, the Purple or Green Alternatives (Options C and D) would incorporate a portion <u>453-acres (18%) of TMC land</u>, thereby using the TMC property.</p>
45	4	4-77			Reclamation	<p>Identified under Section 4(f) Legislation, Regulations, and Guidance for Net Benefit is the following information. Within the section titled Findings it states that in order to determine that the do-nothing and avoidance alternatives described in the Alternatives section are not feasible and prudent you must do the</p>

						<p>following which <u>only</u> occurs in the Tier 1 EIS and not Tier 2.</p> <p><u>“The net impact of the do-nothing or build alternatives must also consider the function and value of the Section 4(f) property before and after project implementation as well as the physical and/or functional relationship of the Section 4(f) property to the surrounding area or community.”</u></p> <p>The physical and/or functional relationship is missing from the analysis. Please identify and evaluate the physical and/or functional relationship of the Section 4(f) property (Tucson Mitigation Corridor) to the surrounding area or community such as Saguaro National Park, Tucson Mountain Park, and further west across Avra Valley.</p>
46	4	4-79		34-36	Reclamation	<p>Please incorporate the following line.</p> <p>The Orange Alternative is co-located with I-10 in the Tucson area. The Orange Alternative would avoid the TMC but would impact more Section (f) properties than the Purple and Green Alternatives. <u>Whereas the Purple and Green Alternatives would result in a greater loss of 453-acres to only 234-acres on the Orange Alternative.</u> The Orange Alternative is not an avoidance alternative.</p>
47	4	4-80		14-15	Reclamation	<p>“Wildlife connectivity would be disrupted at the entrance and exit structures.”</p> <p>That would only be correct if you constructed the entrance and exit structures near the boundaries of the property. For that reason that would never be the recommended entrance and exit locations for a tunnel.</p>
48	4	4-80		38, 43-44	Reclamation	<p>Please clarify the line identified below. While Sandario Road borders the western boundary of TMC and does result in the deaths of some wildlife by vehicle strikes and likely results in some intimidation, it is not an impermeable barrier to wildlife. Lots of mule deer and desert big horn are able to safely cross Sandario Road under current traffic conditions.</p> <p>Modify line 38 to the following. “Sandario Road would remain <u>a temporal barrier to wildlife movements with inconsistent periods of traffic and the absence of traffic.</u>”</p>
49	4	4-80		20-22	Reclamation	<p>“The Orange Alternative would avoid the TMC Section 4(f) property but would impact Section 4(f) properties that are clustered in Downtown Tucson.” FHWA did not identify or present any comparison of value or importance of the identified Section 4(f) properties on Segment B, C, and D. There is little to no information on their history, purpose, or value to adequately inform readers of the EIS.</p> <p>1) Santa Cruz River Park (multi use local park), 2) David G. Herrera and Ramon Quiroz Park (athletic fields and swimming pool), 3) Barrio El Membrillo Historic District, 4) El Paso and Southwestern Railroad District, and 5) Barrio Anita Historic District</p> <p>Whereas the 2,514-acre Tucson Mitigation Corridor functions as the primary wildlife movement corridor for approximately 44,818-acres (Tucson Mountain Park 20,000-acres and Saguaro National Park 24,818-acres) of two ecologically sensitive and unique parks both categorized as Section 4(f) properties. Even with minimization and mitigation in place such as multiple wildlife overpasses, an I-11 travel corridor would further isolate them. The existing wildlife linkage would be impaired and its ecological functions suppressed.</p>
50	4	4-82			Reclamation	<p>Need to clarify what is mitigation vs minimization. Mitigation is compensation by replacing or providing substitute resources such as purchasing additional land to compensate for the direct loss of 18% of the TMC. Minimization is where you limit the degree or magnitude of the action and its implementation such as constructing overpasses across I-11 within the TMC.</p> <p>1) CAP Design Option - Minimization 2) Remove and reclaim Sandario Road – Minimization 3) Relocate Sandario Road – Minimization 4) I-11 crossings within the TMC – Minimization</p>

						5) Acquisition of land and crossings structures for additional wildlife movement corridor(s) – Mitigation 6) Dark Skies compliant – Minimization 7) Visual Screening - Minimization
51	4	4-83		7	Reclamation	Please edit Line 7 to make the word Corridor plural because no studies have been done to show the level of mitigation that will be needed. <i>Mitigation Recommended in Wildlife Studies Including Additional Wildlife Corridor(s)</i>
52	4	4-91		11-18	Reclamation	Reclamation questions what FHWA identifies as severe disruption of communities along Segment B when compared to Segments C and D? It was previously requested that FHWA <u>quantify and report</u> the number of homes that would be disrupted and need to be removed on all three segments in order for proper comparison and analysis. Additionally, since a Net Benefit is part of this analysis FHWA should include a quantification of how many homes would potentially be removed from the acquisition of land and homes approximately 0.9 miles north of the TMC. This location has been previously discussed as a probable location for one new wildlife corridor. A preliminary count by Reclamation personnel identified that a minimum of approximately 101 homes located outside the I-11 right of way would require acquisition to restore that area into a new wildlife corridor.
53	4.6	4-95, 4-96	4-7		Reclamation	“Downtown Tucson: There are seven Section 4(f) properties that fall within 120’ of either side of I-10. I-11 would expand the ROW 60 feet of either side, or 120 feet on one side or the other. There are 7 properties at risk, but a smaller number would be impacted.” Clarify how many and which properties would be impacted. Identifying 7 properties as part of the analysis when not all would be impacted inflates the level of impact for Segment B under Factor 1. On Page 4-96 it states Segment B would potentially impact 7 properties. It should be clarified to reflect what was identified in Table 4-7, that a smaller number would be impacted what specific properties would be in order to avoid overestimating the level of impact. As previously mentioned FHWA needs to provide background information on the other Section 4(f) properties located along the Orange alternative. There is an imbalance of information and on the TMC but nothing of equal comparison for the Orange alternative.
54	4	4-96		23-25, 29-31	Reclamation	As stated in accompanying letter, Reclamation feels that a programmatic evaluation is no longer a feasible approach and recommends an individual evaluation. Please revise accordingly. “The Recommended Alternative is the only alternative for which use of a Section 4(f) property could result in a beneficial outcome for the property.” As identified in a Department of Interior Points for Discussion document submitted to FHWA on March 28, 2019 there is a risk based on the assumption that a net benefit to the TMC could be reached given appropriate mitigation. If it is determined that one cannot be reached then under FHWA’s current evaluation either proposed segment through the TMC would not be the most prudent when compared to Segment B.
55	4.6	4-96		29-31	Reclamation	“By achieving the programmatic net benefit finding, the Purple, Green, and Recommended Alternatives would substantially reduce and possibly eliminate remaining harm to the TMC property.” How can the construction of the proposed I-11 reduce and eliminate remaining harm to the TMC property? Please Identify and incorporate into the referenced section.
56	4.6	4-97		20-26	Reclamation	“Reclamation requested FHWA and ADOT follow a prescribed process to identify, evaluate, and implement mitigation measures. <u>Wildlife studies shall be developed and completed, in coordination with Reclamation, prior to the Tier 2 EIS, to ensure adequate data is available for that process. AGFD and USFWS, as recognized</u>

					<p><i>authorities on wildlife, with coordination and input from the TMC Working Group, should use these studies to identify the Tier 2 preferred wildlife corridor location and design. FHWA and the Arizona Department of Transportation (ADOT) would consult with the TMC Working Group to develop the recommended approach, prior to Reclamation's concurrence on a Tier 2 final Net Benefit Programmatic determination.</i> Reclamation stated in their letter of June 8, 2018, co-alignment of the I-11, Sandario Road, and CAP canal crossings will provide the benefit of encouraging and enhancing conditions for wildlife movements across the TMC.”</p> <p>Please update the above paragraph to incorporate information from Reclamation’s June 8, 2018 letter to FHWA.</p>
57	4.6	4-97, 4-98		Reclamation	<p>Factor 5 address 7 elements of the project purpose and need while primarily evaluating the three alternatives as a whole and to a much lesser extent the segments used to construct the preferred alternative which is a hybrid of the three.</p> <p>1) Planned Growth Areas: Areas identified for anticipated future growth by municipal general and county comprehensive plans identifies prominent growth in Sahuarita along existing Interstate 19 and in Marana along existing Interstate 10. Growth while mild in size is anticipated on existing state route 86 which is a short distance from existing I-19. There is no forecasted or planned growth within Avra Valley or nearby that would justify the selection of Segment D and C. The two proximate growth areas identified in Sahuarita and Marana would logically be better served by the selection of Segment B through Tucson. Specifically within the EIS it states the following: “The Orange Alternative best responds to continued population and employment growth in the South Section; however, less growth is anticipated in the Tucson urbanized area compared to other portions of the Study Area”.</p> <p><u>As mentioned in the EIS the Orange Alternative best responds to continued population and employment growth in the South Section.</u></p> <p>2) Travel Time: Travel time in minutes for City pairs between Nogales and Casa Grande shows 117 minutes for Purple, 121 for Green, and 133 for Orange. The difference between the Purple (fastest) and Orange (slowest) is only a difference of 16 minutes.</p> <p><u>The Purple Alternative is the preferred with an improvement of 16 minutes travel time.</u></p> <p>3) As shown on Table 2-5 (2040 Vehicle Miles Traveled), Figure 2-14 (2040 Vehicle Miles Traveled for Passenger Cars and Trucks), and Figure 2-15 (2040 Vehicle Miles Traveled for Trucks), there would be a negligible increase (less than 1 percent) in VMT in the South Section with the Build Corridor Alternatives.”</p> <p><u>There is a negligible difference in VMT between the two alternatives and segments.</u></p> <p>4) Key Economic Centers: “The Orange Alternative provides the most access to economic activity centers, followed by the Purple Alternative” (p.2-32, 2-35) and within the southern section. So it is unclear why that Segment is identified as such a suitable option for growth and economic activity centers when Segment B is identified as the best option.</p> <p><u>As mentioned in the EIS the Orange Alternative provides the most access to economic activity centers.</u></p> <p>5) Alternate Regional Route: As previously mentioned for #3 there is a negligible increase in VMT for an Avra Valley alignment that leaves the only remaining justification for choosing one is that it provides an alternate regional route.</p> <p><u>Purple provides an alternate route over Orange.</u></p> <p>6) FHWA did not address or attempt to quantify the future acquisition of homes that would be needed to establish a new wildlife corridor required as mitigation</p>

					<p>for the loss of 453-acres and devaluing wildlife use of the TMC and the 7 siphon crossings within it. A past discussion with FHWA identified an area approximately 0.9-miles north of the TMC where a preliminary count by Reclamation personnel identified a minimum of 101 homes located outside the I-11 right-of-way that would require acquisition to restore that area into a new wildlife corridor.</p> <p><u>Within the EIS it states the Orange Alternative will result in less species isolation and less impact to the federally listed Pima pineapple cactus. Impacts to cultural resources would be comparable if not less along the Orange alternative.</u></p> <p>7) Substantial differences in costs: Capital costs for segment C (Purple) is \$2,371,714,000.00, \$2,082,061,000.00 for D (Green), and \$585,899,000.00 for B (Orange). That is a difference of \$1,785,815,000 more for constructing Segment C and \$1,496,162,000.00 more for Segment D over Segment B. It is far more costly to tax payers to construct new segments in Avra Valley then to improve and expand the existing Segment B.</p> <p><u>As identified within the EIS it is far less costly to construct Segment B.</u></p> <p>To summarize the 5 Factors: Factor 1 favors construction of Segment B. Factor 2 slightly favors Segment C. Factor 3 results in a negligible difference in VMT. Factor 4 favors Segment B. Factor 5 favors Segment C. Factor 5 favors Segment C. Factor 6 favors Segment B. Factor 7 favors Segment B. That is a difference of 4 to 3 in favor of Segment B.</p>
58	4	6-7		17-18	<p>Reclamation</p> <p>“The adverse effects on the low-income and minority populations in Tucson have the potential to exceed those borne by non-environmental justice populations.”</p> <p>This is a very general statement. How do they have the potential and what quantification has been done to show the level of impact in both areas? Incorporate the preliminary quantification of homes that would be removed from the acquisition of land and homes approximately 0.9 miles north of the TMC. This location has been previously discussed as a probable location for one new wildlife corridor. A preliminary count by Reclamation personnel identified that a minimum of approximately 101 homes located outside the I-11 right of way would require acquisition to restore that area into a new wildlife corridor.</p>
59	4.6	4-102		42	<p>Reclamation</p> <p>See comment #48 for suggested language.</p>
60	6	6-17			<p>Reclamation</p> <p>Reclamation disagrees with the recommended alternative and believes Segment B would be a better fit over Segment D. After evaluating the seven elements of Factor 5 previously identified and clarified above, Segment B better serves: 1) Planned Growth Areas, 2) Key Economic Activity Centers, 3) results in less species isolation, impacts to the listed Pima pineapple cactus and comparable or less impacts to cultural resources, and 4) significantly lower capital costs for construction.</p> <p>The 2,514-acre TMC was established in 1990 for a present-day cost of approximately \$15 million. It was acquired as mitigation for the construction of the Tucson Aqueduct of the Central Arizona Project (CAP) canal. The true value of the TMC is the functional and critical role the property plays with maintaining the primary wildlife movement corridor between the Roskrige Mountains, Ironwood Forest National Monument and west across Avra Valley to the Tucson Mountains. The corridor supports multiple biological processes that are critical to the ecological health of Saguaro National Park and Tucson Mountain Park, both Section 4(f) properties found within the Tucson Mountains.</p> <p>Additionally the 1990 Cooperative Agreement in which the TMC was established states the following: "WHEREAS, lands described herein for fish and wildlife purposes shall not become subject to exchange or other transaction if those actions would defeat the</p>

						initial purpose of their acquisition [16 U.S.C., section 663(d)]". No section 4(f) property located along Segment B within Tucson was established with or currently has a federal statute with a comparable level of protection.
61	6	6-7		3-9	Reclamation	<p>“The Purple and Green Alternatives also are located closer to Tucson Mountain Park, the Tucson Mitigation Corridor (TMC), and Saguaro National Park (SNP) – West and designated wilderness within the park). A new interstate in this area would result in varying degrees of change in noise, light, air quality, and visual character for SNP-West, Tucson Mountain Park, and the TMC. After careful consideration, FHWA and ADOT determined Orange Alternative impacts are unmitigable, whereas impacts under the Purple and Green Alternatives could be mitigated.”</p> <p>1) How did FHWA and ADOT determine those impacts within Avra Valley can be mitigated but not along the Orange alignment through Tucson? You can mitigate for noise, light, and air quality in Tucson the same way you can in Avra Valley.</p> <p>2) The differences between the two is impacts to Section 4(f) properties. There is the claim to not being able to mitigate impacts to some identified properties, such as the losses of certain homes or structures in historic districts. But you also have no guarantee of being able to effectively mitigate impacts to the TMC. The whole purpose of adequate time for wildlife studies is to determine if and how a Net Benefit could be reached, but there is no guarantee the measures to reach one can be identified or acquired. If they could be identified there is no guarantee from FHWA that those mitigation measures can be acquired and properly implemented to reach one. So there are risks and challenges for both segments.</p>



Email from Bureau of Reclamation, January 2, 2020



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Rietz, Jessica

Subject: FW: BOR additional comments
Attachments: Additional BOR comments on I-11 1_2_19.pdf

From: Yedlin, Rebecca (FHWA) [<mailto:Rebecca.Yedlin@dot.gov>]
Sent: Thursday, January 2, 2020 1:56 PM
To: 'jfife@azdot.gov' <jfife@azdot.gov>; Tracy D. McCarthy <tmccarthey@acstempe.com>
Cc: Jones, Laynee <laynee.jones@aecom.com>; Katie Rodriguez (KRodriguez@azdot.gov) <KRodriguez@azdot.gov>
Subject: FW: additional comments

Yep...

Happy New Year – Rebecca

From: Heath, Sean M [<mailto:sheath@usbr.gov>]
Sent: Thursday, January 2, 2020 11:50 AM
To: Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>; Lirange, Aryan (FHWA) <Aryan.lirange@dot.gov>
Cc: Bommarito, Thomas A <tbommarito@usbr.gov>
Subject: additional comments

Rebecca,

Here are some additional comments expanding on the importance of gene flow when looking at wildlife connectivity and the TMC. Let me know if there are any questions, or if any of the biologists have questions they can reach out to Tab directly also.

Thanks

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Additional Reclamation comments for an Individual 4(f) evaluation for the TMC

Identified in the March 2019 *Draft Tier 1 EIS and Preliminary Section 4(f) Evaluation for the I-11 Corridor*, the recommended alternative through Avra Valley would bisect the 2,514-acre Tucson Mitigation Corridor (TMC) resulting in a use of 453-acres (18 percent) of the TMC. As the Official with Jurisdiction over the TMC, Reclamation feels it is important to clearly identify constraints, minimization, and mitigation measures that are required as part of the Individual Section 4(f) Evaluation, as well as emphasize the unique and special significance of the TMC. The TMC was purchased in 1990 for a current value of approximately \$15 million to partially mitigate biological impacts from the Central Arizona Project (CAP) Tucson Aqueduct-Phase B. Additionally, the CAP was modified to accommodate the TMC. The property functions as the “primary wildlife movement corridor” for approximately 44,818-acres (Tucson Mountain Park 20,000-acres and Saguaro National Park 24,818-acres) of two ecologically sensitive and unique parks; both categorized as Section 4(f) properties. The true value of the TMC is the functional and critical role the property plays with maintaining connectivity between the Roskrige Mountains, Ironwood Forest National Monument and east across Avra Valley to the Tucson Mountains and Saguaro National Park (SNP). The corridor supports multiple biological and physical processes that are critical to the ecological health of both Section 4(f) parks. As a result of this role, Reclamation views and manages the TMC as a Section 4(f) property of unique and special significance and of critical importance as identified within the FHWA Section 4(f) Policy Paper.

“The regulation incorporates this aspect of the statute in the definition of feasible and prudent avoidance alternative which states that “it is appropriate to consider the relative value of the resource to the preservation purpose of the statute.” In effect, the first part of the definition recognizes the value of the individual Section 4(f) property in question, relative to other Section 4(f) properties of the same type. This results in a sliding scale approach that maximizes the protection of Section 4(f) properties that are *unique or otherwise of special significance* by recognizing that while all Section 4(f) properties are important, some Section 4(f) properties are worthy of a greater degree of protection than others.”

Since at least 1916, starting with the efforts of the Tucson Mountain Game Protective Association, wildlife within the Tucson Mountains have been actively managed (Brown, 2012). Tucson Mountain Park (TMP) was established in 1929 to preserve the natural and scenic resources of the Tucson Mountains and to provide opportunities for outdoor recreation in a natural setting (Pima County, 2007). In 1931, Arizona established the Tucson Game Refuge on the federal and private lands encompassing the Tucson Mountains and its piedmont, an area that ultimately became the Tucson Mountain Wildlife Area (AGFD, 2017). A 15,360 acre area of TMP was placed under federal management in 1961 by President John F. Kennedy, as a district of Saguaro National Monument, in part for its “*significant wildlife qualities*”(Proclamation No. 3439). Additional protections within the Tucson Mountains were added in 1976 with the Congressional designation of the Saguaro Wilderness (P.L. 94-567), and further protections were added in 1994 when the property was elevated to National Park status through a Congressional designation (P.L. 103-364). In 1988, Pima County established a Buffer Overlay Zone around

both TMP and SNP to “*assure the continued existence of adequate wildlife habitat and foster the unimpeded movement of wildlife in the vicinity of Pima County’s public preserves*” (Pima County, 1988; Figure 1).

Isolation of the Tucson Mountains

The role the TMC plays in preserving ecological health and maintaining important biological processes is what makes it unique and of special significance when compared to the other Section 4(f) properties in the I-11 study area. The fact that the Tucson Mountains and its piedmont are virtually isolated or fragmented from the surrounding landscape further supports the unique and special significance of the TMC (NPS, 1995; Perkl et al., 2018). Habitat fragmentation occurs when continuous habitat is broken apart into distinct pieces and isolated (Bennett and Saunders, 2010). Removal of native vegetation in areas utilized as wildlife habitat and movement areas causes disruptions to various ecosystem and biological processes such as humidity, ground and air temperature, nutrient cycling, structure and composition of vegetation, and litter decomposition.

Decades of conservation biology studies have demonstrated that isolation of wildlife and plant populations is a fundamental consequence of habitat fragmentation resulting from land use conversions and development such as construction of linear features (e.g., highways and canals) that restrict or eliminate immigration and emigration (Bennett and Saunders, 2010). Effects of highways are particularly acute, with negative road effects outnumbering positive effects 5:1 (Fahrig and Rytwinski, 2009). Isolation affects the following types of wildlife movements: (1) Regular movements of individuals between parts of the landscape to obtain different requirements (food, shelter, breeding sites), (2) seasonal or migratory movements of species at regional, continental or inter-continental scales, and (3) dispersal movements (immigration, emigration) between fragments, which may supplement population numbers, increase the exchange of genes, or assist recolonization if a local population disappears (Bennett and Saunders, 2010). These disruptions to wildlife movement can lead to extirpation, or local extinctions of these species in these areas (Coffin, 2007).

When populations become small and isolated they become vulnerable to stochastic event processes that normally pose little threat to larger populations. Those processes include: (1) Stochastic variation in demographic parameters such as birth rate, death rate, and the sex ratio of offspring, (2) loss of genetic variation, which may occur due to inbreeding, genetic drift, or a founder effect from a small population size, (3) fluctuations in the environment, such as variation in rainfall and food sources, which affect birth and death rates in populations, and (4) small isolated populations are particularly vulnerable to catastrophic events such as disease, fire, or drought (Bennett and Saunders, 2010). Some populations within SNP and TMP 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).

Species within SNP that have limited habitat within park boundaries and 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

cannot move back into the area. Preventing the extirpation of these species in the park depends on connectivity with populations outside the park. Loss of these species from SNP has implications, given that the NPS Organic Act specifically states that national parks are managed to protect wildlife and other natural and cultural resources in perpetuity (16 U.S.C. § 1).

There are very few studies with a proper Before-After-Control-Impact design that have demonstrated mitigation measures (e.g., tunnels, overpasses, etc.) creating a neutral or positive effect for wildlife, especially for non-game species (Benitez-Lopez et al., 2010). Given the known impacts of highways on wildlife, we must assume that loss or damage to the TMC would result in adverse effects on wildlife in the Tucson Mountains, potentially including extirpation of vertebrate species from SNP.

Fish and Wildlife Coordination Act

The TMC is compensation for wildlife movement disruption between the Tucson Mountains and west across Avra Valley, as well as preservation of habitat for a number of special status species (Reclamation, 1983). In the Final EIS for the CAP Tucson Aqueduct-Phase B, Reclamation identified specific environmental commitments and mitigation measures to reduce project impacts. Among those was the acquisition of the TMC, which the U.S. Fish and Wildlife Service (USFWS) stated the importance of in a comment later dated February 14, 1985. Within it they state:

“Without acquisition of this corridor, we believe the mitigation plan is grossly inadequate and would not come close to adequately addressing wildlife impacts”.

Following the establishment of the property in 1990, Reclamation entered into a Cooperative Agreement (CA) with Pima County, Arizona Game and Fish Department (AGFD), and USFWS for management and oversight of the TMC. The agreement was characterized as a “general plan” under the FWCA and has no termination date (AGFD, 2017). The CA states the following:

"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)]."

The existing Master Management Plan also prohibits any future developments within the TMC, other than wildlife habitat improvements.

In order for the recommended alternative to be chosen FHWA and ADOT cannot defeat the initial purpose of the property as mentioned in 16 U.S.C., section 663(d). Evaluating potential impacts to the purpose of the property requires knowledge of the connectivity, and ecosystem and biological processes associated with the property. Ensuring the preservation of connectivity through the TMC would require more than just the construction of wildlife bridges and compensation for the loss of 453-acres; it would require that the key ecosystem and biological processes that the TMC was specifically acquired for would continue. Those processes were identified by Reclamation prior to acquisition, in comment letters from Subject Matter Experts, and in the March 1984 Fish and Wildlife Coordination Act Report (FWCA Report), written by

the USFWS, the agency Congress entrusted with certain duties to consult on federal proposals to impound, divert, or otherwise control or modify any stream or other body of water (16 U.S.C., section 663(d)). As the Official with Jurisdiction over the TMC, Reclamation also has the right to identify and interpret the initial purpose of its acquisition.

Comment letters were received by Reclamation from The Wildlife Society (TWS) on May 16, 1983 and The Desert Tortoise Council (DTC) on December 1, 1983. Both are categorized as Non-Government Organizations but also subject matter experts in the fields of wildlife science, management and conservation, and desert tortoise conservation.

TWS stated the following within their letter:

“However, I would like to strongly recommend the idea of land acquisition for a wildlife movement corridor. The purchase of land, as suggested in the Information Packet would do several things. First, it would counterbalance the actual habitat loss due to construction itself. Secondly, it could mitigate for the residual migration disruption still occurring after wildlife bridges are constructed. More importantly, the purchase would reduce the possibility of the Tucson Mountains becoming a biological island. In effect, a fenced canal route along the West Side of the Mountains would greatly increase the probability of the Tucson Mountain area terrestrial wildlife populations being genetically cut off from a larger population base. Scientific studies of islands, in the geographic sense and as isolated populations of living organisms, have illustrated the problems inherit with the island situation. The Chapter again commends the Bureau for considering this idea, for 2 reasons. First, the biological considerations related to insularization (gene-flow problems, inbreeding, loss of vigor) through construction of the project, weakens island-situation populations.”

The DTC stated:

“We urge you to consider acquiring this corridor (sections 10, 11, 14, and 15, T.14S., R.11E.) for several reasons. This corridor lies within habitat supporting the Tucson Mountains desert tortoise population. Because few tortoise populations are known to occur in the Sonoran Desert, habitat acquisition would help ensure continued existence of this population. In addition, this land would provide a corridor for movement of desert tortoises from the Tucson Mountains to nearby foothill and mountain areas, thus providing continued gene flow and potential for population expansion. Numerous wildlife species besides the desert tortoise would enjoy similar benefits from acquisition of this wildlife corridor.”

Prior to the concept of a wildlife movement corridor being accepted by Reclamation, an internal memo was written by the project biologist titled *Justification for Acquisition of Land to Mitigate for Biological Impacts from Tucson B Aqueduct*, which identified three primary objectives of its proposed acquisition (Reclamation, 1983). The first objective (which were ordered by importance) was:

“1) To mitigate for the movement disruption impacts, not totally compensated for by wildlife crossing structures over the aqueduct, by providing a long-term movement corridor for wildlife between the Tucson Mountains and wildlife habitat to the west.”

The internal memo also stated that:

“wildlife movements across the aqueduct will permit bisected populations to maintain gene flow and will allow use of habitat on both sides of the aqueduct.”

The FWCA Report for Phase B of the Tucson Aqueduct, Central Arizona Project was prepared under the authority of and in accordance with Section 2(b) of the FWCA (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). It was developed as a detailed fish and wildlife report on the effects of Phase B of the Tucson Aqueduct. The Report was developed in coordination with and approved by AGFD. The report includes a description of wildlife movement needs that were documented in the AGFD Biological Resource Inventory for the Tucson Division Phase B Central Arizona Project (1983). The USFWS and AGFD documented that wildlife within the project area move for both long- and short-terms needs. Of equal, if not greater importance than daily movement are the long-term movements (FWS, 1984). Seasonal use areas are where valuable resources are found usually miles apart, requiring extensive journeys before they can be reached. Total population numbers and the dispersal of excess animals require the ability to utilize and access both long- and short-term use areas (FWS, 1984). Most importantly, the following statements were made in the 1984 FWCA Report:

“This dispersal also promotes gene flow between local populations, reducing the possibility of inbreeding especially with very small populations.”

“In addition to interference with normal gene flow within a population, the division of habitat into 2 or more parcels may affect the total number of animals that could be supported in each parcel versus the number of animals the habitat could support.”

“Islanding is a term developed by population biologists to describe the isolation of a population of animals from other populations by some physical or climatic barrier. Inbreeding, reduced viability due to small population size, and increased vulnerability to habitat disturbance are the usual result of islanding which often leads to the elimination of wildlife populations.”

“Some wildlife movement across the canal must continue in order to permit divided populations to maintain gene flow and all use of habitat on both sides of the alignment.”

“With only fencing and crossings, there would still be a long term loss of 50-70% of the mule deer population due to genetic isolation and insufficient habitat. With the movement corridor, fencing and crossings, mule deer impacts would be only about 10%, and these would be centered near Black Mountain and near the northern crossing area.”

The 1983 Reclamation internal memo written by the project biologist identified the purpose and primary objective of the property seven years before it was established, which is to provide a long-term wildlife movement corridor to maintain normal gene flow. Additionally, the

1984 FWCA Report summarized the most important purpose of the TMC, which is to promote and maintain normal gene flow while avoiding genetic isolation of populations within the Tucson Mountains. Genetic isolation and normal gene flow was also identified by TWS and DTC as among their principle concerns. Connectivity is a general scientific concept that covers wildlife 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 principle process of connectivity (FWS, 1984). Therefore, the primary purpose of the TMC was developed as a result of data first collected and analyzed by AGFD in their 1983 biological resource inventory and further interpreted by the USFWS in their 1984 FWCA Report, objectives identified within the 1983 Reclamation memo, and concerns communicated by high value subject matter experts, years before it was established in 1990. The primary purpose of the TMC is to 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.

Evaluation of Gene Flow and Connectivity

Roads often result in a broad spectrum of detrimental effects on wildlife populations. Among those effects is the isolation of habitat blocks that threaten the viability of secluded populations (Fahrig, 2003). Reductions and obstructions of the movements of species may decrease the probability of their successful movement between habitat blocks, which affects whether individuals of a species can re-enter the area and replace individuals – potentially an entire small population – that have died due to stochastic events. In addition, reduction of movements of species may affect gene flow, a complex process influenced by several intrinsic and extrinsic factors (Burgman and Lindenmayer, 1998; Corlatti et al., 2008). Gene flow is defined as the movement of genes among populations (Mitton, 2001). Genetic theory suggests that the reduction of gene flow between subpopulations may lead to greater inbreeding and loss of genetic diversity within blocks (Wright, 1943; Frankham et al., 2002; Corlatti et al., 2008).

Dixon et al. (2006) reported that collection and analysis of genetic material from corridor-connected patches alone can support qualitative inferences, whether gene flow has or has not occurred. Utilization of gene flow is more advantageous for determining corridor success because animal presence or use of a corridor does not indicate corridor success (Gregory and Beier, 2014). For example, a corridor may be occupied by a population that does not interact with populations in the blocks or if the corridor is a sink for surplus individuals from those blocks; animal presence within the corridor would not achieve the corridor's conservation goal (Gregory and Beier, 2014). Utilization of a Corridor Success Index can indicate gene flow success with values close to one, or failure with values close to zero (Gregory and Beier, 2014). Initial baseline conditions within the Tucson Mountains would need to be established by utilizing a subset of species adequately representative of the taxa found within the Tucson Mountains (Powell et al., 2007). When evaluating gene flow in locations such as Avra Valley, genetic divergence should be evident after 10 generations for effective population sizes of approximately 60 per patch, 20 generations for effective population sizes of approximately 100 individuals, and 10-20 generations for populations of 400-2000 individuals (Hare et al., 2011; Gregory and Beier, 2014).

Other examples of gene flow monitoring for connectivity includes the jaguar (*Panthera onca*), ocelot (*Leopardus pardalis*), and Sonoran pronghorn (*Antilocapra americana sonoriensis*). All three species are found within southern Arizona where fragmentation and inadequate gene flow are among the most significant threats to those species. Administered by the FWS, the jaguar recovery plan (2016a) under Biological Constraints and Needs, states that maintaining stable (large) population sizes and connectivity among jaguar populations is essential to the recovery of the species. Small, isolated populations can suffer from the deleterious effects of inbreeding and decreased genetic variation (Mills, 2006; Frankham et al., 2007), resulting in loss of genetic representation and resiliency. Maintaining connectivity allows for gene flow and dispersal and helps prevent these effects and avoids genetic divergence. Genetic distance was identified as the chosen measure of connectivity between jaguar populations in the Sonora and Jalisco Core Areas because it is a numerical measure of the genetic difference and times of divergence between species or populations (NEI, 2001; FWS, 2016a). In the comparison of closely related species or populations, the effect of polymorphism needs to be considered, and one has to examine many proteins or genes. For this reason, it is customary to measure the genetic distance between populations in terms of allele frequencies for many genetic loci (NEI, 2001).

When evaluating the core areas for the jaguar in Sonora and Jalisco, it was determined within the 2016 Draft Recovery Plan that no significant increase in genetic distance between populations, and no significant increase in inbreeding within each population would be acceptable (FWS, 2016a). An evaluation timeframe of 15 and 30 years (three and six generations) was chosen based on standards by the International Union for the Conservation of Nature. To identify if threats had been reduced to an extent that the jaguar population is no longer at risk of a ≥ 30 percent decline because its area of occupancy, extent of occurrence, and/or habitat quality, as well as actual or potential levels of exploitation have been stable for at least 30 years (six generations, inclusive of a 15 year evaluation (3 generations) required to downlist (FWS, 2016a). Using currently available genetic markers (e.g., microsatellites), it is unlikely that a change in genetic distance over 15 and 30 years would be detected (assuming all connectivity is lost between the Sonora and Jalisco Core Areas), if jaguar populations in Core Areas maintain their current sizes of 300 and 350 individuals, respectively (Miller, 2014). However, if either population were to fall much below 100 individuals (reduction in population size in addition to loss of connectivity), then a 15- and 30-year time frame would be responsive to shifts in genetic distance, and would indicate both a loss of connectivity, a reduction in genetic diversity, and a reduction in effective population size, in either or both Core Areas. Additionally, as new genetic technology is developed, the ability to detect subtle changes in the genetic distance between the Core Areas, due to a loss in connectivity, even if not accompanied by a reduction in population sizes, will likely be possible within a 15- and 30-year time frame. For further information, see Appendix D of the 2016 Draft Recovery Plan for the protocol to genetically monitor the jaguar (FWS, 2016a).

The process for evaluating Sonoran pronghorn is different from the jaguar because of a prior study that measured heterozygosity and allelic richness for nuclear DNA markers (Culver and Vaughn, 2015). In addition to Downlisting Criterion that must be met, metrics that monitor gene flow include a minimum level of 49 percent heterozygosity and a minimum of 1.96 allelic richness for population segments (Culver and Vaughn 2015). Heterozygosity is a measure of

genetic variation in natural populations with results for low heterozygosity attributed to forces such as inbreeding. As estimated by Culver and Vaughn (2015), average heterozygosity (across 16 microsatellite loci developed specifically for Sonoran pronghorn) of 10 population segments is 62 percent (range 54 to 68 percent); this level of heterozygosity is not considered an immediate threat to the subspecies. Allelic richness is a measure of the average number of alleles that takes into account rarity and commonness of alleles and provides an additional measure of genetic diversity that complements heterozygosity. These genetic criterion must be met in addition to achieving the population size criteria, because captive breeding and other management efforts could result in an increase in population numbers without obtaining acceptable levels of genetic diversity (FWS, 2016c).

A genetic augmentation plan for the ocelot is currently being developed, but the 2016 recovery plan identifies that heterozygosity levels, allelic diversity, gene flow, level of inbreeding, and census and effective population sizes, are all important to estimate in managing declining populations (FWS, 2016b). In order to maintain genetic variability, it is recommended that connectivity among populations occurs through natural dispersal rather than by translocation. Adequate natural corridors for dispersal should be more reliable, because they do not rely on long-term commitments by management agencies to translocate animals and better incorporate natural spatial behavior. In addition, natural connectivity avoids or minimizes the risk to individual animals by capture and handling, and avoids the disruption of local populations by removal or supplementation (FWS, 2016b).

While impacts to the TMC could be most detrimental to wildlife populations within the Tucson Mountains, adjoining properties west of the TMC would also be measurably degraded. A total of eight Section 4(f) properties or protective designations, including the TMC itself, benefit from the gene flow facilitated by this linkage (Table 1). Although the TMC is a relatively small parcel, it functions as a conduit, facilitating gene flow to expansive areas of protected open space.

Table 1. Section 4(f) & Special Designation Properties with Wildlife Values Adjacent to the Tucson Mitigation Corridor

Property	Official with Jurisdiction	Acres	Significance
Tucson Mitigation Corridor	U.S. Bureau of Reclamation	2,514	Federal property established through the Tucson Aqueduct Phase B EIS ¹ .
Tucson Mountain Park	Pima County Natural Resources, Parks, & Recreation	20,000	Created by a federal land withdrawal by the Dept. of the Interior in 1929 for use as a state game refuge and county-managed park. ²
Saguaro National Park, Tucson Mountain District	National Park Service	24,830	Lands included in Tucson Mountain Park designation in 1929; became NPS unit in 1961 by Presidential Proclamation ³ ; elevated to National Park status by Congress in 1994 ⁴ .
Ironwood Forest National Monument	Bureau of Land Management	129,000	Established by Presidential Proclamation, 2000 ⁵
Tohono O'odham Nation Reservation	Tohono O'odham Nation	2,700,000	Established by Presidential Proclamation, 1917 ⁶
Saguaro Wilderness	National Park Service	13,005	Designated by Congress, 1976 ⁷
Tucson Mountain Wildlife Area	Arizona Game & Fish Department	84,058	Designated by the Arizona Game & Fish Commission, 1931 ⁸
Tucson Mountain Park Historic District	National Park Service	28,708	Eligible for the National Register of Historic Places with State Significance ⁹

¹ Final Environmental Impact Statement: Tucson Aqueduct Phase B, a Feature of Central Arizona Project. 8/14/85. <https://www.energy.gov/sites/prod/files/2015/04/f22/EIS-0122-FEIS.pdf>

² Clemensen, A.B. 1987. Cattle, copper, and cactus: the history of Saguaro National Monument. Historic Resource Study. National Park Service. Denver, CO.

³ Presidential Proclamation 3439, 11/15/1962; 76 Stat. 1437. Enlarging the Saguaro National Monument. <https://www.govinfo.gov/app/details/STATUTE-76/STATUTE-76-Pg1437>

⁴ Public Law 103-364: To establish the Saguaro National Park in the State of Arizona, and for other purposes. (108 Stat. 3467; Date: 10/14/1994). <https://www.govinfo.gov/content/pkg/STATUTE-108/pdf/STATUTE-108-Pg3467.pdf>

⁵ Presidential Proclamation 7320, 6/9/2000; 65 FR 37259. Establishment of the Ironwood Forest National Monument. <https://www.govinfo.gov/app/details/FR-2000-06-13/00-15112>

⁶ Presidential Proclamation 2524, 2/1/1917; Reserving Certain Lands in the State of Arizona for the Papago Indians in Arizona.

⁷ Public Law 94-567: An act to designate certain lands within units of the national park system as wilderness; to revise the boundaries of certain of those units, and for other purposes. (90 Stat. 2692; Date: 10/20/1976). <https://www.govinfo.gov/content/pkg/STATUTE-90/pdf/STATUTE-90-Pg2692.pdf>

⁸ Arizona Administrative Code. Section R12-4-802(A)(31). Tucson Mountain Wildlife Area. https://apps.azsos.gov/public_services/Title_12/12-04.pdf

⁹ Determination of Eligibility: Tucson Mountain Park Historic District. 2019. Arizona State Historic Preservation Office.

Conclusion

When FHWA is preparing the Individual Section 4(f) Evaluation the TMC should be identified as a property of unique, or otherwise of special significance, due to its critical role as the primary movement corridor for SNP and TMP, both significant Section 4(f) properties. An important component of that evaluation is 16 U.S.C., section 663(d) of the FWCA ,which describes the use of acquired properties and the prohibition against exchange or other transactions that would defeat the initial purpose of the acquisition. For any development to occur within the TMC, FHWA and ADOT cannot defeat the initial purpose of the TMC's acquisition. The determination requires the development of adequate mitigation and minimization measures, and as the project proponents FHWA and ADOT are responsible for developing them. Once developed they would be reviewed by the TMC Working Group which is composed of Reclamation, USFWS, National Park Service, Arizona Game and Fish Department, and Pima County to determine if the measures are adequate. The working group may also consult outside specialists to further evaluate the effectiveness of proposed measures.

Success would be measured beyond the commitment and construction of crossing structures and acquisition of land for supplemental corridors. As previously mentioned, their existence is not a measure of success for maintaining and promoting normal gene flow. A study by Gregory and Beier (2014) identified that populations within a corridor may not interact with populations in nearby habitat blocks, or a corridor may be a sink for surplus individuals from those blocks and animal presence within the corridor would not necessarily achieve the corridor's conservation goal. If minimization and mitigation developed for the TMC were inadequate and/or genetic divergence of taxa was identified, then the initial purpose would be defeated. Adaptive management would not be a reasonable option to correct non-compliance because there is no guarantee additional measures would help or be feasible.

Properly evaluating normal gene flow requires the evaluation of baseline conditions by looking at a subset of species representing taxa found within the Tucson Mountains and west across Avra Valley. To come to a scientifically based conclusion, I-11 would then have to be constructed and follow up evaluations 10 to 20 generations or 10 to 50 years later would determine if conservation and mitigation measures worked. Prior to or without those evaluations it would be extremely challenging to conclude that I-11 did not defeat the initial purpose of the TMC. Reclamation understands the challenge this presents to FHWA and ADOT, but Reclamation and the TMC Working Group are willing and interested in continuing the consultation to review over your future development of minimization and mitigation measures.

At the conclusion of the Individual Section 4(f) Evaluation if Segments C or D are chosen as part of the preferred alternative, then Reclamation believes the same conditions identified in our June 8, 2018 letter are still applicable and necessary to accomplish needed minimization under 23 CFR § 774.3(a)(2), 16 U.S.C., section 663(d) and mitigation required to compensate for the loss and "use" of 453-acres.

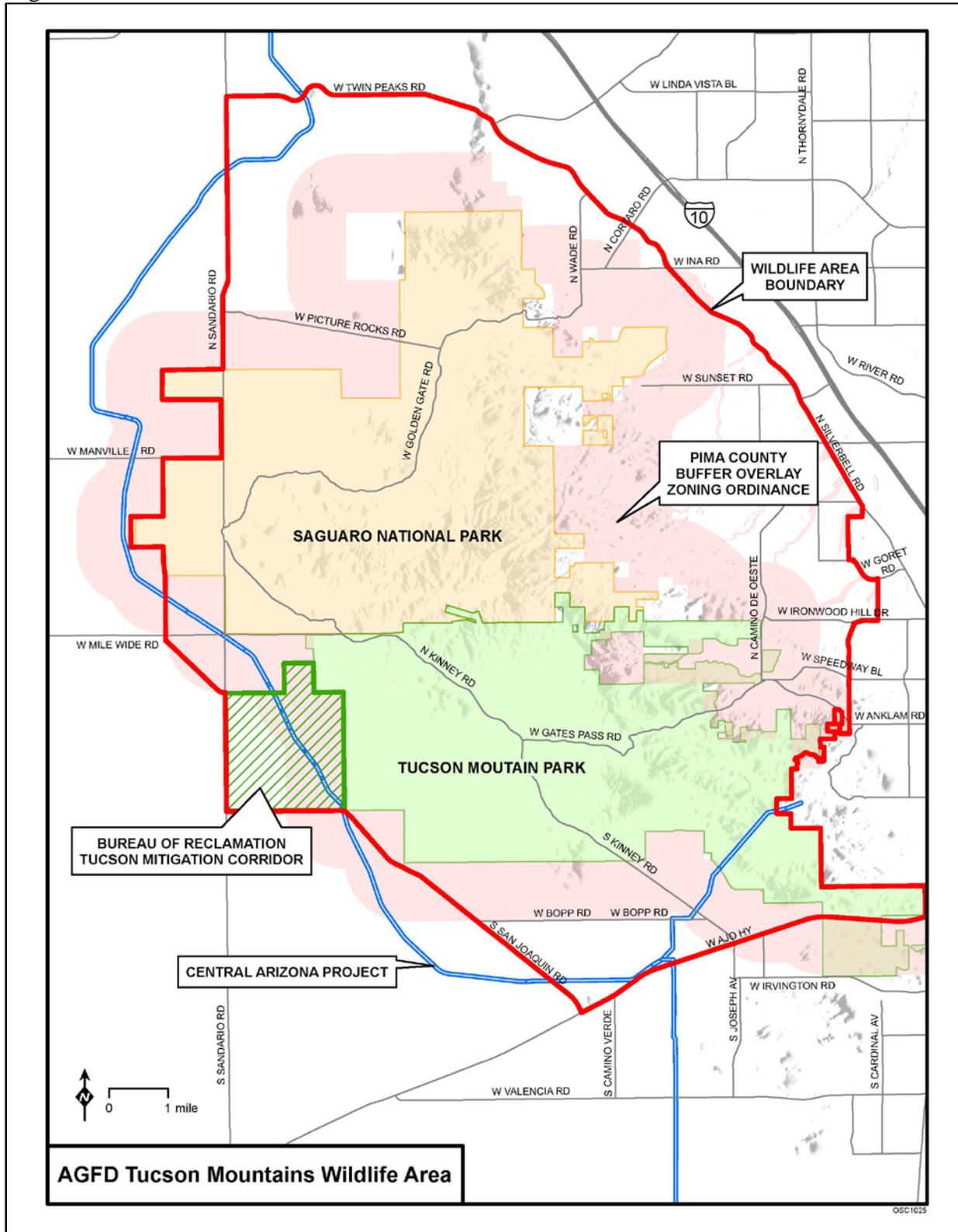
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Figure 1. Pima County established Buffer Overlay Zone around both Tucson Mountain Park and Saguaro National Park.





US Fish and Wildlife Service



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I-11 PLO Lands Discussion with USFWS, Meeting Notes, December 3, 2018



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Jones, Laynee

From: Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>
Sent: Tuesday, December 04, 2018 2:59 PM
To: Jay Van Echo (JVanEcho@azdot.gov); Katie Rodriguez (KRodriguez@azdot.gov)
Cc: 'jayv@horrocks.com'; Jones, Laynee; Lirange, Aryan (FHWA)
Subject: I-11 - PLO Lands Discussion with USFWS

Follow Up Flag: Follow up
Flag Status: Flagged

On December 3, 2018 Aryan and I met via conference call with the following USFWS Realty folks in the Regional Office (NM) and the ADOT USFWS Liaison:

David Allard, USFWS, Branch of Realty Management
david_allard@fws.gov 505-248-7404

Juliette Fernandez, USFWS, Refuge Supervisor for Arizona and New Mexico
juliette_fernandez@fws.gov 505-248-6650

Paul Cornes, USFWS, Regional Realty Supervisor
paul_cornes@fws.gov 505-248-7417

Carol Torrez, USFWS, Chief, Branch of Planning
carol_torrez@fws.gov 505 248-6821

Robert Lehman, USFWS, Liaison to ADOT/FHWA
robert_lehman@fws.gov 602-889-5950

We discussed the PLO 1015 lands as well as the adjacent AGFD parcels within the Gila River Refuge area. The following items were concluded in the meeting:

- The PLO 1015 lands are owned/administered by USFWS, but managed by AGFD.
- The PLO 1015 lands are National Wildlife Refuge Act lands (special category of lands called "Coordination Areas").
- The AGFD parcels that are adjacent or near the PLO are also Wildlife Refuge and are in furtherance of the DOI/AGFD Cooperative Agreement from 1954, clause #7.
- USFWS asked us to avoid the PLO properties, and we explained that the Tier 1 corridors are 2,000ft wide and the alignments in Tier 2 would be able to avoid the refuge properties. We need to add a mitigation measure to this effect.
- The appropriateness and compatibility determination would occur in Tier 2. We need to acknowledge this evaluation would take place for the Tier 2 project/N when it occurs, including coordination with USFWS. We need to add a mitigation measure related to the coordination in Tier 2.
- The PLO lands are not a priority for USFWS.
- We agreed to send a DEIS to the USFWS Realty Office, to the Attn of Carol during the public review period.

Aryan and my conclusions after the meeting are that the PLO land and the AGFD parcels purchased in furtherance of the Gila River Wildlife Refuge properties are Section 4(f). We need to update chapter 4 (and Katie should probably update your white paper) to explain all of the above and determine if accommodation is the proper way to move forward.

I'm assuming this will be on the agenda for our call on Thursday. Thanks, Rebecca

Rebecca Yedlin
Environmental Coordinator
Federal Highway Administration Arizona Division
4000 N Central Ave, Ste#1500
Phoenix, AZ 85012
602.382.8979



I-11 PLO Lands Discussion with USFWS, Meeting Agenda, February 12, 2019



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From: [Lirange, Aryan \(FHWA\)](#)
To: [Cornes, Paul](#); [Carol Torrez](#); "[robert_lehman@fws.gov](#)"; "[david_allard@fws.gov](#)"; "[juliette_fernandez@fws.gov](#)"
Cc: [Yedlin, Rebecca \(FHWA\)](#); [Joshua Fife](#); [Katie Rodriguez](#); [Jay Van Echo \(jayv@horrocks.com\)](#); [Jay Van Echo \(JVanEcho@azdot.gov\)](#); [Jones, Laynee](#); [Richardson, Anita](#); [Rietz, Jessica](#); [AMER-US-AZ Phoenix-i11doccontrol](#)
Subject: RE: Arizona I-11 Draft Tier 1 EIS USFWS Consultation PLO 1015 Lands
Date: Thursday, February 14, 2019 5:26:37 PM
Attachments: [I-11 PLO 1015 Constructive Use Text_CLEAN.DOCX](#)

Hello everyone. Our February 12 conference call was not fully attended due to unexpected USFWS conflicts and we committed to follow up with a recap of the topic and desire for a conference call.

Copied below is the background on the PLO 1015 lands Section 4(f) review that would have served as our Tuesday meeting agenda.

The team asks the respective USFWS offices copied on this email take a few moments to review the discussion and provide feedback if you believe a follow-up conference call for clarifications or questions is required.

If USFWS believes a call is required, please provide two or more 1-hour blocks that would work. The I-11 team should be able to accommodate almost any meeting opportunity you can provide.

Have a great long weekend and hopefully we'll see everyone back on Tuesday.

Aryan

Arizona FHWA – Senior Urban Engineer
(eMail) aryan.lirange@dot.gov
(602) 382 8973 | cell (602) 999 2921

From: Lirange, Aryan (FHWA)
Sent: Thursday, January 3, 2019 11:14 AM
To: 'david_allard@fws.gov' <david_allard@fws.gov>; 'juliette_fernandez@fws.gov' <juliette_fernandez@fws.gov>; 'paul_cornes@fws.gov' <paul_cornes@fws.gov>; 'carol_torrez@fws.gov' <carol_torrez@fws.gov>; 'robert_lehman@fws.gov' <robert_lehman@fws.gov>
Cc: Yedlin, Rebecca (FHWA) <Rebecca.Yedlin@dot.gov>; Joshua Fife' <JFife@azdot.gov>; Katie Rodriguez <KRodriguez@azdot.gov>; Jay Van Echo (jayv@horrocks.com) <jayv@horrocks.com>; Jay Van Echo (JVanEcho@azdot.gov) <JVanEcho@azdot.gov>; Jones, Laynee <laynee.jones@aecom.com>; Richardson, Anita <Anita.Richardson@aecom.com>; Rietz, Jessica <Jessica.Rietz@aecom.com>; AMER-US-AZ Phoenix-i11doccontrol <i11doccontrol@aecom.com>
Subject: Arizona I-11 Draft Tier 1 EIS USFWS Consultation PLO 1015 Lands

Hello everyone... we had a meeting scheduled for this morning with the USFWS (the Official With Jurisdiction (OWJ) for subject PLO 1015 lands) but due to the government shutdown our USFWS partners were not able to participate.

I lieu of delaying the process while waiting for a rescheduled meeting, within this email I will provide

background for today's discussion and have attached additional details extracted from the Draft Tier 1 EIS.

On 12/03/2018, FHWA and USFWS held a conference call which resulted in an agreement that the PLO 1015 lands are Section 4(f) properties.

Based on this decision, the study team evaluated the existing corridor alternatives and determined that only the Purple Alternative was affected but remained viable with a commitment to accommodate (avoid) the PLO 1015 lands. See the Purple Alternative graphic included in the attachment.

In addition, the study team evaluated the possibility of the Purple Alternative resulting in a constructive use of the PLO 1015 lands. The attached evaluation concluded that there would not be a constructive use of the PLO 1015 lands.

The meeting scheduled for today 01/03/2019, was intended to consult with the OWJ, provide an opportunity to discuss the constructive use evaluation and answer questions regarding the FHWA conclusion. This information will be contained in the Draft Tier 1 EIS which will be available for review and comment sometime soon, depending on when the government shutdown concludes. During the review period all interested agencies and the public will have an opportunity to make comments.

USFWS Action Item:

- 1- Please reply with confirmation you received this email and once you have an opportunity to review this contents, please reply if you think a follow up meeting is necessary.
- 2- Be aware the contents of this email are confidential and may only be shared within the USFWS or the Department of the Interior until the public release of the Draft Tier 1 EIS.

ADOT Action Item: If a rescheduled meeting is desired, ADOT will coordinate a follow up meeting.

Thank you for your attention to this issue. Happy new year.

Aryan

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ADOT MD 005R

4.4.4.3 Public Land Order (PLO) 1015 Lands and Adjacent AGFD Parcels Assessment

Originally the jurisdiction of the BLM, the PLO 1015 lands were withdrawn from BLM jurisdiction in 1954 under Public Land Order 1015 and “reserved under the jurisdiction of the USFWS for wildlife refuge purposes.” The PLO 1015 lands are owned/administered by USFWS, but managed by AGFD. The USFWS considers the PLO 1015 lands to be in a special category of lands called “Coordination areas” under the National Wildlife Refuge Act. The adjacent AGFD parcels are those that were purchased in furtherance of the USFWS/AGFD Cooperative Agreement from 1954, clause 7.

FHWA and ADOT assessed the potential for the Project to cause a constructive use on the PLO 1015 lands. The assessment focuses on PLO 1015 lands on either side of the Purple Alternative corridor (Figure 4-21).

The primary purpose of the PLO 1015 lands is to provide open space, wildlife habitat and locations for outdoor-related recreation. The PLO 1015 lands are managed passively for the most part; for example, no designated public access infrastructure is provided to the properties adjacent to the Purple Alternative corridor.

The AGFD’s document, Lower Gila River Wildlife Area Property Operational Plan (2012) refers to an original, preliminary project statement and subsequent amendments as they relate to the PLO 1015 lands, stating that the lands were acquired for the purpose of providing ponds and food areas for wildfowl, upland game birds and other wildlife species; the PLO 1015 lands will not be used for any activity other than game propagation.

The PLO 1015 properties on either side of the Purple Alternative corridor are in floodplain and are seasonally wet terrain. Small game hunting occurs on PLO 1015 lands, focusing on rabbits and game birds such as doves and quail. However, no designated public access infrastructure is present.

In light of the activities, features and attributes of the PLO 1015 lands, FHWA examined the potential for the Purple Alternative to cause a constructive use to occur as defined in 23 CFR 774.15(d). As defined by the regulation, the impacts of concern to constructive use analysis are noise and light, aesthetics, public access, vibration and ecological intrusion. Of these, aesthetic and public access impacts do not apply because the AGFD does not have designated public access infrastructure for the properties.

Noise, vibration and light impacts from I-11 could cause some wildlife to move away from the highway, thereby reducing wildlife use near the highway. However, in terms of the activities, features and attributes of the PLO 1015 properties, noise, vibration and light impacts would not substantially interfere with the ability of the properties to provide shooting opportunities or habitat for game birds on the properties in the long-term. Based on this analysis, FHWA has determined that, in the case of the PLO 1015 lands, no constructive use would occur due to Project noise, vibration and light.

Ecological intrusion impacts from I-11 could reduce the value of habitat near the highway due to noise, light and vibration. However, the impact would not substantially reduce habitat for game birds or other wildlife on the properties. Connectivity between PLO 1015 lands on either side of the highway would be

provided by wildlife crossing opportunities under the highway. Based on this analysis, FHWA has determined that, in the case of the PLO 1015 lands, no constructive use would occur due to ecological intrusion.

Based on this analysis, FHWA has determined that, in the case of the PLO 1015 lands, the proximity effects of I-11 would not be so severe that the protected activities, features or attributes that qualify the properties for protection under Section 4(f) would be substantially impaired. No constructive use of PLO 1015 lands or adjacent AGFD parcels would occur as a result of the Project.

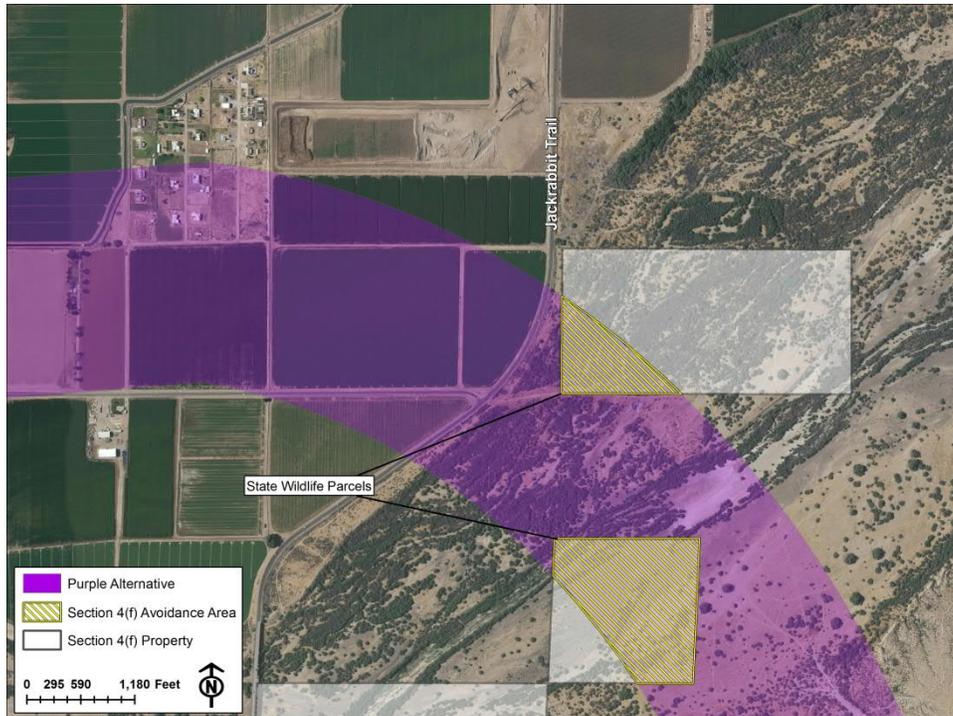


Figure Error! No text of specified style in document.-1 PLO 1015 Land Parcels – Purple Alternative (Accommodate in the Corridor)



Letter from Department of the Interior with USFWS DEIS Comments, July 8, 2019



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United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
333 Bush Street, Suite 515
San Francisco, California, 94104

July 8, 2019

In Reply Refer To:
19/0143
Filed Electronically

Ms. Karla Petty
Division Administrator
Federal Highway Administration
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Subject: Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona, dated March 2019.

Dear Ms. Petty:

The Department of the Interior (Department) has reviewed the *Draft Tier 1 Environmental Impact Statement (EIS) and Preliminary Section 4(f) Evaluation for the Interstate 11 Corridor in Santa Cruz, Pima, Pinal, Maricopa, and Yavapai Counties, Arizona*, dated March 2019 and provides the following comments on behalf of its bureaus; the U.S. Bureau of Reclamation (Reclamation), the U.S. Fish and Wildlife Service (FWS), the U.S. Bureau of Land Management (BLM), and the U.S. National Park Service (NPS).

General Section 4(f) Comments

The Tucson Mitigation Corridor (TMC) is a 2,514-acre 4(f) designated property purchased in 1990 for approximately \$15 million. The land was purchased to partially mitigate biological impacts from the Central Arizona Project (CAP) Tucson Aqueduct-Phase B. Additionally, the CAP was modified to accommodate the TMC. In the Final EIS for the CAP Tucson Aqueduct-Phase B, Reclamation identified specific environmental commitments and mitigation measures to reduce project impacts. In accordance with the Fish and Wildlife Coordination Act of 1958 (PL 85-624, 16 U.S.C. 661 et seq.), Reclamation, Arizona Game and Fish Department (AGFD), FWS, and several public conservation groups agreed on a specific parcel (i.e., TMC) for mitigation. In 1990, Reclamation, FWS, AGFD, and Pima County signed a Cooperative Agreement. The Cooperative Agreement states:

"WHEREAS, 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)]".

[Type here]

The Master Management Plan (attached to Cooperative Agreement) prohibits any future development within the area other than existing wildlife habitat improvements or developments agreed to by Reclamation, AGFD, FWS, and Pima County.

In an effort to work with the Federal Highways (FHWA) and to accommodate FHWA's Programmatic EIS schedule, Reclamation identified preliminary conditions for a potential path to a programmatic Net Benefit determination for the TMC in a letter dated June 8, 2018. This letter stated that, "*Based on the proposed process to identify, evaluate, and implement potential mitigation measures, Reclamation believes that a net benefit could be achieved, and Reclamation would concur with the application of the Net Benefit Programmatic Evaluation to the TMC.*" Our understanding is that FHWA is requesting a higher level of commitment than what was provided in the June 8, 2018 letter prior to the Tier 1 EIS Record of Decision. Based on the lack of specificity and qualitative analysis inherent in a Programmatic EIS, Reclamation would not be able to provide a higher level of commitment on our concurrence for a 4(f) net benefit determination for the TMC.

After continued consultation with our TMC partners, the Department is requesting FHWA prepare an Individual Section 4(f) Evaluation for the TMC. Based on discussions with FHWA, it is our understanding that this change will not affect the overall EIS schedule.

The true value of the TMC is the functional and critical role the property plays in maintaining the primary wildlife movement corridor between the Roskrige Mountains, Ironwood Forest National Monument and west across Avra Valley to the Tucson Mountains and Saguaro National Park (SNP). The corridor supports multiple biological processes that are critical to the ecological health of SNP and Tucson Mountain Park, both Section 4(f) properties found within the Tucson Mountains that total approximately 44,818-acres. As a result of this role, Reclamation has viewed and managed the TMC as a Section 4(f) property of unique significance and critical importance.

General EIS Comments

Recommended Alternative

The Department continues to be concerned that the analysis at the Tier 1 level is insufficient to determine a Recommended Alternative or a Preferred Alternative in the Final EIS. The Recommended Alternative, which is 0.3 miles from SNP and 0.6 miles from Wilderness, should include the necessary studies to illustrate and further quantify the impacts the highway and cumulative effects of future multi-modal transportation and reasonably foreseeable subsequent development would have to park resources and visitors; specifically to wildlife movement and park wilderness values; impacting the view shed, diminishing natural sounds; diminishing night sky darkness and increasing air pollution.

The Tucson Mountain District of SNP was established to protect its natural resources, scenic beauty, and habitat from various threats associated with the growth of metropolitan Tucson. Because many wildlife species rely on the ability to move in and out of SNP to meet their water needs throughout the year, SNP works closely with adjacent land managers and neighbors to assist in providing habitat (and water sources) that maintain healthy wildlife populations.

These needs have been recognized and formalized through federal and local efforts. As mentioned above, Reclamation established the TMC to protect a critical wildlife corridor. Additionally, Pima County established the Pima County Buffer Overlay Zone, in part to: “3. Establish mechanisms that will protect the public preserves and result in an ecologically sound transition between the preserves and more urbanized development; 4. Assure the continued existence of adequate wildlife habitat and foster the unimpeded movement of wildlife in the vicinity of Pima County's public preserves...” (Pima County Code of Ordinances § 18.67). Finally, the Sonoran Desert Conservation Plan has identified critical wildlife corridors within the project study area which connect the park to other adjacent conservation lands.

The Recommended Alternative directly impacts all three of these properties: it bisects the TMC, it overlaps 916 acres of the Buffer Overlay Zone, and “most of the corridor (94%) impacts one or more categories of the Conservation Land System” identified in the Sonoran Desert Conservation Plan (Pima County DOT Report, Appendix F, p. 267).

Based on the potential for significant adverse impacts to SNP, TMC, Ironwood National Monument, and Pima Pineapple Cactus (PPC), the Department recommends the Orange Alternative for the southern section of the corridor. Additionally, the Orange Alternative better serves planned growth areas, freight industry focus areas, and economic activity centers while still reducing travel time over the no build alternative. Our determination is based on an analysis of the potential impacts and the EIS which states the Orange alternative best responds to continued population and employment growth in the South Section; provides the most access to economic activity centers; reduced impact to wildlife corridors and linkages; and, would have fewer impact to PPC and its habitat.”

Overall the environmental impact under Segment B is less severe to wildlife connectivity and the federally endangered PPC. Therefore, as identified above, Segment B is the ideal selection for the southern end of the study area.

Pima Pineapple Cactus

The Department recommends that FHWA develops a preliminary effects analysis and mitigation strategy for the federally endangered PPC (*Coryphantha scheeri* var. *robustispina*) before Option D of the recommended alternative is finalized in the Record of Decision. If the effects analysis and mitigation strategy are deferred until Tier II, we recommend that all options for aligning I-11 through Pima County remain open.

Of all listed species that may be affected by the I-11 project, FWS is most concerned about effects to the PPC. Unlike other listed species that occur in the I-11 study area—which tend to occur in small numbers in restricted or relatively inaccessible habitats—the PPC occurs in significant numbers within all three of the I-11 build corridor alternatives. The recommended alignment for I-11 will bisect the PPC’s entire known range from south to north and will affect possibly hundreds of individual cactus plants. The proportion (percent) of the known range-wide population that will be affected is unknown but is likely to be significant.

FWS is currently aware of fewer than 8,000 extant PPC individuals across the range of the taxon. In addition, 1,837 are known to no longer exist, primarily due to development and mining.

A primary concern is to assure that a path to avoid Endangered Species Act Section 7(a)(2) prohibitions against jeopardy is available before formal section 7 consultation on the cactus occurs during or after Tier II. That assurance can be provided only if PPC numbers and distribution within the build corridor alternatives, or at least the recommended alternative, have been assessed in advance, and only if I-11 planners and FWS are confident that project affects to those populations can effectively be avoided or mitigated.

There is currently insufficient information to determine whether impacts to the PPC that may result from the I-11 project can be mitigated or to assure that a jeopardy opinion from the FWS would not occur during formal consultation on the PPC. A potential jeopardy decision for the PPC due to potentially large losses of this endangered species is critical and poses a serious challenge to I-11 planners.

Central Arizona Project

Reclamation and the Central Arizona Water Conservation District (CAWCD) have design standards for facilities that encroach on CAP lands. These design standards protect the CAP facilities and the ability to perform Operation and Maintenance of project facilities. As I-11 reaches the design phase, we recommend coordination with CAWCD and Reclamation on the applicable design standards.

Segment U of the recommended alternative which spans north through the Hassayampa Plain and Tonopah Desert study area has the potential to affect wildlife movement over two concrete wash overchutes and a wildlife bridge. While the primary intent of overchutes is to maintain hydrological connectivity, wildlife use was considered in their design. Reclamation has performed long-term monitoring of multiple CAP wildlife bridge and concrete wash overchutes. Some overchutes currently being monitored have recorded total individual crossings by mule deer as high as 380 a month. It is expected that Segment U would devalue and reduce the wildlife utilization of the overchutes and the wildlife bridge in the surrounding area. Replacement of multiple wildlife crossing structures should be included as mitigation in Segment U.

Summary Comments

As Cooperating Agencies, we value our cooperative relationship and believe an Individual Section 4(f) Evaluation is the most appropriate evaluation moving forward. At its conclusion, if Segment D is still chosen as part of the preferred alternative, then the Department still believes the same conditions identified in Reclamation's June 8, 2018 letter are still applicable to accomplish the required minimization under 23 CFR 774.3(a)(2) and the appropriate mitigation required to compensate for the loss and "use" of 453-acres (18% of the TMC) and all necessary measures to avoid defeating the initial purpose of its acquisition [16 U.S.C., section 663(d)]. The Department continues to be committed to consulting and collaborating on the analysis necessary to determine the best way to minimize and mitigate the effects of the proposed I-11.

Thank you for the opportunity to provide comments and a path forward to minimize impacts to the TMC and the features and values for which the property was established. The Department and bureaus would be available to meet to clarify any of our recommendations, and further assist the FHWA and ADOT with identification of appropriate measures for the benefit of wildlife.

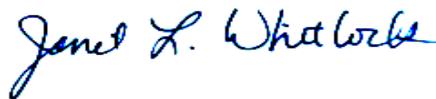
For additional comments from BLM, please see **Attachment 1** – *Additional Comments from the BLM on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

For additional comments from Reclamation, please see **Attachment 2** – *Additional Comments from Reclamation on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

For additional comments from NPS, please see **Attachment 3** – *Additional Comments from NPS on the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona.*

Thank you for the opportunity to provide comments, and we look forward to continued work with the FHWA and ADOT. For questions regarding specific comments please contact: Mr. Lane Cowger with BLM at 602-417-9612 or via email at lcowger@blm.gov; Mr. Bob Lehman with FWS at 602-242-0210 or via email at Robert_lehman@fws.gov; Mr. Jeff Conn with NPS at 623-773-6250 or via email at jeffery_conn@nps.gov; Mr. Sean Heath with Reclamation at 623-773-6250 or via email at sheath@usbr.gov. For all other comments or questions please contact me at 415-420-0524 or via email at janet_whitlock@ios.doi.gov.

Sincerely,



Janet Whitlock
Regional Environmental Officer
Office of Environmental Policy and Compliance

Attachments

Cc

Shawn Alam, DOI
Jeff Conn, NPS
Lane Cowger, BLM
Sean Heath, BOR
Courtney Hoover, DOI
Robert Lehman, FWS
Joseph Mathews, SOL
Roxanne Runkel, NPS

US Fish and Wildlife Service Specific Comments

The U.S. Fish and Wildlife Service (FWS) has reviewed the *Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation* for the proposed I-11 corridor from Nogales to Wickenburg, Arizona. Our comments conform to policy outlined in the *U.S. Fish and Wildlife Service Manual*, Section 505, FW 3-4, concerning review of environmental documents and are provided below.

Comments on Key Factors of the EIS

In this section, we update our comments on key factors that we considered in our review of the July 2018 administrative draft of the EIS.

Factor 1. Clear description of Tier 1 level of analysis and appropriate level of analysis

The objective and analytical approach of Tier 1 were clearly described in the Reviewer Guide of the 2018 draft EIS, and in the Introduction and Executive Summary of the current (March 2019) public review draft. The primary purpose of Tier 1 work is to compare differences among the build corridor alternatives (purple, green, and orange) and corridor options (sections of corridor alternatives) to allow a 2,000-foot-wide recommended alternative to be identified that would advance to Tier 2 for further NEPA analysis. FHWA and ADOT considered three factors—purpose and need, impacts, and mitigation—in selecting the recommended alternative. Pre-Tier 2 site-specific and species-specific studies will facilitate decision making during Tier 2 when I-11 planners refine the 2,000-foot corridor down to a 400-foot right-of-way.

The issue of how appropriate Tier 1 analyses were in identifying the recommended alternative is somewhat subjective and depends in part on the emphasis particular agencies and stakeholders place on competing and sometimes incompatible resource values. Our emphasis is on wildlife; however, all stakeholders have the same right to equal consideration during Tier 1 data gathering and analysis. In the end, there are few clearly right choices or clearly wrong choices involved in selecting a recommended alternative. There is, however, the obligation for planners to be fully informed when making those choices.

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What is not subjective is the severity of impacts the recommended alternative is likely to have on particular resources and the level of detail needed to fully inform decision makers about those impacts. One risk of a tiered NEPA process is that a recommended alternative will advance to Tier 2 based on inadequate data.

ADOT referred to the I-11 Tier 1 analysis as a “desktop” analysis. It was qualitative, not quantitative, and relied on literature, digital spatial data, and other information from resource and regulatory agencies, not on new field work or new research. The inventory of biological resources (Chapter 3.14 and Appendix E14) begins with a landscape-level view of vegetation and wildlife in each biotic community in the I-11 study area (e.g., semidesert grassland, Sonoran desertscrub), and from there addresses species and their habitats at increasingly finer scales, i.e.,

by build corridor alternative, corridor option, and finally specific localities (e.g., important bird areas), species groups (threatened and endangered species) habitat types (riparian), drainages, and areas included in wildlife and habitat management plans.

The effects analysis was also qualitative. It considered impacts among build corridor alternatives and corridor options that involve new roadway versus options that are co-located with existing roads and interstate highways. To determine if particular corridors would disproportionately affect wildlife habitat, I-11 planners generated acreage calculations for the amount of overlap of biotic communities, important bird areas, riparian and other specific habitats, and proposed and designated critical habitats of ESA listed species within corridor options. Planners also determined the number of wildlife linkages each corridor option would cross, and estimated the amount of fragmentation that would occur within large intact blocks of habitat. Chapter 3.2 of the draft EIS, provides a summary of key environmental impacts.

Mitigation strategies for listed species and other wildlife are stated in preliminary form for all corridor options (see Tables 3.14-11 and Table 3.14-12), for example, for Option A and threatened and endangered species:

Avoid widening I-19 to the east along the Santa Cruz River and impacting habitat; conduct pre-construction surveys [for listed species] where appropriate; and consult with the USFWS, as needed.

Thus, Tier 1 work summarized potential I-11 impacts by identifying what species and other biological resources occur in the project area, where they occur, and to what extent those resources overlap project boundaries. Mitigation needs were addressed in general terms, as illustrated above, and were deferred to Tier 2 for further development. More specific mitigation measures, e.g., for individual species within particular corridor options, would be difficult to address without work on the ground; however, the field studies required to assess impacts and mitigation needs in greater detail are not planned until after Tier 1, as part of pre-Tier 2 field studies.

Factor 5. Clarity

No comment other than to say that presentation of data in the tables and figures of Chapter 3.14 and Appendix E14, and related discussions in the text, are clear and readable.

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In theory, the recommended alternative is the one that will best meet the purpose and need and result in the fewest impacts, or at least result in impacts that can be mitigated and reduced to an acceptable level. In practice, however, FHWA and ADOT identified a recommended alternative that is a hybrid mostly of the purple and green alternatives which are composed of many corridor options with few existing roadways and interstate highways. The recommended alternative will require new construction along eight of its nine corridor options, and includes one corridor (Option D) that will have ecological and biological effects far greater than any build corridor alternative considered. The recommended alternative will open relatively undeveloped areas of

central Arizona to municipal, urban, and suburban development; will reduce the natural values of national and regional parks and monuments in the Avra Valley west of Tucson; will place a new bridge across one of the few undeveloped reaches of the Gila River near Phoenix (Option N); will reduce irrigation recharge in the Gila River and threaten marshlands and riparian areas that support listed bird species (Options N and R); and in the case of Option D, will severely impact the endangered Pima pineapple cactus (PPC) (*Coryphantha scheeri* var. *robustispina*) and the Tucson Mitigation Corridor (TMC), an existing mitigation property west of Tucson.

In contrast, eight of nine corridor options that comprise the orange build alternative would be co-located with existing interstate highways (I-19, I-10, I-8) and other state and county roadways (the reverse of the recommended alternative), and its effects to wildlife, other biological resources, and natural landscape values would be minor compared to the recommended alternative.

Specific EIS and Section 4(f) Comments

In this section, we address concerns about adverse effects the recommended alternative is likely to have on certain species and wildlife conservation lands involving FWS authorities.

Pima Pineapple Cactus

Here we re-emphasize the following key points from our 2018 review of the draft EIS:

- Option D of the recommended alternative is likely to have the greatest impact on the PPC of any corridor alternative or option considered in the EIS.
- We recommend that PPC field surveys to determine numbers of individual cactus plants and acres of habitat inside the recommended alternative occur before Option D is finalized in the Record of Decision.
- The objective of field studies will be to assess if impacts to the PPC associated with the recommended alternative can effectively be avoided or mitigated. We acknowledge ADOT's commitment, stated in the current EIS draft, to survey suitable PPC habitat within all corridor options one year prior to Tier 2.
- Mitigation and compensation for PPC losses will be possible only if those losses do not involve a substantial proportion of the remaining PPC population, which is unknown, and to the extent that PPC conservation bank credits or mitigation lands are available for purchase.
- If impacts to the PPC within the recommended alternative cannot be mitigated, ADOT will need to choose among other corridor alternatives and options where PPC numbers are likely to be lower.
- We recommend that all options for aligning I-11 through Pima County remain open until the potential effects of the recommended alignment are understood.

Section 4(f) Evaluation for the Tucson Mitigation Corridor

Option D of the recommended alternative includes the CAP Design Option (hereafter CAP Design) that would align I-11 and Sandario Road, a county road that currently borders the

TMC's western boundary, through the TMC alongside the existing Central Arizona Project (CAP) aqueduct. Among other proposed mitigation measures, ADOT would include wildlife crossings in the I-11 and Sandario Road designs to match wildlife crossings in the TMC that were built into the CAP when the aqueduct was constructed.

FHWA and ADOT have determined that the CAP Design will result in a net benefit to the TMC, given extensive mitigation efforts designed to reduce adverse effects of the proposed action. However, the U.S. Bureau of Reclamation (BOR) manages the TMC under a Master Management Plan that prohibits future development other than existing wildlife habitat improvements and other developments agreed to by all signatories, including the FWS.

The CAP Design clearly and directly conflicts with the property's stated purpose and provisions of the Master Management Plan. The proposed action will significantly and irreversibly alter the property, and there is no reason to conclude that those changes will not involve adverse effects to wildlife that will outweigh potential benefits. In fact, we have difficulty foreseeing any positive outcome for the TMC property under the CAP Design. If approval for use of the TMC is not forthcoming, FHWA and ADOT will need to consider Option B under the orange alternative for siting I-11 (Option C of the purple alternative also includes use of the TMC). Instead, the project proponents have concluded that there are no feasible and prudent alternatives to the CAP Design.

FWS fails to see how the purposes of the TMC property can be furthered or made better by aligning a new interstate highway through the property. The 4(f) evaluation states that moving Sandario Road from its present location on the property's western edge into the TMC will eliminate the road's barrier effect; however, the extent to which Sandario Road represents a barrier to wildlife movements is not documented, and even if it is a barrier, we fail to see why I-11 is needed to mitigate for Sandario Road's adverse effects on wildlife movements.

FWS questions ADOT's conclusion that there are no feasible or prudent alternatives to the CAP Design. The evaluation also found 7 properties in Tucson—3 historic buildings, a historic railroad, 2 city parks, and a hiking trail—that cannot be accommodated or avoided, thus, would require approval for use under Section 4(f) if they were part of the recommended alternative, and we cannot adequately explain why these properties were dismissed as infeasible and/or imprudent alternatives.

Option N, Option R, and PLO 1015 Lands on the Gila River

We continue to have reservations about Option N of the recommended alternative, which would require a new bridge crossing of the Gila River west of Phoenix, as opposed to co-locating I-11 with SR 85 (Option Q2 of the green alternative), which crosses the river further downstream and is our preference.

Construction of a new bridge at the proposed crossing will impact the endangered Yuma Ridgeway's rail (YRR) (*Rallus obsoletus yumanensis*), and possibly the threatened western yellow-billed cuckoo (*Coccyzus americanus*) and endangered southwestern willow flycatcher (*Empidonax traillii extimus*), due to habitat loss and elevated disturbance levels.

Of particular concern would be the permanent loss of irrigation runoff that currently helps to recharge the Gila River and maintain marsh and riparian habitats at the Option N crossing and along river reaches upstream and downstream of the crossing. The Option N alignment would bend sharply to the west after the river crossing and would eliminate 8.5 miles of irrigated pasture and croplands along the Gila River. Option R, which begins at SR 85 and continues west, would eliminate another 5.8 miles of irrigation lands. We recommend that status assessments of rails, cuckoos, flycatchers and their habitats occur during pre-Tier 2 studies within all reaches of the Gila River that may be affected by bridge and roadway construction. During those studies, ADOT should carefully consider how the loss of irrigation recharge in the Gila River will affect marsh and riparian habitats within affected areas.

Another concern associated with Option N is the intersection of the 2,000-foot-wide build corridor alternative with several small parcels of FWS National Wildlife Refuge (NWF) lands managed by AGFD as the Gila River Waterfowl Management Area under Public Land Order (PLO) 1015. ADOT has determined that these NWR lands can be avoided when the narrower (400-foot-wide) I-11 alignment is established during Tier 2. During the preliminary Section 4(f) evaluation, ADOT determined that proximity effects of aligning I-11 near these refuge lands would not be so severe that the lands could not continue to fulfill their function as wildlife habitat. However, we recommend that these lands be surveyed during pre-Tier 2 field studies to assess what wildlife species are currently using the lands and to more carefully analyze the effects that I-11 may have on that wildlife. We also recommend that all options for aligning I-11 in the vicinity of the Gila River west of Phoenix (including Option Q2) remain open until pre-Tier 2 wildlife studies have been completed and potential effects of all possible alignments are well understood.

Tumamoc Globeberry

ADOT is aware that this species occurs in Pima County within corridor Options C and D, and that the species has seriously declined in Pima County in recent years. We recommend that a status assessment for this species be conducted and that the species be included in mitigation strategies that may be developed within those corridor options.

Other Special Status Species and Managed Lands for Wildlife

The EIS states that ADOT will work with federal, state, and local agencies before and during Tier 2 to evaluate potential impacts to all special status species and to avoid or minimize those effects. We encourage I-11 planners to apply the same due diligence to any and all lands managed for wildlife values that may lie in or near the path of the future I-11 corridor. We also encourage planners to coordinate with government agencies and private organizations that are signatories to FWS habitat conservation plans (HCPs), e.g., the City of Tucson HCP, and multi-species conservation plans (MSCPs), e.g., Pima County MSCP.

Conclusions

- From a wildlife perspective, the orange alternative is the preferred alternative overall, and Option B of that alternative, which would align I-11 through Tucson, is preferable to Option D of the recommended alternative.

- It is the FWS's opinion that the draft preliminary 4(f) analysis is inadequate to conclude that there are no feasible and prudent alternatives to the CAP Design.
- The requirement of all possible planning to minimize effects of the proposed action has not been met with respect to the Tucson Mitigation Corridor.
- FWS urges the project proponents to consider options other than the CAP Design for aligning the future I-11 roadway; however, we will defer to any decision BOR makes regarding 4(f) use of the Tucson Mitigation Corridor.

The FWS looks forward to continuing our cooperation with FHWA and ADOT on the I-11 project. If you have questions or wish to discuss our comments and concerns, please contact Bob Lehman, the FWS Transportation Liaison, at (602) 889-5950 or robert_lehman@fws.gov.



Letter from Department of the Interior with USFWS DEIS Comments, August 30, 2019



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United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
333 Bush Street, Suite 515
San Francisco, California, 94104

In Reply Refer To:
19/0143

Filed electronically

August 30, 2019

Ms. Karla Petty
Division Administrator
Federal Highway Administration
4000 N. Central Ave., Suite 1500
Phoenix, AZ 85012

Subject: Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation for Interstate 11 Corridor between Nogales and Wickenburg, Arizona, dated March 2019.

Dear Ms. Petty:

The Department of the Interior (Department) has reviewed the *Draft Tier 1 Environmental Impact Statement (EIS) and Preliminary Section 4(f) Evaluation for the Interstate 11 Corridor in Santa Cruz, Pima, Pinal, Maricopa, and Yavapai Counties, Arizona*, dated March 2019 and provides the attached specific comments on behalf of the U.S. Fish and Wildlife Service.

Thank you for the opportunity to provide comments, and we look forward to continued work with the FHWA and ADOT. For questions regarding the FWS specific comments, please contact Bob Lehman, the FWS Transportation Liaison, at (602) 889-5950 or robert_lehman@fws.gov. For all other comments or questions, please contact me at 415-420-0524 or via email at janet_whitlock@ios.doi.gov.

Sincerely,

Janet Whitlock
Regional Environmental Officer

Attachment

Cc
Shawn Alam, DOI
Jeff Conn, NPS
Lane Cowger, BLM
Sean Heath, BOR

Robert Lehman, FWS
Aryan Lirange, DOT
Joseph Mathews, SOL
Roxanne Runkel, NPS
Rebecca Yedlin, DOT

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Conclusions

- From a wildlife perspective, the orange alternative is the preferred alternative overall, and Option B of that alternative, which would align I-11 through Tucson, is preferable to Option D of the recommended alternative.

- It is the FWS's opinion that the draft preliminary 4(f) analysis is inadequate to conclude that there are no feasible and prudent alternatives to the CAP Design.
- The requirement of all possible planning to minimize effects of the proposed action has not been met with respect to the Tucson Mitigation Corridor.
- FWS urges the project proponents to consider options other than the CAP Design for aligning the future I-11 roadway; however, we will defer to any decision BOR makes regarding 4(f) use of the Tucson Mitigation Corridor.

The FWS looks forward to continuing our cooperation with FHWA and ADOT on the I-11 project. If you have questions or wish to discuss our comments and concerns, please contact Bob Lehman, the FWS Transportation Liaison, at (602) 889-5950 or robert_lehman@fws.gov.



US Forest Service



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Letter from US Forest Service with CNF DEIS Comments, July 1, 2019



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File Code: 1900
Date: July 1, 2019

Ms. Rebecca Yedlin
FHWA Environmental Coordinator
4000 N. Central Avenue, Suite 1500
Phoenix, AZ 85012

Dear Ms. Yedlin:

The Coronado National Forest (CNF) has reviewed the Federal Highway Administration (FHWA)/Arizona Department of Transportation (ADOT) I-11 Tier 1 Draft Environmental Impact Statement (DEIS). Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA) (42 USC 4321, et seq) and under the guidance of the 2018 Coronado National Forest Land and Resource Management Plan (Forest Plan).

The Forest Plan is a strategic management tool providing guidance to CNF over the next 15 years with a focus on the following: ecosystem restoration and resiliency, visitor experiences, access to National Forest System (NFS) lands, preservation of open spaces, and communities, collaboration, and partnerships. Per the Forest Plan, "In recent years, the Forest Service has been prioritizing relationships between national forests and surrounding communities, as well as communities of interest. There is a growing realization that the Coronado National Forest will need to work in partnership with other entities to sustain the natural and social environment within its boundaries. All agencies and nongovernmental organizations that manage wildlife, fish, rare plants, and their habitats need to work together as complete partners, rather than relying on an individual group or agency to bear the burdens of management and conservation."

While the recommended I-11 alternative does not directly impact CNF lands, the Forest Service operates under many of the same rules and legislations guiding the management of the Department of Interior (DOI) including the National Environmental Policy Act (1969), the Endangered Species Act, and The Wilderness Act (1964). The Coronado National Forest and Saguaro National Park share a boundary and a history of partnership. The Forest Plan stresses the importance of maintaining and enhancing collaborative relationships with partners and communities to promote and develop consistency among resource plans and integrate common goals and strategies. The CNF has an active partnership with Saguaro National Park and a shared conservation mission. The CNF does not support Option D of the Recommended Alternative which parallels the Central Arizona Project (CAP) canal through the Avra Valley and affects sensitive and irreplaceable resources of Saguaro National Park and other DOI managed lands. The CNF prefers an option which would be co-located with I-19 and I-10 through Pima County and the Tucson urban area for the southern section. This option best avoids potential adverse impacts to sensitive biological resources in the area including vegetation and wildlife habitat, threatened and endangered species, and scenic resources. The CNF would like to see this route fully analyzed in the Tier II EIS.

In addition to our support of partnership and resource protection, the CNF has the following comments regarding the Tier 1 DEIS:



Comments

- The Tier 1 EIS is not evaluating wilderness as a resource. Wilderness is scattered throughout the document as a 4(f) resource, Land Use, recreation, etc. The CNF would like to see wilderness added as its own section in Chapter 3 Affected Environment and Environmental Consequences in the Tier II study. All wilderness areas are part of one National Wilderness Preservation System and their management must be consistent with the Wilderness Act and establishing legislation. As per section 2(c)(2) of the Wilderness Act, wilderness is managed to preserve natural conditions that, “has outstanding opportunities for solitude or a primitive and unconfined type of recreation.” Wilderness provides more than just recreation and scenic opportunities.
 - o How will the impacts to solitude be evaluated?
 - o How will impacts to wilderness character be evaluated?
 - o What mitigation will occur?

The CNF recommends using the Forest Service Manual (FSM) Chapter 2320 Wilderness Management for guidance. Per the Forest Service Manual Chapter 2320, “Manage the wilderness resource to ensure its character and values are dominant and enduring. Its management must be consistent over time and between areas to ensure its present and future availability and enjoyment as wilderness. Manage wilderness to ensure that human influence does not impede the free play of natural forces or interfere with natural successions in the ecosystems and to ensure that each wilderness offers outstanding opportunities for solitude or a primitive and unconfined type of recreation. Manage wilderness as one resource rather than a series of separate resources. Where a choice must be made between wilderness values and visitor or any other activity, preserving the wilderness resource is the overriding value. Economy, convenience, commercial value, and comfort are not standards of management or use of wilderness (sec. 2320.6)”

- 3.16 Irreversible and Irretrievable Commitment of Resources, 3.16.3 Potential Impacted Resources, page 3.16-1: the CNF would like to see wilderness added to the list of Potential Impacted Resources. Wilderness is a unique and vital resource with measureable impacts that can be assessed at direct and indirect levels. As with other measureable resources, impacts to wilderness would have irreversible and irretrievable commitments.
- 6.4 Impact Avoidance, Minimization, and Mitigation, Table 6-4 Corridor Wide Mitigation Strategies: the CNF recommends adding wilderness as a Resource Area to this table. Wilderness is a managed resource with measureable impacts.

Air

- Saguaro National Park was designated a Class 1 airshed and has been granted protection under the Clean Air Act. Visibility is monitored in parks and wilderness areas as part of the IMPROVE program, a cooperative effort that includes the U.S. Forest Service. Visibility impairment results largely from small particles in the atmosphere. The primary visibility impairing pollutants are ammonium sulfate, ammonium nitrate, coarse mass, and organic carbon. Motor vehicles are the primary source of ammonium nitrate in the atmosphere. Increasing motor vehicle traffic on the border of SNP would have negative effects on visibility and the Class 1 airshed designation of SNP. The CNF requests that the following measures are implemented during the next phase:
 - o 1. Define air quality related values (AQRV) in SNP and initiate action to protect those values.
 - o 2. For each air quality related value, select sensitive indicators, monitor, and establish the acceptable level of protection needed to prevent adverse impacts (FSM 2120).
 - o 3. Determine the potential impacts of proposed facilities in coordination with State air quality management agencies. Make appropriate recommendations in the permitting process following established Prevention of Significant Deterioration application review procedures for major emission sources. Requests to air quality management agencies for consideration of class II values in the permit process are appropriate (FSM 2120).

- In 3.10.4.1 Purple Alternative, page 3.10-19 at 3, and 3.10.4.2 Green Alternative, page 3.10-22 at 30: states that from an air quality planning perspective, the Purple or Green alternatives may have a small benefit for regional air quality by shifting traffic away from the existing roadways and reducing congestion and delay. This statement has no citation for reference. Would it be equally likely that the increased Vehicle Miles Traveled (VMT) of a Build Alternative offset potential air quality improvements?

Environmental Justice

- Section 3.5 Community Resources, Title VI, and Environmental Justice, Figures 3.5-4 (page 3.5-17) and 3.5-5 (page 3.5-18): These figures do not have consistency in representing Tribal Lands. In Figure 3.5-4 the Tohono O’odham and Pascua Yaqui are represented as Census Tracts but Figure 3.5-5 represents them as Tribal Lands. CNF requests new Figures showing consistency in representation. (Same comment applies to Figures 3.5-7 (page 3.5-20) Low-Income Populations – South Section and 3.5-8 (page 3.5-21) Low-Income Populations – Central Section).

- At 3.5.3.3 Environmental Justice page 3.5-23 at 13, it mentions Tribal Lands in relation to minority and low-income. Please provide a citation for the reference where this material can be found. Interstate design standards are based on avoidance and minimizing impacts to Tribal lands. Under these standards, why are these community demographics not visually represented in the maps? The CNF requests it be added to the maps.

- In Figures 3.5-4, 3.5-5, 3.5-6, 3.5-7, 3.5-8, 3.5-9 Census Tracts (CT) part of the Study Area Demographics legends for Minority and Low Income maps. The DEIS does not have an explanation in the chapter, or within the maps, about what these percentages represent. The CNF requests that an explanation is included about what CT represents.
- Why were Minority and Low Income Demographics not represented for the Tohono O'odham Nation or Pascua Yaqui Tribe (Figures 3.5-4 through 3.5-9)? Demographic analyses have been completed for the Tohono O'odham Nation. The CNF requests this information be added to the Low Income Populations and Minority Populations Figures because the current maps do not represent Tribal demographics. How can an accurate analysis of potential impacts to these Nations be completed without this information?

Recreation and Economic Impacts

- 3.4 Recreation, Table 3.4-1 Agencies and Policies and Regulations for Managing Recreation page 3.4-2: The Wilderness Act should be added to NPS Policy of Regulation column.
- 3.6.6 Future Tier 2 Analysis age 3.6-19 at 33: "The Tier 2 EIS also can take advantage of the recently released Outdoor Recreation Satellite Accounts." The U.S. Forest Service is a Federal Recreation Council Member for the Bureau of Economic Analysis Outdoor Recreation Satellite Account. We anticipate that I-11 could have effects on CNF managed NFS lands. We would like to see a comprehensive study of the direct and indirect effects to recreation and tourism and the effects of I-11 in the Tier 2 EIS.
- The DEIS did not identify any properties in the study areas under the Department of Transportation's Federal Highway Administration Recreational Trails Program (RTP). Will any areas or properties acquired, leased, or under easement of RTP funding be impacted by any of the proposed alternatives? Once these lands are acquired, they are to remain a public trail for a minimum of 25 years. The CNF requests that if present, these areas be identified, summarized, and a discussion of potential mitigation strategies be included. If these areas are not present, please include a statement that this program was analyzed for impacts.
- Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area page 4-15: Features/Attributes column: Forest should be 1.8 million acres, not 1.7 million acres. Also "forest" is listed as one of the multiple uses, please correct as "forest" is not a use of USFS lands.
- Per U.S. Department of Transportation Federal Highway Administration Section 4(f) guidance, "The programmatic evaluation does not apply if a feasible and prudent alternative is identified that is not discussed in this document. The project record must clearly demonstrate that each of the above alternatives was fully evaluated before the Administration can conclude that the programmatic evaluation can be applied to the project." FHWA and ADOT propose using the programmatic net benefit for use of the Tucson Mitigation Corridor (TMC) property. The CNF requests that FHWA and ADOT

use individual findings for the TMC property as the applicability of programmatic evaluation has not been met according to the standards defined by U.S. Department of Transportation Federal Highway Administration Section 4(f) guidance.

Alternatives

- The recommended alternative bisects the 2,514 acre TMC used for wildlife habitat and connectivity and rare plant preserve to offset adverse impacts from the CAP. Any alternative which impacts the TMC nullifies the purpose for which it was preserved and is contrary to management guidelines that explicitly prohibit development on these lands. The CNF strongly opposes any alternative which impacts the TMC.
- Several studies have rigorously documented the induced travel effect, in which added highway capacity leads to added vehicle travel. This often results in congestion reducing benefits being overstated and environmental impacts being understated. In 2015, the California Department of Transportation (Caltrans) sponsored a review of research on the induced travel effect to inform transportation analysis guidance in response to new laws in California, such as Senate Bill 743. This bill prohibited the use of vehicle level of service (LOS) and similar measures as the sole basis for determining significant transportation impacts under the California Environmental Quality Act. In keeping with the best available science to support transportation models and predictions, has ADOT and FHWA accounted for the induced travel effect in the transportation models used to predict travel times of each alternative?
- Chapter 6 Recommended Alternative 6.2 Differentiating and Substantive Impacts: the CNF would like to see VMT used as an evaluative tool along with the qualitative measure of level of service (LOS) for each road section. Currently it is only in 6.2.4 Casa Grande to Buckeye at 26.
- 3.10.4 Environmental Consequences pg. 3.10-16, states that, "Transportation strategies associated with the Build Corridor Alternatives generally affect emissions by having one or more of the following effect:" Reducing VMT and/or vehicle trips is listed. According to Table 2-5 2040 Vehicles Miles Traveled page 2-29, all Build Alternatives increased VMT as compared to the No Build Alternative. Please provide a citation or reference of how the Build Alternatives reduce VMT.

If you have any questions about the CNF's comments, please contact Emily Reynolds at 520-388-8311. We look forward to reviewing the results of the Tier 2 studies, including the mitigation to avoid or minimize adverse impacts to these resources. The CNF looks forward to future coordination with FHWA and ADOT.

Sincerely,



for KERWIN S. DEWBERRY
Forest Supervisor

