



United States Department of the Interior



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In Reply Refer To:
AESO/SE
22410-2005-F-0002-R1

September 3, 2013

Ms. Keisha L. Tatem
State Conservationist
USDA, Natural Resources Conservation Services
U.S. Courthouse – Federal Building
230 North First Avenue, Suite 509
Phoenix, Arizona 85003-1733

RE: Reinitiation of Formal Consultation on the Altar Valley Fire Management Plan
(Consultation #22410-2005-F-0002), Altar Valley, Pima County, Arizona

Dear Ms. Tatem:

Thank you for your request for reinitiation of formal consultation on the Altar Valley Fire Management Plan (AVFMP) covering non-Federal portions of the Altar Valley, Pima County, Arizona. Your request was received by us on August 1, 2013, and was made pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). At issue are the possible effects of a proposed revision of the conservation measures related to the Pima pineapple cactus included as part of the original proposed action.

The Natural Resources Conservation Service (NRCS) has determined that only the endangered Pima pineapple cactus (*Coryphantha scheeri* var. *robustispina*) may be affected by the proposed action, a revision of the conservation measures, that is the subject of this reinitiation; hence, our previous analyses and conclusions stand regarding other listed species included in the original Biological Opinion (see the Altar Valley Fire Management Plan Biological Opinion issued December 15, 2008 (consultation number 22410-2005-F-0002)). The NRCS determined that the proposed action may adversely affect the endangered Pima pineapple cactus, and this species is the subject of this reinitiation of the Biological Opinion (BO).

This BO is based on information provided in your request for reinitiation of consultation dated July 31, 2013; information from our January 7, 2013 coordination meeting, the original December 15, 2008 BO for the Altar Valley Fire Management Plan (22410-2005-F-0002); conversations and

electronic correspondence with NRCS and the King's Anvil Ranch; and other sources of information. Literature cited in this BO is not a complete bibliography of all literature available on the species addressed or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

CONSULTATION HISTORY

See the December 15, 2008 BO on the AVFMP for the consultation history prior to February 16, 2012.

- February 16, 2012 – The Fish and Wildlife Service (FWS) met with the NRCS and representatives from the King's Anvil Ranch to discuss the potential to change the Pima pineapple cactus survey requirements as outlined in the BO for the AVFMP.
- December 7, 2012 – The FWS held a coordination meeting with the NRCS, representatives from the Altar Valley Conservation Alliance (AVCA) (including the King's Anvil Ranch), biologists with expertise related to the Pima pineapple cactus, and other agency and university personnel. The purpose of this meeting was to discuss the effects of fire on Pima pineapple cactus and survey and monitoring protocols for this species. Potential approaches related to the West Mill Burn proposed for the King's Anvil Ranch were discussed and agreed upon.
- July 31, 2013 – The FWS received a request from the NRCS to reinitiate section 7 consultation under the Act on proposed revisions to the conservation measures related to Pima pineapple cactus found in the original AVFMP BO.
- August 30, 2013 – A final BO addressing the reinitiation of section 7 consultation is completed and provided to the NRCS.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The proposed action addressed by this reinitiation is the revision of the conservation measures related to the Pima pineapple cactus which represents a change to the original December 15, 2008 BO. The rest of the proposed action remains as described in the original December 15, 2008 BO. The revisions analyzed in this BO are specific to the West Mill Burn that will occur on the King's Anvil Ranch under the AVFMP. However, subsequent burns proposed under the AVFMP and covered by the original BO may also incorporate the approach outlined in this reinitiation if deemed appropriate by the NRCS and FWS. Correspondence between FWS and NRCS confirming the use of this approach for future burns shall provide coverage for these burns by this reinitiation. If such an approach is not appropriate, future burns will be required to comply with the terms of the original December 15, 2008 BO. A full description of the proposed action for this reinitiation is found in

your July 31, 2013 letter and is incorporated herein by reference. A summary of the proposed revisions follows:

- The AVCA and NRCS will use the prescribed burn as an experimental study to further our knowledge of the effects of fire on the Pima pineapple cactus.
- A reduced survey requirement will be implemented (strip sampling as opposed to 100% survey as required in the original BO).
- No protective measures will be implemented for Pima pineapple cacti located during the surveys. However, each Pima pineapple cactus located during surveys will be marked and a GPS location recorded. This also constitutes a change from the original BO.
- Pre-burn information will be gathered for each Pima pineapple cactus located during the surveys. This information will include plant health, fuel conditions, and other environmental conditions.
- Burn conditions will be documented at the time the prescribed burn is implemented.
- Three post-burn monitoring visits will be conducted. Monitoring will evaluate documented Pima pineapple cacti to assess and document fire damage, or lack thereof, mortality, extent of fuels burned, and any indirect effects (animal or insect damage). Monitoring visits will be spaced to occur within one month of the burn, within one year of the burn, and approximately 3 years post-burn.

NRCS, AVCA, and FWS will coordinate with regard to implementing this approach throughout the Altar Valley to facilitate our understanding of the effects of fire on the Pima pineapple cactus on a broader scale, as well as to assess the effectiveness and need for survey and monitoring requirements as part of the AVFMP.

STATUS OF THE SPECIES

The status of the Pima pineapple cactus is unchanged from the description found in the original AVFMP BO issued December 15, 2008 (File Number 22410-2008-F-0002).

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR § 402.02) define the environmental baseline as the past and present impacts of all Federal, state, or private actions in the action area; the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation; and the impact of state and private actions which are contemporaneous with the

consultation process. The environmental baseline defines the current status of the species and its habitat in the action area to provide a platform from which to assess the effects of the action now under consultation.

Description of the Action Area

There are no changes to the Action Area described in the original AVFMP BO issued December 15, 2008 (File Number 22410-2008-F-0002). The West Mill Burn falls within the action area and the boundaries are shown on the map included in your July 31, 2013 correspondence.

Status of the Pima Pineapple Cactus in the Action Area

There are no changes in the status of the Pima pineapple cactus as described in the AVFMP BO issued December 15, 2008 (File Number 22410-2008-F-0002).

Factors Affecting the Pima Pineapple Cactus in the Action Area

In general, there are no changes in the factors affecting the Pima pineapple cactus in the action area from those described in the AVFMP BO issued December 15, 2008 (File Number 22410-2008-F-0002). However, the number of prior formal section 7 consultations with Federal agencies has increased from 44 to 55, with an increase to 23 occurring in the action area, as opposed to 16 described in the original BO. These consultations address the same types of Federal actions as described in the original BO (see Document Library on the Arizona Ecological Services Office website: <http://www.fws.gov/southwest/es/arizona/reading.htm>).

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the proposed action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and, are later in time, but are still reasonably certain to occur.

The effects to the Pima pineapple cactus from the proposed action generally remain the same as described in the original BO. Implementation of the AVFMP is most likely to result in direct effects to Pima pineapple cactus. Prescribed fire, like wildland fire, can result in mortality and morbidity of individuals exposed directly to flame or indirectly from heat. While the original conservation measures helped reduce these direct effects by requiring a buffer between known Pima pineapple cacti and the fire and reducing fuels around individuals to reduce flame intensities, the revised conservation measures will not require the location and protection of all Pima pineapple cacti within the area of the prescribed burn. This will expose more individual Pima pineapple cacti to the direct effects of fire. However, based on the fuel conditions, ground-cover species found within the areas

in the immediate vicinity of the known Pima pineapple cacti, and the continued presence of Pima pineapple cacti in areas that have burned historically, we do not anticipate that every, or even a majority of the Pima pineapple cactus within the prescribed burn area will be affected by fire, nor do we anticipate that this population of Pima pineapple cacti will be eliminated. The history of fire in the Altar Valley shows that fires burn in a mosaic of varying fire intensity and effects. Allowing known individual Pima pineapple cacti to be exposed to the effects fire will increase our understanding of the effects of fire on this species. Currently, our understanding is very limited with regard to the role fire plays in the life history of this species, but we do know that the grassland ecosystem, within which Pima pineapple cacti occur, does have a history of fire. What we do not know is the extent to which changes in the ecosystem from a diverse history of livestock grazing, invasive species, drought, and climate change will alter the effects of fire on the Pima pineapple cactus and affect the long-term conservation of this species.

It is likely that implementing this revised approach to Pima pineapple cactus survey and monitoring for prescribed burns will result in direct effects to a number of individual Pima pineapple cacti. However, we believe that documenting and understanding these effects will benefit our understanding of the conservation needs for this species and, ultimately, contribute to the long-term conservation and recovery of the Pima pineapple cactus. The proposed action will be applied only to the West Mill Burn. Future prescribed burns under the AVFMP will be subject to the conditions of the original BO unless this alternative approach to survey and monitoring is found to be appropriate by both the NRCS and the FWS.

CUMULATIVE EFFECTS

Cumulative effects within the action area remain the same as described in the original AVFMP BO issued December 15, 2008 (File Number 22410-2008-F-0002).

CONCLUSION

After reviewing the current status of the Pima pineapple cactus; the environmental baseline for the action area, the effects of the proposed activities, and the cumulative effects, we reaffirm our biological opinion that the proposed action is not likely to jeopardize the continued existence of the Pima pineapple cactus. No critical habitat has been designated for this species; therefore, none will be affected. Our conclusion is based on the rationale given in the original AVFMP BO, our discussion of effects found in the “Effects of the Action” section above, and the following:

- 1) Surveys for Pima pineapple cacti will be completed prior to implementing the prescribed burn. This will increase our knowledge and understanding of the occurrence and distribution of Pima pineapple cacti within the action area. While the proposed action will likely directly affect an increased number of individual Pima pineapple cacti compared to the original conservation measures, we do not believe that every individual Pima pineapple cactus within the burn area will be affected, nor do we believe that this population of Pima pineapple cacti will be eliminated.

- 2) Although we anticipate that activities associated with the proposed restoration action may result in direct and indirect effects to Pima pineapple cacti, the proposed survey and monitoring approach will document the effects of fire on this species and increase our understanding of the life history and conservation needs of not only the Pima pineapple cactus, but the grassland ecosystem upon which it depends. It is our opinion that the knowledge and understanding achieved through the proposed action will be beneficial to the long-term conservation and recovery of the Pima pineapple cactus.
- 3) The long-term effects of the AVFMP will be to maintain the native vegetation associations of the Altar Valley, including the desert scrub and grasslands within the action area.

The conclusions of this biological opinion are based on full implementation of the project as described in the “Description of the Proposed Action” section of this document and other documents incorporated by reference, including the appropriate conservation measures found in the original BO.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. “Harm” is defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR 17.3). “Harass” is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering (50 CFR 17.3). “Incidental take” is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species. However, limited protection of listed plants from take is provided to the extent that the Act prohibits the removal and reduction to possession of federally listed endangered plants from areas under Federal jurisdiction, or for any act that would remove, cut, dig up, or damage or destroy any such species on any other area in knowing violation of any regulation of any State or in the course of any violation of a State criminal trespass law.

CONSERVATION RECOMMENDATIONS

The Conservation Recommendations remain the same as described in the original AVFMP BO issued December 15, 2008 (File Number 22410-2008-F-0002).

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the reinitiation request. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

For further information, please contact Scott Richardson of our Tucson Suboffice at (520) 670-6150 (x242) or Jean Calhoun (x223). Please refer to the consultation number, 22410-2008-F-0002-R1 in future correspondence concerning this project.

Sincerely,

/ s / Scott Richardson for
Steven L. Spangle
Field Supervisor

cc (hard copy):

Field Supervisor, Fish and Wildlife Service, Phoenix, AZ (2 copies)
Jean Calhoun, Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ
Sally Gall, Refuge Manager, Buenos Aires National Wildlife Refuge, Sasabe, AZ
King's Anvil Ranch, Three Points, AZ (Attn: Pat King)

cc (electronic copy):

State Biologist, Natural Resources Conservation Service, Phoenix, AZ (Attn: Stu Tuttle)
District Conservationist, Natural Resources Conservation Service, Tucson, AZ (Attn: Kristen Egen)
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