

increased abundance in non-native species associated with this project may result in an increased fire risk, which may result in future habitat loss.

BrightSource has proposed numerous measures to address control of non-native plant species within the project site. We cannot reasonably predict the increase in abundance that this project will create within the action area, but we anticipate that the program proposed by BrightSource will be reasonably effective in reducing the increase in some species. However, BrightSource has not proposed any measures to control species, such as red brome, that are ubiquitous in the area. Increases in the abundance of this species elevate the risk of fire, which, in turn, heightens the risk of future habitat loss, which could reduce the number and distribution of desert tortoises within the action area. We anticipate that BrightSource's use of herbicides in control of weeds would have minimal effects because these herbicides would be used within fenced areas that do not contain desert tortoises.

Summary of Effects

Prior to construction of the ISEGS facility, we estimate that BrightSource would capture and translocate approximately 32 subadult and/or adult desert tortoises from project worksites. We anticipate that they will translocate few, if any, juvenile desert tortoises. Because BrightSource will implement a variety of measures to reduce stress to these animals, we do not anticipate that injury or mortality will result from handling of these animals. We anticipate that disease screening associated with the translocation effort will result in the improper removal of few, if any, desert tortoises with false positive ELISA test results. Following release of translocated animals, we anticipate that approximately 30 percent (i.e., 10 subadult and/or adult desert tortoises) will die due to predation, exposure, fire, disease, crushing by cattle, road kills, or flooding. Most of this mortality is likely to occur in the first year after release, during the period that translocated animals are making long-distance movements and attempting to establish new home ranges. In addition, some resident desert tortoises in the translocation areas are likely to die due to the same causes of mortality. We have concluded that mortality rates within the resident and translocated populations are unlikely to be above what they would experience in the absence of translocation, and we do not anticipate that post-translocation mortality will actually be caused by the act of moving desert tortoises. If post-translocation monitoring indicates elevated levels of mortality in resident and translocated populations, re-initiation of consultation may be required to address this unanticipated effect.

We also anticipate that BrightSource may have to quarantine and collect blood from the 32 translocated animals and collect additional blood samples from 32 control animals and up to 98 resident desert tortoises to assess disease. Some potential exists that collection of blood from some of these individuals could result in injury, if done improperly. However, we anticipate that the number of desert tortoises that may be injured would be minimal because BrightSource would use experienced biologists authorized by the Service to perform these activities.

In addition to the 32 translocated desert tortoises that BrightSource would attach transmitters to and monitor following release, we estimate that they will attach transmitters to and monitor an

additional 32 resident and 32 control animals. We do not anticipate that placing transmitters on these animals or periodic handling for the purposes of monitoring will result in substantial adverse effects because BrightSource will use experienced biologists, approved by the Service, and approved handling techniques.

Because BrightSource will surround the majority of its work areas with desert tortoise exclusion fencing, perform clearance surveys on all work areas, and implement numerous measures to prevent injury and mortality of desert tortoises, we anticipate that construction of the ISEGS project site, in tortoises. Because of the difficulty detecting them, we estimate that project implementation may kill or injure up to 35 juvenile desert tortoises. We also anticipate that project construction will destroy any desert tortoise eggs within work areas; some eggs may be detected and moved to a translocation area, but most are unlikely to be found. Given the numerous variables discussed in this section, we cannot predict the precise number of eggs with any certainty.

Following construction, we do not anticipate that operations, maintenance, or restoration and reclamation activities within the permanently fenced portions of the ISEGS facility or regular access to the ISEGS facility along Colosseum Road will injure or kill desert tortoises. Because BrightSource would implement numerous protective measures, restoration activities in unfenced work areas are unlikely to injure or kill desert tortoises. We cannot accurately predict the number of desert tortoises that most Class II maintenance activities would kill or injure outside of the fenced project site because we do not have sufficient information to predict the location, frequency, or magnitude of these actions. However, Class I activities and Class II maintenance activities associated with fence repair would kill or injure few, if any, desert tortoises because of the nature of these activities and the protective measures that BrightSource would implement.

Project development will result in 3,297.03 acres of long-term/permanent disturbance to desert tortoise habitat. Although all of this area, except for the permanent facilities (i.e., SCE substation and gas metering stations), will undergo restoration/reclamation work, it is unlikely to serve as suitable desert tortoise habitat for many years following facility closure. We cannot predict the amount of time required to return areas of long-term disturbance to suitable desert tortoise habitat because of numerous variables associated with restoration success, including the timing and amount of rainfall. We estimate that BrightSource will return an additional 285.4 acres of short-term disturbance to suitable desert tortoise habitat by the end of the 45-year project lifespan.

Construction, operation, maintenance, and decommissioning of the ISEGS facility have the potential to increase common raven predation on desert tortoises within the action area. In addition, this project is likely to result in an increased abundance of non-native plant species and a subsequent increase in fire frequency within the action area. The measures proposed by BrightSource to address these threats will reduce the magnitude of these effects, but some level of adverse effect will likely persist. We cannot reasonably predict the number of desert tortoises that these threats will adversely affect.

The compensation required by the Bureau would, to some degree, offset the adverse effects of the proposed solar power facility. All of the actions that would be undertaken as compensation are consistent with recommendations for recovery of the desert tortoise. However, the lack of specificity with regard to which actions will be implemented, the uncertainty of success of the actions, and the time lag between implementation of the conservation actions and a substantive effect on recovery of the desert tortoise prohibit us from concluding that the compensation measures would completely offset the adverse effects of the solar facility. Because of the long term or permanent loss of approximately 3,297 acres of desert tortoise habitat, the project will likely result in a net decrease in desert tortoise habitat.

To conclude, areas disturbed by the proposed solar facility and its ancillary features would no longer support reproduction of desert tortoises. Most of the desert tortoises that currently reside within these areas will likely continue to reproduce after translocation. Consequently, we anticipate that the proposed action will not appreciably diminish the reproductive capacity of the species.

Implementation of the proposed action would not appreciably reduce the number of desert tortoises in the Northeastern Mojave Recovery Unit. Based on the amount of modeled desert tortoise habitat (7,583.39 square miles) and the average density (4.4 desert tortoises per square mile) that the Service has estimated for this recovery unit, we estimate that approximately 33,367 subadult and/or adult desert tortoises occur in the Northeastern Mojave Recovery Unit. Using the conservative estimate of the amount of remaining modeled habitat (i.e., 3,323 square miles; see the Effects of the Action - Effects of Loss of Habitat section of this biological opinion), we estimate that approximately 15,652 subadult and/or adult desert tortoises reside within the Northeastern Mojave Recovery Unit. Using this estimate and the information and methods described above for estimating the number of juvenile desert tortoises and eggs within the project site, action area, and translocation area, we estimate that the Northeastern Mojave Recovery Unit may contain approximately 16,422 juvenile desert tortoises in at any given time. Reproductive females within the Northeastern Mojave Recovery Unit may produce as many as 134,733 desert tortoise eggs over the course of a year. Consequently, we conclude that the number of desert tortoises and eggs that are likely to be lost as a result of the ISEGS project comprises a relatively small portion of the overall population in the Northeastern Mojave Recovery Unit.

In previous consultations, we estimated the number of desert tortoises found in the desert wildlife management areas and critical habitat by multiplying the average density of animals found in these areas by their total size. For the numbers of desert tortoises outside of those areas, we used a density value of one-tenth of that estimated within desert wildlife management areas and critical habitat, which we multiplied by the estimated area of available desert tortoise habitat. We did not correct for areas that were unsuitable habitat in either case in these past consultation estimates. Because the method of estimating the number of desert tortoises we use in this biological opinion takes into account a conservative estimate of modeled desert tortoise habitat, we used the same average density across all areas of desert tortoise habitat for our estimate.

The distribution of the desert tortoise would be reduced by approximately 5 square miles, based on the amount of long-term and permanent disturbance associated with the proposed action. As we mentioned previously in the biological opinion, this loss comprises approximately 0.07 percent of the modeled habitat in the Northeastern Mojave Recovery Unit and approximately 0.15 percent of the modeled habitat if we use the conservative estimate discussed previously in this section. Although this loss of habitat is likely to increase fragmentation of habitat and decrease the overall sustainability of the portion of the recovery unit that is isolated by Interstate 15, Ivanpah Lake, Primm, Nevada, and the Clark Mountains, it will not appreciably reduce the amount of habitat available to the desert tortoise when considered in the context of the entire Northeastern Mojave Recovery Unit.

Although the effects of this project on desert tortoises are substantial, we do not anticipate that it will result in effects that appreciably reduce the current distribution, numbers, or reproduction of the overall population within the Northeastern Mojave Recovery Unit or range wide. We anticipate that the compensation programs (i.e., one proposed by the Bureau and the other approved by the California Energy Commission) will result in an increase in the amount of habitat that is managed for the conservation of this species and will result in many advances in the implementation of recovery actions. We anticipate that this compensation will offset many adverse effects associated with this project. Taking into consideration the compensation that is proposed, the lack of statistical trends in population size in this recovery unit, and considering the relative scale of the adverse effects in context with our current estimates of the species' status in the Northeastern Mojave Recovery Unit and range wide, we do not anticipate that construction of this project would appreciably reduce our ability to recover the desert tortoise.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. The Bureau manages all of the land in the action area with the exception of two 640-acre sections owned by the State of California. There are no proposed, non-federal actions within these parcels.

CONCLUSION

After reviewing its status, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is our biological opinion that the proposed action is not likely to jeopardize the continued existence of the desert tortoise. We have reached this conclusion because:

1. Project activities are likely to directly kill few subadult and adult desert tortoises because BrightSource will implement numerous measures to reduce the potential that desert tortoises will occupy project work sites (i.e., clearance surveys, exclusion fencing, translocation, qualified biologists, desert tortoise monitors).

2. The number of desert tortoises injured and killed as a result of translocation will likely be small relative to the number of desert tortoises that occur within the Northeastern Mojave Recovery Unit and across the range of the species.
3. BrightSource will implement numerous measures to reduce the potential for increased predation by common ravens and spread of non-native plant species.
4. Current information from permanent study plots and line distance sampling does not document a statistical trend in adult desert tortoise densities in this recovery unit. Therefore, we have no information to indicate that the loss of a small number of individuals as a result of this project would appreciably reduce our ability to reach population recovery objectives for the desert tortoise in the Northeastern Mojave Recovery Unit.
5. This project would not result in loss of desert tortoise habitat in areas that the Bureau or other agencies have designated for intensive management to achieve conservation of desert tortoises.
6. Compensation requirements through the Bureau and California Energy Commission will result in an increase in the amount of existing habitat that is managed for the conservation of the desert tortoise and will likely lead to restoration of lost or degraded habitat within these areas.
7. Regional management actions are likely to aid in reducing common raven predation in a portion of the desert tortoise's range.

As we noted previously in this biological opinion, the analysis we conduct under section 79a)(2) of the Endangered Species Act must be conducted in relation to the status of the entire listed taxon. We based the analysis in this biological opinion within the context of the Northeastern Mojave Recovery Unit because of the wide range of the desert tortoises. Because we have determined that the effects of this action would not compromise the integrity of the Northeastern Mojave Recovery Unit or impede the survival or recovery of the desert tortoises in a measurable manner in this portion of its range, we have not extended the analysis of the effects of this proposed action to the remainder of the range of the Mojave population of the desert tortoise.

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 further defined by the Service 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. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. 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 an incidental take statement.

The measures described in this document are non-discretionary. The Bureau has a continuing duty to regulate the activities covered by the incidental take statement in the biological opinion. If the Bureau fails to include the terms and conditions of this incidental take statement as enforceable conditions of its right-of-way grant, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the Bureau must report the progress of its action and its impact on the desert tortoise to the Service as specified in the incidental take statement [50 *Code of Federal Regulations* 402.14(i)(3)].

Translocation of Desert Tortoises

We anticipate that the translocation of approximately 32 subadult /adult desert tortoises from project facilities (i.e., Ivanpah 1, 2, and 3 project sites, the CLA, and natural gas distribution line) would involve take, in the form of capture and harassment, of all of these individuals. We anticipate the translocation of few, if any, desert tortoises from the fiber-optic line or highway fence project sites. We emphasize that these numbers are estimates, based on the best available information. The number of individuals translocated may be somewhat higher or lower. We anticipate that few, if any, of these individuals will be injured or killed due to handling.

We cannot precisely quantify how many juvenile desert tortoise eggs that project activities would take because we do not know how successful surveyors will be in locating them. However, we have estimated that as many as 35 juvenile desert tortoises may be on the project site, based on the number of adults detected during pre-project surveys and information on desert tortoise demographics. We have also estimated that as many as 139 desert tortoise eggs may be produced on the project site each year. Based on our estimate that few, if any, subadult and adult desert tortoises would be in project work sites on the fiber-optic line and highway fence, we anticipate that these portions of the action area will contain few, if any, juveniles or eggs. We emphasize that these numbers are estimates, based on the best available information; the number of individuals may be somewhat higher or lower. Because of the difficulty in locating juvenile desert tortoises and desert tortoise eggs and because of the difficulty in determining what proportion of the total number of eggs might be on site at the time that construction occurs, we anticipate that the total number taken in the form of capture for translocation will be a small fraction of these numbers. Any individuals and eggs that are not captured would likely be killed or injured by construction activities. We have discussed injury and mortality of these individuals later in this section.

We do not anticipate that the post-translocation mortality rates for the resident and translocated population will be statistically greater than that of the control population. Consequently, we do not anticipate take associated with translocation aside from what we have described in this incidental take statement.

Disease Testing

We anticipate that as many as 162 subadult and/or adult desert tortoises (i.e., 98, 32, and 32 in the resident, control, and translocated populations, respectively) will be taken, in the form of capture and harassment, when BrightSource collects blood to assess disease prevalence. Although such an invasive procedure presents some likelihood that individuals could be injured or killed, we do not anticipate that blood collection will result in the mortality of any individuals because BrightSource would use experienced biologists, authorized by the Service.

Post-translocation Monitoring

We anticipate the take, in the form of capture, of approximately 64 desert tortoises each in the resident and control population for monitoring. As discussed above, because the project site population may increase between now and the time of translocation, a somewhat larger number of desert tortoises may require monitoring depending on the final number of desert tortoises translocated. Although these animals and the 32 desert tortoises from the translocated population would be captured multiple times over the course of the post-translocation monitoring effort, we do not anticipate injury or mortality of these individuals as a result of the post-translocation monitoring.

Construction of ISEGS Facilities

We anticipate that construction of the ISEGS project site, including use of access routes, is likely to take, in the form of mortality or injury, few, if any, subadult or adult desert tortoises because BrightSource will fence the majority of its work areas with desert tortoise exclusion fencing, perform clearance surveys on all work areas, and implement numerous measures to prevent adverse effects to desert tortoises

We anticipate that construction of the ISEGS facilities is likely to take, in the form of mortality or injury, many of the juvenile desert tortoises and destroy eggs that occur within this area; because of the difficulty detecting them, these individuals and eggs are likely to be missed during clearance surveys. We have estimated that as many as 35 juvenile desert tortoises may be on the project site and that as many as 139 desert tortoise eggs may be produced on the project site each year. Because of the difficulty in locating juvenile desert tortoises and eggs, we cannot determine a precise number because we do not know how successful surveyors will be at locating these individuals.

Compensation

All enhancement actions associated with the Bureau's compensation requirements will require future Bureau authorizations. Consequently, we have not provided incidental take exemptions for these actions in this biological opinion. These actions will require future project-specific consultation if they may affect the desert tortoise or other listed species.

Operation and Maintenance of ISEGS Facilities

We anticipate that operation permanently fenced areas are likely to take few desert tortoises. A limited potential exists that a very small number of desert tortoises may find their way into a fenced area. Most of these individuals are likely to be taken in the form of capture as they are removed to offsite habitat; a small fraction of these individuals may be taken, in the form of injury or mortality, if they are exposed to adverse weather conditions or crushed by vehicles before they are detected.

We anticipate that Class I maintenance activities that are outside of fenced work areas and Class II maintenance activities associated with fence repair are likely to take, in the form of injury or mortality, few, if any, desert tortoises because Class I activities would not result in ground disturbance, Class II activities would be localized and infrequent, and access to repair sites would require little, if any, off-road travel. In addition, for all maintenance work, BrightSource would implement numerous protective measures to avoid killing or injuring desert tortoises. We anticipate that these maintenance activities may result in the take, in the form of capture, of a small number of desert tortoises if they are encountered during work activities and moved from harm's way.

Because we do not have sufficient information regarding the location or extent of other Class II and Class III maintenance activities that may occur outside of the permanently fenced work areas, we cannot determine the level of take associated with these activities. Consequently, we cannot provide an exemption from the prohibitions against take for these activities. These actions will require further site-specific or programmatic consultation.

Decommissioning and Restoration of ISEGS Facilities

We anticipate that restoration of temporary disturbance within fenced facilities during operation and maintenance or following decommissioning is unlikely to result in take of desert tortoises because BrightSource will clear all fenced areas of desert tortoises prior to construction of facilities. After facility closure, decommissioning activities and restoration of long-term disturbance within fenced areas are unlikely to take desert tortoises for the same reason. We anticipate that restoration of temporary disturbances and long-term disturbances outside of fenced work areas is likely to take, in the form of injury or mortality, few, if any, desert tortoises for the following reasons: 1) desert tortoise habitat will either be absent from restoration sites or will be of a substantially degraded nature that it will not attract desert tortoises; 2) BrightSource will implement clearance surveys of any restoration sites where ground-disturbing activities are likely to occur, 3) BrightSource will implement numerous measures to reduce the potential for take on restoration sites (e.g., worker education, desert tortoise monitors, etc.). We anticipate that a few desert tortoises are likely to be taken, in the form of capture as they are moved out of harm's way, during these activities. Because much of this work would occur many years from now, we cannot quantify the number of animals that are likely to be taken.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of desert tortoises during the implementation of the ISEGS project:

1. The Bureau must ensure that desert tortoises do not enter fenced project facilities.
2. The Bureau must ensure that the level of incidental take anticipated in this biological opinion is commensurate with the analysis contained herein.
3. The Bureau must ensure that translocation of desert tortoises does not result in injury or mortality of translocated or resident desert tortoises that is substantially elevated above natural injury and mortality rates within the action area.
4. The Bureau must ensure that desert tortoises carrying transmitters are routinely monitored to prevent loss of these animals prior to the removal of transmitters.
5. The Bureau must ensure that the ISEGS facility does not serve as a subsidy to common ravens.
6. The Bureau must ensure that desert tortoises that exhibit clinical signs of disease are not translocated.
7. The Bureau must ensure the proper implementation of health assessments and disease testing to ensure the accuracy of results and to minimize the injury of desert tortoises.
8. The Bureau must ensure that translocation does not result in density-dependent effects or disease related effects to the resident or translocated populations.

Our evaluation of the proposed action includes consideration of the protective measures described in the Description of the Proposed Action section of this biological opinion. Consequently, any changes in these protective measures may constitute a modification of the proposed action that causes an effect to the desert tortoise that was not considered in the biological opinion and require re-initiation of consultation, pursuant to the implementing regulations of the section 7(a)(2) of the Act (50 Code of Federal Regulations 402.16).

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the Bureau must comply with the following terms and conditions, which implement the reasonable and prudent measures described in the previous section, or make them enforceable conditions of its right-of-way grant, and must comply with the reporting and monitoring requirements. These conditions are non-discretionary.

1. The following term and condition implements reasonable and prudent measure 1:

The Bureau must ensure that BrightSource monitors the integrity of all desert tortoise exclusion fencing at least once a month and following any rain events that result in surface flow of water in washes within the action area. The Bureau must ensure that BrightSource promptly repairs any damage identified during monitoring.

2. The following terms and conditions implement reasonable and prudent measure 2:

- a. To ensure that the measures proposed by the Bureau and BrightSource are effective and are being properly implemented, the Bureau must contact the Service immediately if it becomes aware that a desert tortoise has been killed or injured by project activities. At that time, the Service and the Bureau must review the circumstances surrounding the incident to determine whether additional protective measures are required. Project activities may continue pending the outcome of the review, provided that the proposed protective measures and any appropriate terms and conditions of this biological opinion have been and continue to be fully implemented.
- b. If more than 38 subadult or adult desert tortoises are identified for translocation during clearance surveys of the project site, the Bureau must re-initiate consultation, pursuant to the implementing regulations for section 7(a)(2) of the Endangered Species Act at 50 Code of Federal Regulations 402.16, on the proposed action. This condition only applies to clearance of the project site for construction and does not apply to the short distance movement of desert tortoises out of harm's way during activities that occur outside of the fenced project site. Because we do not expect that capturing and removing desert tortoises from work areas outside of the project site is likely to result in injury or mortality of desert tortoises, we are not establishing a re-initiation criterion for that activity.
- c. If 9 desert tortoises are killed or injured as a result of any construction, operation, maintenance, decommissioning, or restoration activities covered by this biological opinion over the life of the ISEGS project, the Bureau must re-initiate consultation, pursuant to the implementing regulations for section 7(a)(2) of the Endangered Species Act at 50 Code of Federal Regulations 402.16, on the proposed action. This term and condition also applies to direct mortality and injury of desert tortoises during translocation and post-translocation monitoring on the resident, control, and translocated populations (i.e., due to handling, road kills, or other effects caused by personnel working on the project). However, it does not apply to post-translocation mortality within these populations that is not connected directly to an action required to carry out the translocation and monitoring effort.
- d. If 3 desert tortoises are killed or injured in any 1 year as a result of any construction, operation, maintenance, decommissioning, or restoration activities covered by this biological opinion, the Bureau must re-initiate consultation, pursuant to the implementing

regulations for section 7(a)(2) of the Endangered Species Act at 50 Code of Federal Regulations 402.16, on the proposed action. This term and condition also applies to direct mortality and injury of desert tortoises during translocation and post-translocation monitoring on the resident, control, and translocated populations (i.e., due to handling, road kills caused by personnel working on the project). However, it does not apply to post-translocation mortality within these populations that is not connected directly to an action required to carry out the translocation and monitoring effort.

3. The following term and condition implements reasonable and prudent measure 3:

If monitoring of translocated and resident desert tortoises indicates a statistically significant elevation in mortality rates above that observed in control populations, the Bureau must re-initiate consultation, pursuant to the implementing regulations for section 7(a)(2) of the Endangered Species Act at 50 Code of Federal Regulations 402.16, on the proposed action.

4. The following terms and conditions implement reasonable and prudent measure 4:

- a. The Bureau must ensure that BrightSource monitors all translocated desert tortoises according to the following schedule: 1) within 24 hours of release, 2) twice weekly for the first 2 weeks after release, 3) starting the third week after release, at least once a week from March 1 to October 31 and once every other week from November 1 to February 28.
- b. The Bureau must ensure that BrightSource monitors all desert tortoises that carry transmitters in the resident and control populations at least once a week from March 1 to October 31 and once every other week from November 1 to February 28.

5. The following term and condition implements reasonable and prudent measure 5:

The Bureau must meet with the Service to review data and reports associated with BrightSource's monitoring and adaptive management program for common ravens prior to the cessation of these activities. If the agencies determine that further monitoring and adaptive management are warranted, the Bureau must require BrightSource to extend these activities.

6. The following term and condition implements reasonable and prudent measure 6:

After performance of visual health assessments on project-site desert tortoises, the Bureau must ensure that BrightSource contacts the Service with the results of the health assessments and the proposed disposition of each individual. The Bureau must ensure that BrightSource receives authorization for translocation of these individuals from the Service prior to commencement of translocation.

7. The following term and condition implements reasonable and prudent measure 7:

The Bureau must ensure that all individuals that will perform visual health assessments and blood collection have been specifically authorized or trained for that activity by the Service. The Service must receive the credentials for all individuals seeking approval at least 30 days prior to the need for visual health assessments and blood collection.

8. The following terms and conditions implement reasonable and prudent measure 8:

- a. If pre-translocation surveys of the translocation area indicate that it cannot accommodate all desert tortoises from the ISEGS project under the threshold established in the description of the proposed action, the Bureau must re-initiate consultation, pursuant to the implementing regulations for section 7(a)(2) of the Endangered Species Act at 50 Code of Federal Regulations 402.16 to address modifications to the translocation plan.
- b. If pre-translocation surveys of the translocation areas indicate a disease prevalence of more than 5 percent or indicates that additional translocation areas will be required to accommodate the disease buffering requirements identified in the description of the proposed action, the Bureau must re-initiate consultation, pursuant to the implementing regulations for section 7(a)(2) of the Endangered Species Act at 50 Code of Federal Regulations 402.16 to address modifications to the translocation plan.
- c. The Bureau must ensure that BrightSource performs disease sampling of all areas that desert tortoises may move to following translocation as described in the Environmental Baseline section of this biological opinion (i.e., area bounded by Interstate 15, the Clark Mountains, Ivanpah Lake, and Primm, Nevada), as opposed to the 6 kilometer buffer identified in the project description.

Because of the complex nature of this incidental take statement, we have attached a summary of the levels of incidental take that would necessitate re-initiation of formal consultation.

REPORTING REQUIREMENTS

Within 60 days of the completion of the proposed action, the Bureau must provide a report to the Service that provides details on the effects of the action on the desert tortoise. The Bureau must also provide an annual report by December 31 of each year during construction of each phase and during the subsequent translocation monitoring. Specifically, these reports must include information on the effectiveness and practicality of minimization measures, any instances when desert tortoises were killed, injured, or handled; the circumstances of such incidents and the specific information for each animal; and any actions undertaken to prevent similar instances from re-occurring. In addition, these reports should provide detailed information on the results of translocation monitoring to include the following: 1) location of all desert tortoises carrying transmitters, 2) mortality rate from each population, 3) statistical analysis of mortality rate between all three populations, and 4) health status and body condition of all desert tortoises that

carry transmitters. These reports should also provide an estimate of the actual acreage disturbed by various aspects of the construction and operation up to the time of the report. We recommend that the Bureau provide us with any recommendations that would facilitate the implementation of the protective measures while maintaining protection of the desert tortoise. We also request that the Bureau provide us with the names of any monitors who assisted the authorized biologist and an evaluation of the experience they gained on the project; the qualifications form on our website (http://www.fws.gov/ventura/sppinfo/protocols/deserttortoise_monitor-qualifications-statement.pdf), filled out for this project, along with any appropriate narrative would provide an appropriate level of information. This information would provide us with additional reference material in the event these individuals are submitted as potential authorized biologists for future projects.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. We recommend that the Bureau work with BrightSource and the Service to determine if the desert tortoises associated with the resident, control, and translocated populations can be used to answer additional research questions related to translocation or desert tortoise biology.
2. We recommend that the Bureau amend the California Desert Conservation Area Plan to prohibit large-scale development (e.g., solar energy facilities, wind development, etc.) within the area bounded by Interstate 15, the State line, and Clark Mountains. We offer this recommendation because this area will have been used as a recipient site for translocated desert tortoises from the ISEGS project. Additionally, three other projects, the Joint Port of Entry, DesertXpress, and a pipeline extension from the Kern River Gas Transmission Company's line may be built in this valley. Given these activities, the potential exists that this portion of the Ivanpah Valley may be disturbed and fragmented to the extent that desert tortoises and other wildlife populations may be severely compromised.
3. We recommend that the Bureau perform additional wild burro gathers in the former Clark Mountain Herd Management Area to remove remaining burros that may adversely affect habitat within translocation areas.
4. Based upon our review, certain aspects of the weed management plan may result in an inefficient use of resources. We recommend that the Bureau and BrightSource work with the Mojave Resource Conservation District to develop a site-specific weed management plan that would be effective and efficient.

5. We recommend that the Bureau consider alternative configurations for this project that would focus ground disturbance on lands next to Interstate 15 that are likely to have very low desert tortoise densities.

The Service requests notification of the implementation of any conservation recommendations so we may be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats.

DISPOSITION OF DEAD OR INJURED DESERT TORTOISES

Within 3 days of locating any dead or injured desert tortoises, you must notify the Ventura Fish and Wildlife Office by telephone (805 644-1766) and by facsimile (805 644-3958) or electronic mail. The report must include the date, time, location of the carcass, a photograph, cause of death, if known, and any other pertinent information.

We will advise you on the appropriate means of disposing of the carcass when you contact us. We may advise you to provide it to a laboratory for analysis. Until we provide information on the disposition of the carcass, you must handle it such that the biological material is preserved in the best possible state for later analysis. If possible, the carcass should be kept on ice or refrigerated (not frozen) until we provide further direction.

Injured desert tortoises must be taken to a qualified veterinarian for treatment. If any injured desert tortoises survive, the Service must be contacted regarding their final disposition.

REINITIATION NOTICE

This concludes formal consultation on the Bureau's proposal to issue a right-of-way grant to BrightSource Energy for construction of the ISEGS facility in San Bernardino County, California. Reinitiation of formal consultation is required where discretionary federal involvement or control over the action has been retained or is authorized by law and: (a) if the amount or extent of taking specified in the incidental take statement is exceeded; (b) if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (c) if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or (d) if a new species is listed or critical habitat designated that may be affected by the identified action (50 Code of Federal Regulations 402.16).

If you have any questions regarding this biological opinion, please contact Brian Croft of my staff at (951) 697-5365.

Attachment

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