# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Southern Nevada Fish and Wildlife Office
4701 North Torrey Pines Drive
Las Vegas, Nevada 89130

IN REPLY REFER TO:
08ENVS00-2021-F-0037

March 5, 2021
*Sent by email only*

Memorandum

To: Assistant Regional Director
Ecological Services, Sacramento, California

From: Field Supervisor GLEN KNOWLES Digitally signed by GLEN KNOWLES Date: 2021.03.05 10:55:07 -08'00'
Southern Nevada Fish and Wildlife Office, Las Vegas, Nevada

Subject: Intra-Service Biological Opinion for Issuance of a Section 10(a)(1)(B) Incidental Take Permit for the Spring Mountain Raceway, LLC Habitat Conservation Plan, Nye County, Nevada

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the subject incidental take permit application and associated habitat conservation plan (HCP). Spring Mountain Raceway, LLC, is applying for an incidental take permit (Permit) for the federally threatened Mojave desert tortoise (*Gopherus agassizii*) in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 et seq.) and 50 Code of Federal Regulations (CFR) Part 402 of our interagency regulations governing section 7 of the Act. This biological opinion evaluates potential effects to the desert tortoise that may result from issuance of the Permit and implementation of the Spring Mountain Raceway Project HCP. No critical habitat will be affected by the proposed action.

This biological opinion addresses potential effects to the desert tortoise in accordance with the Act, and 50 CFR § 402 of our interagency regulations governing section 7 of the Act. This biological opinion is based on information provided in the Spring Mountain Raceway Project HCP (HCP; BEC Environmental, Inc., 2021); meetings and correspondence with the applicant; desert tortoise survey results on the subject property; scientific publications, articles, and reports; and information in our files. A complete administrative record of this consultation is on file at the Service's Southern Nevada Fish and Wildlife Office in Las Vegas.

# BIOLOGICAL OPINION

## CONSULTATION HISTORY

The following chronology documents the consultation process that culminated in this biological opinion for the Mojave desert tortoise (*Gopherus agassizii*) for the Spring Mountain Raceway Project HCP:

February 8, 2019: The Service met with the project proponent (applicant) and consultants to discuss the Spring Mountain Raceway Project.

February 13, 2019: The Spring Mountain Raceway Project (Project) consultants provided the Service a draft HCP.

March 8, 2019: The Service conducted a site visit with the applicant and consultants at the Spring Mountain Raceway.

May 22, 2019: The Service was informed by the applicant that the Project was not going forward at that time.

October 17, 2019: The Service met with the applicant and new consultants to discuss a revised version of the Project.

July 30, 2020: The Service received a revised Project HCP and environmental assessment.

October 2, 2020: The Service published in the Federal Register a notice of availability of the Project HCP and environmental assessment, initiating a 30-day comment period.

November 10, 2020: The Service met with Project consultants to discuss revisions to the draft HCP.

November 25, 2020: The Service met with Project consultants to discuss revisions to the draft HCP.

December 16, 2020: The Service requested and received a copy of the MDT Pre-Project survey data sheet.

January 5, 2021: The Service communicated with Project consultants to address additional public comments on the draft HCP and EA.

January 7, 2021: The Service received a response regarding additional comments on the draft HCP and EA from the Project consultants.

January 19, 2021: The Service communicated with Project consultants to address revisions to the draft HCP and EA.

January 24, 2021: The Service received revisions of the draft HCP and EA from the Project consultants.

February 4, 2021: The Service communicated with Project consultants to address revisions to the draft HCP and EA.

February 5, 2021: The Service received revisions of the draft HCP and EA from the Project consultants.

February 18, 2021: The Service communicated with Project consultants to address revisions to the draft HCP and EA.

February 19, 2021: The Service received revisions of the draft HCP and EA from the Project consultants.

March 3, 2021: The Service communicated with Project consultants to address final revisions to the draft HCP and EA.

March 3, 2021: The Service received the final draft of the HCP and EA from the Project consultants.

DESCRIPTION OF THE PROPOSED ACTION

**Definition of the Action Area**

The Pahrump Valley is in southern Nevada in the Basin and Range physiographic province, at an average elevation of about 2,800 feet above mean sea level (AMSL). The Spring Mountains, with maximum elevation of nearly 12,000 feet AMSL, lie to the north and east of the Project Area. The Pahrump Valley is an internal drainage basin, and runoff flows from the surrounding mountains to the west and east of Pahrump down to the valley floor, where dry lake beds have formed, and salt desert scrub is the dominant plant community. No perennial surface waters occur within the Project Area. Surface water is only present in ephemeral washes following precipitation. The Project Area is located mid-valley on the distal portion of an alluvial fan above the dry lakebed, with slopes ranging from 2 to 8 percent.

The climate in the Pahrump Valley is typical for the Mojave Desert, with very hot summers, cool winters, and arid conditions. The southernmost part of Nye County receives an average annual precipitation of five inches or less. Precipitation occurs sporadically from either winter rains or summer thundershowers. During the winter months, high-pressure conditions predominate resulting in west-to-east tending winds and precipitation patterns. During the summer months, low-pressure conditions predominate, resulting in southwest-to-northeast trending precipitation patterns.

The soil in the Project Area is characterized as desert pavement interspersed with somewhat silty-soiled playa. The vegetation within the Project Area is typical Mojave Desert scrub dominated by creosote bush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*). Other

plants include four-wing saltbush (*Atriplex canescens*), shadscale (*Atriplex confertifolia*), spiny menodora (*Menodora spinescens*), Nevada ephedra (*Ephedra nevadensis*), littleleaf ratany (*Krameria erecta*), common matchweed (*Gutierreza sarothrae*), Mojave yucca (*Yucca schidigera*), and cottontop cactus *(Echinocactus polycephalus*). Joshua tree (*Yucca brevifolia*) were not observed within the Project Area. The area is characterized as moderate to good desert tortoise habitat. There is no critical habitat present in the Project Area.

The Project Area is located within the Town of Pahrump, adjacent to the existing SMR facility (Figure 1). The Project Area is part of a 620-acre parcel purchased from the Bureau of Land Management (BLM). The Project Area is zoned for heavy industrial development with special projects overlay in a Pahrump Regional Master Plan Amendment approved by the Nye County Board of County Commissioners. The special projects overlay restricts development to be consistent with raceway and track operations (no residential use), and the maximum water use to less than 50 acre-feet per year on the entire 620 acres acquired from BLM.

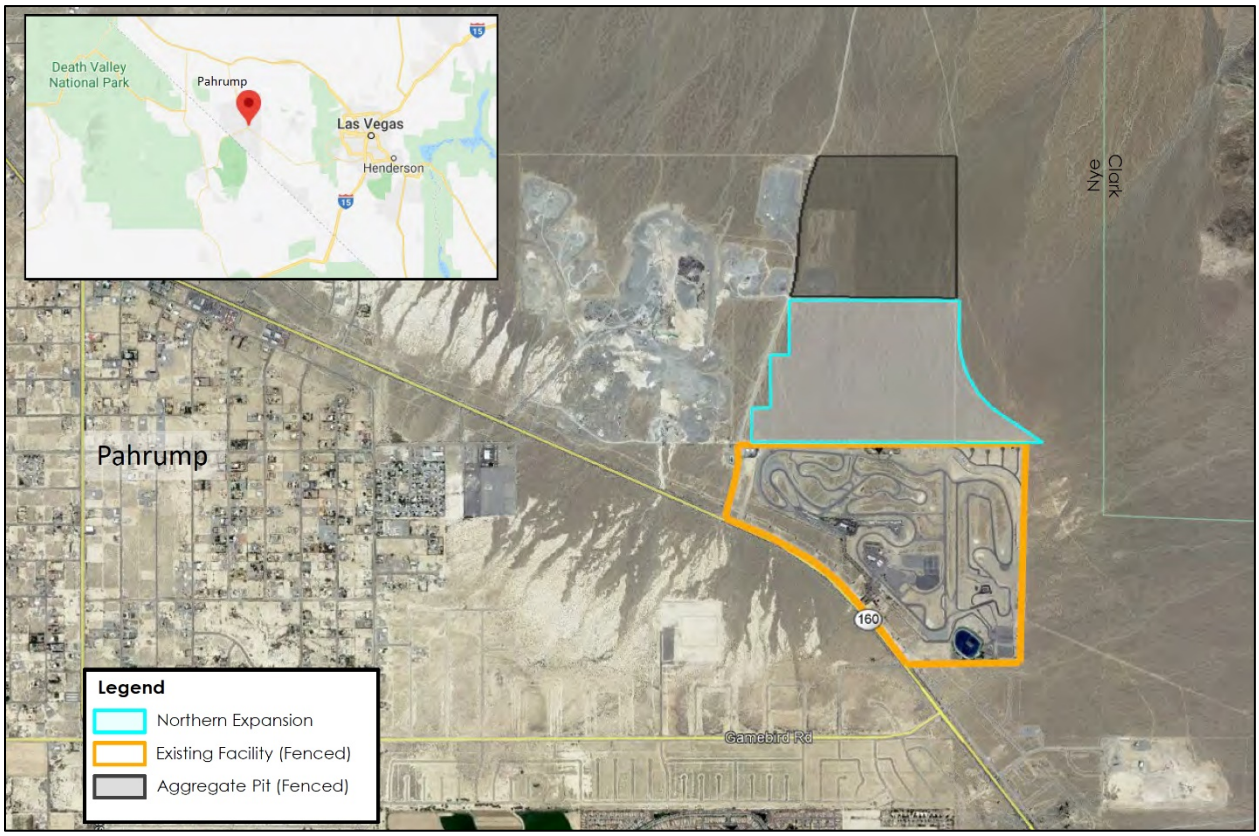


Figure 1. Location of SMR facility. From south to north, the existing facility is outlined in yellow, the proposed northern expansion is outlined in blue, and an aggregate pit is outlined in black.

The area west of the Project Area is a 40-acre area of moderately disturbed native desert which consists of Mojave Desert scrub consistent with the vegetation within the Project Area. This 40-acre area and the Project area is separated by Wheeler Pass Road. The Project Area is bound to

the north and west by an existing aggregate mine enclosed with fencing. The active, expanding gravel pit to the north of the expansion is fenced, but given SMR has no control over the integrity or future of that fence, SMR plans to install fencing along the northern boundary of the Project Area. The Project Area is bound to the south by the existing SMR facilities.

The area to the east of the Project Area, which is the proposed Tortoise Release Area, is Mojave Desert Scrub administered by BLM for multiple uses as described in the Las Vegas Field Office Resource Management Plan (BLM, 1998). This area supports occupied, suitable desert tortoise habitat. Much of this land is within a corridor dedicated for future development of power transmission and distribution infrastructure (Figure 2).

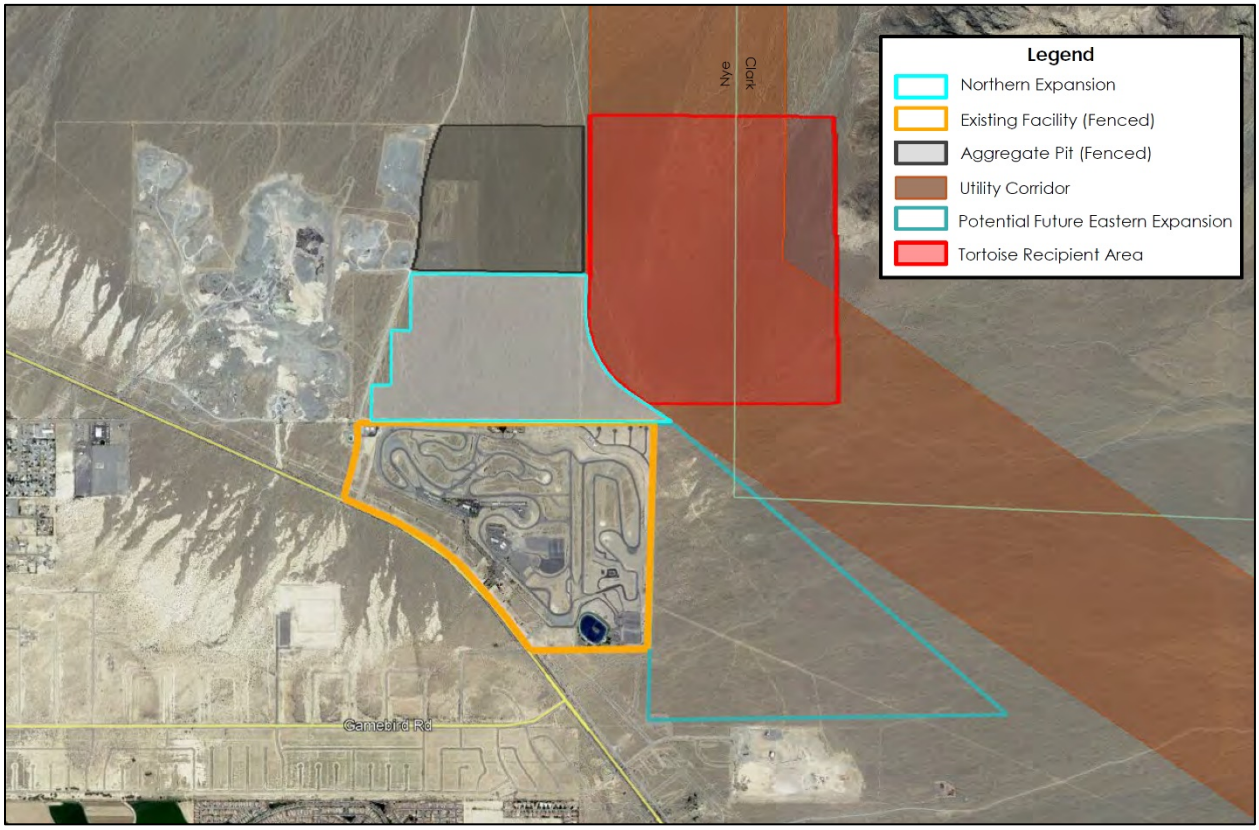


Figure 2. Location of the Mojave Desert tortoise recipient site is outlined in red, northern expansion is outlined in blue above the existing facility, a potential future expansion area is outlined in blue east of the existing facility, and a utility corridor is colored brown.

**Proposed Action**

Spring Mountain Raceway, LLC (SMR, project proponent) is applying for an incidental take permit under section 10(a)(1)(B) of the Endangered Species Act (ESA) for activities proposed in association with the development of 227 acres of vacant land in Pahrump, Nevada. The project proponent has developed a habitat conservation plan (HCP) in support of their permit application. The HCP describes activities associated with the development of an expansion to the

existing SMR facility, the effects of those activities on the Mojave Desert tortoise, and measures the project proponent will take to avoid, minimize, and mitigate the effects.

The purpose of the project is to construct, operate, and maintain additional SMR facilities on private land. The project will result in an additional 3.6 miles of racetrack, a stormwater detention basin, two 4,800 square foot classroom buildings with guest parking, and a paddock area for parking and preparation of cars for use on the track (Figure 3). The track will not include the installation of lighting; night operations will not be conducted. Access to the expansion area will be through the existing SMR facility. The entire Project Area will be surrounded by a desert tortoise exclusion fence (approximately 10,000 feet). The project proponent is applying for an incidental take permit because the proposed project is located within desert tortoise habitat and take will be unavoidable as a result of constructing and operating the expansion facilities on the project site.

The Project Area is located approximately 0.3 miles northeast of the intersection of Nevada State Road 160 and Wheeler Pass Road in Nye County, Nevada. The SMR expansion will be constructed on 227 acres of vacant private land within Mount Diablo Meridian, Township 20, South Range 54 East, in portions of sections 27 and 28.

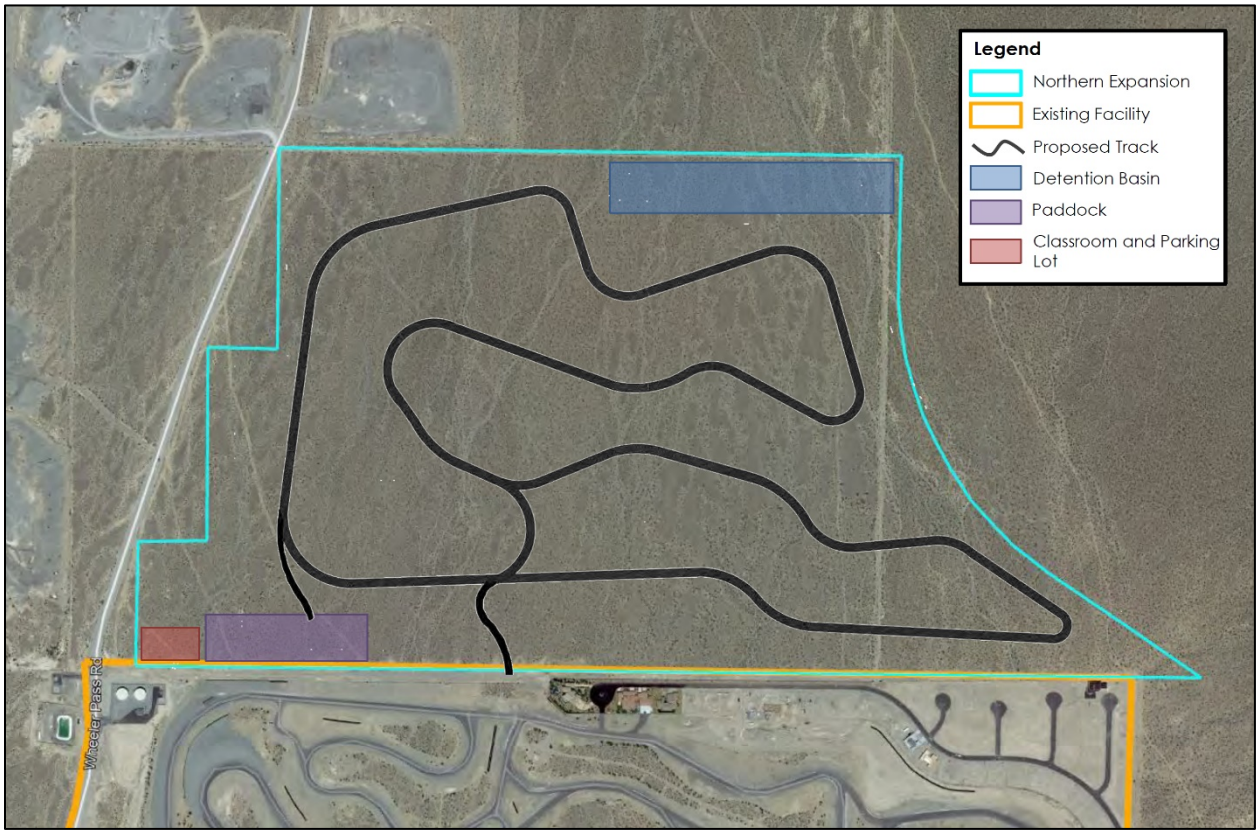


Figure 3. Proposed SMR expansion area showing locations of proposed facilities.

Construction activities will be done in stages to reduce any potential impacts to protected species and to minimize dust and noise generation. The duration of construction activities is expected to last approximately 5 years. Construction of the SMR expansion will include:

- Project Area designs will be finalized. Alignment of the track, width of the track, and track shoulder run-out areas may be modified slightly from current plans to increase driver and operations safety of the facility.
- Clearance of the perimeter boundary line of tortoises and/or burrows in preparation of tortoise-exclusion fence installation. After clearance activities, the fence line will be bladed using a Cat 140 blade (or similar equipment) and a water truck for dust control. A minimal disturbance of the fence line area will be conducted, creating enough room to be able to drive a full-sized pickup truck and a skid-steer tractor (a small, rigid-frame, engine-powered tractor with lift arms) along this area in order to install posts and tortoise fencing in accordance with current USFWS design and construction standards. The fence will include three horizontal strands of barbed wire on the top of the tortoise fence to keep other animals and people from entering the property. This activity will take approximately six weeks to complete. Once the fence has been completed, the desert tortoise clearance survey of the Project Area will be conducted to locate all desert tortoises in the area and translocate the tortoises in accordance with the HCP Translocation Plan and the Incidental Take Permit (ITP).
- A survey team will stake the track layout for the 3.6-mile track extension, detention basin for flood control, and other project components. This will be accomplished using a full-sized utility truck to setup survey equipment, and the property will be walked by the surveyor team while setting stakes at 50-foot intervals. This activity will take five days to complete.
- The detention basin, paddock area, classroom, parking lot, and track alignment will be cleared of vegetation, in preparation for the grading and paving of the 50-foot wide track surface. This will be accomplished by using a 15,000-gallon Caterpillar® (CAT) water pull, a CAT 140 Motor Grader and CAT 631 Motor Scraper (or similar equipment) to remove all vegetation and make a drivable surface for water trucks and equipment. The graded track alignment will be watered regularly for two weeks to prepare the ground surface for grading, compaction, and track construction. These activities will take approximately four weeks.
- Grading and contouring of the detention basin, paddock area, classroom, parking lot, and track alignment will include moving a minimal amount of topsoil or surface material to keep the track as close to the original surface contour as possible. The actual paved track surface will be approximately one foot above the natural grade to keep water from ponding on the track surface. This will be accomplished using two CAT 631 Motor Scraper, two CAT water pulls, two CAT 140 Motor Graders, and a CAT 966 Wheel Loader (or similar equipment). The grading will be a rough grade using the materials on site to reach a compaction of 90% minimum below the finished grade. After the rough grade is completed a locally sourced (Nevada Department of Agriculture certified weed-free) crushed aggregate material will be brought in to create a six-inch deep surface below the Asphaltic Concrete surface. The materials will be locally sourced from an existing gravel pit operation and hauled to the site using existing paved roads along

Nevada State Highway 160 and into the site through the existing SMR. The gravel will be hauled in belly dump trailers which create very low impact to dust disturbance. These activities are anticipated to take approximately eight weeks to complete.

- Paving of the track surface will use an Asphaltic Concrete mix using AC 30 Asphalt oil for asphalt binding, and locally sourced materials mixed and shipped from less than two miles from the job site. There will be a 2.5-inch bottom binding course-laid using an asphalt paving machine and three roller machines, one rubber tire roller and two steel drum rollers, to achieve a 90% compaction of the materials. This track surface will take four days to complete, after which the wear surface will be laid using the same common oil mixture with a small amount of binding materials including fly ash and cement powder, to ensure early stability and long term wear ability of the track surface. This procedure will allow for a life span of approximately 20 years. Paving of the paddock and parking area for the classroom will be conducted during this phase as well. This full process will take two weeks to complete.
- After the track surface has cured for one week, the edges of the track (50 feet either side of the track alignment), including vehicle runoff areas, will be cleaned and smoothed (graded) to provide a safe and clean track surface. The edges will be watered and rolled to create a solid crust which will eliminate dust from blowing and debris from being pushed onto the track surface in the event of a car running off the track surface. This activity will be accomplished using a water truck and a CAT 140 Motor Grader (or similar equipment) and a steel drum roller and take approximately three weeks.
- Construction of the classroom buildings will begin at the end of track construction, while the track cures. The building will be constructed in accordance with the Nye County Building Permit. The building will be Slab-on-Grade, wood framed construction with a stucco and stone exterior. A paved parking lot and minimal, xeric landscaping (palm trees) around the building will be constructed per the Nye County Development Agreement. The construction contractors will access the project using Nye County maintained roads. Building construction will require approximately 120 days.

SMR will implement a litter control program during construction. All trash, including food scraps will be stored in a predator-resistant container and removed from the construction area each day. During operations of the facility, SMR employees will remove litter from the Project Area and all fences throughout the year.

SMR will avoid the introduction of non-native weed plant species during construction, and then manage species in the event they become established. The introduction of these plant species will be avoided by ensuring all equipment is cleaned of soils and vegetative material before entering the Project Area. All fill or aggregate material to be imported to the Project Area will be sourced from certified weed-free sources facilities.

To prevent the establishment of the weeds in the Project Area during operation, SMR will continue inspection of developed areas on a regular basis to identify any weed introduction or invasion. When noxious weed species are observed, they will be removed and disposed of through the solid waste hauling service. When weed invasions become too large for manual

removal, SMR will use commercially approved herbicides in accordance with their labeling to eliminate weed species.

**Proposed Minimization Measures**

The project proponent will implement the following minimization measures to reduce impacts to desert tortoises:

- Pre-activity surveys with 100% coverage of the Project Area were performed by an authorized desert tortoise biologist (ADTB).

- A desert tortoise clearance survey will be performed prior to the installation of a permanent desert tortoise exclusion fence around the entire 227-acre expansion area. Installation of a permanent tortoise exclusion fence around the west, north and east boundaries of the SMR expansion Project Area (approximately 10,000 feet) will attach to the fencing for the existing SMR facility to prevent tortoises from gaining access to the project site. The gravel pit to the north of the Project Area is fenced, but SMR has no control over the integrity or future of that fence. Shade-providing structures attached to the fence will provide tortoises with shade as they explore the new exclusion fence. All fencing at SMR is inspected and maintained to ensure tortoises are unable to gain access to all SMR facilities.

- A desert tortoise clearance survey of the Project Area will be performed after perimeter desert tortoise exclusion fence construction. Tortoises found in the Project Area will be moved to a translocation area (recipient site) northeast of the Project Area (Figure 4). Translocated tortoises will be monitored in order to collect data and promote post-translocation survivorship. The proposed Translocation Plan is included in the HCP (Appendix D).


Figure 4. The translocation area (red diagonal strip) is located northeast of the Project Area (dashed polygon).

- After the clearance survey of the Project Area, an on-call ADTB will be available during preliminary vegetation removal, final grading, and other construction activities.

- All employees and contractors involved with the project will be required to complete a Worker Environmental Awareness Program (WEAP) to be developed and presented to all workers at the site. The WEAP will include information on desert tortoises and other special-status species, nonnative invasive weed species (and how to reduce/limit their spread), dust control, and measures to be implemented to minimize impacts to the environment. The WEAP shall be administered to all Project personnel and shall include documentation of training with training acknowledgements signed by each worker. The WEAP shall be implemented during site construction.

- Prior to blading and vegetation removal activities in vegetated habitat during the migratory bird breeding season, typically February 15 – August 31, one or more qualified avian biologists will survey the area no more than 3 days prior to the ground disturbance to locate active nests, including those of burrowing owls. Active nest is defined as any nest with eggs or young of a species listed as a migratory on the MBTA list. If an active nest is found, activities near that nest will be halted, a 100-foot buffer will be established

around the nest, and the nest will be monitored by the avian biologist until the young have fledged or until the biologist confirms the nest has failed. The biologist will document the monitoring efforts and the fate of the nest.

- During all construction activities, if a Gila monster is observed, all activities which may cause it harm will be halted and a qualified and permitted biologist will capture the lizard, place it in a secure container in a safe location, and notify NDOW in accordance with their NDOW permits.

- Implementation of the SMR litter control program will be extended to the Project Area to minimize the potential to attract predators to the area. During operations of the facility, SMR employees will remove litter from the Project Area and all fences and SMR property throughout the year.

- Implementation of the SMR weed management plan will be extended to the Project Area to minimize the introduction and spread of noxious weeds.

- SMR will provide $209,521 for desert tortoise recovery to mitigate impacts from the Project. The mitigation funds provided by the project will be used to fund a habitat restoration project in the nearby Stump Springs and Trout Canyon translocation areas (Figure 5). This project will serve to directly benefit the species, including tortoises directly affected by the project, and serve to fully mitigate the loss of 227 acres of habitat, in a number of ways. The USFWS will work with BLM, the U.S. Geological Survey, and other partners to apply vegetation management to restore native vegetation and reduce or eliminate the invasive annual grass red brome (*Bromus rubens*) and other non-native plant species in the Stump Springs and Trout Canyon translocation areas. This project is expected to benefit desert tortoise recovery by both improving habitat, and specifically foraging habitat, for desert tortoise, but also by serving to refine techniques for desert tortoise habitat restoration that can be applied in the Eastern Mojave Recovery Unit and potentially range-wide for the species. Restoring habitat for desert tortoise in these translocation areas will improve habitat for desert tortoises released in these areas that are displaced by development projects throughout southern Nevada, and will thus enhance the survivorship of tortoises released in these areas, and further our goal for these focus areas of population augmentation. These translocation areas also serve to maintain connectivity through the region, which will also directly benefit tortoises in the project area that are also part of this connectivity corridor. This project is necessary for the effective establishment of these translocation areas and the successful augmentation of the populations in these areas, and will fully mitigate for the adverse affects of the project by directly furthering desert tortoise recovery.

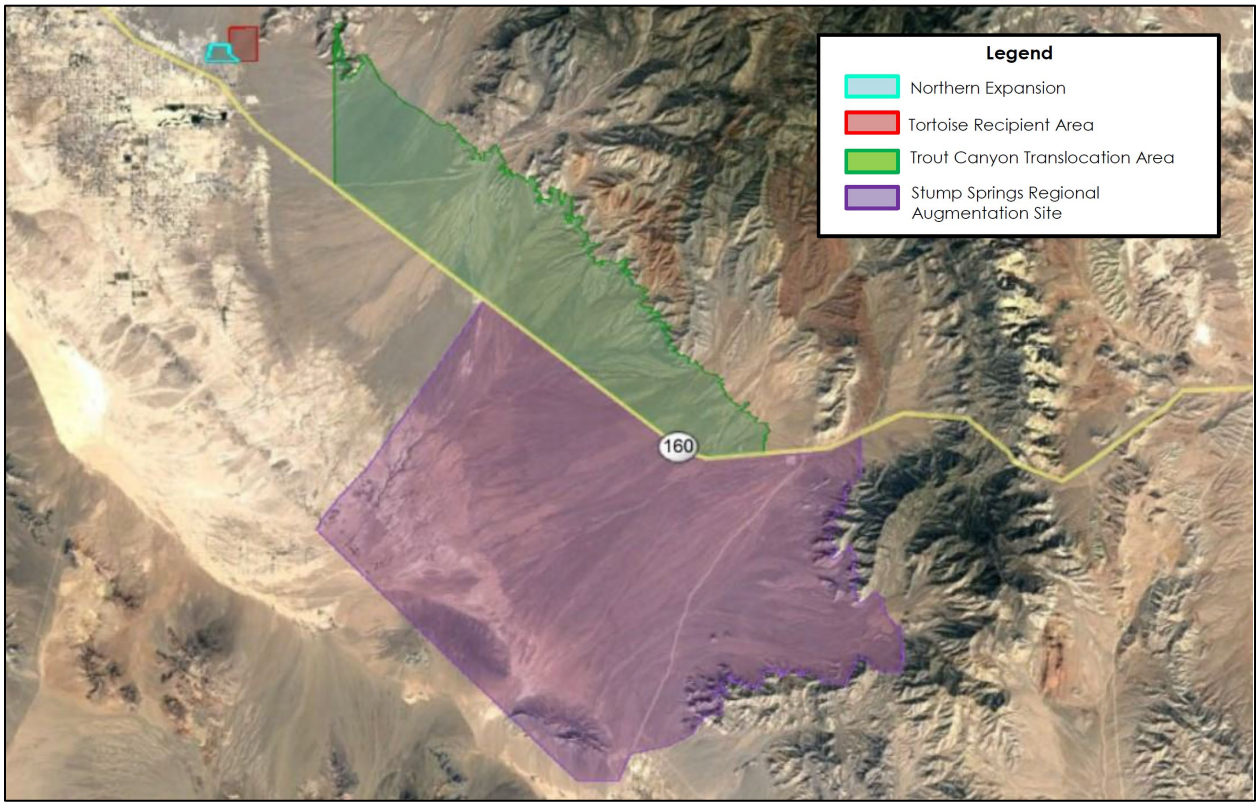


Figure 5. Habitat Conservation Plan Area including the Project Area (SMR Northern Expansion and Desert Tortoise Recipient Area) and the off-site mitigation area (Trout Canyon Translocation Area and Stump Springs Regional Augmentation Site).

ANALYTICAL FRAMEWORK FOR THE SERVICE'S DETERMINATIONS

**Jeopardy Determination**

Section 7(a)(2) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.) requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. "Jeopardize the continued existence of" means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02).

The jeopardy analysis in this biological opinion considers the effects of the proposed Federal action, and any cumulative effects, on the rangewide survival and recovery of the listed species. It relies on four components: (1) the Status of the Species, which describes the rangewide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the Environmental Baseline, which analyzes the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or

interdependent activities on the species; and (4) the Cumulative Effects, which evaluates the effects of future, non-Federal activities that are reasonably certain to occur in the action area on the species.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the current status of the species, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to reduce appreciably the likelihood of both the survival and recovery of the species in the wild by reducing the reproduction, numbers, and distribution of that species.

## STATUS OF THE SPECIES

The range-wide status of the desert tortoise consists of information on its listing history, species account, recovery plan, recovery units, distribution, reproduction, and numbers. Because of the length of the document, the current range-wide status of the species and its critical habitat is provided on the Service's website at:

https://www.fws.gov/nevada/desert_tortoise/documents/misc/Status%20of%20the%20Desert%20Tortoise%20and%20its%20CH%20March%202019.pdf

If unavailable on this web site, contact the Southern Nevada Fish and Wildlife Office in Las Vegas at (702) 515-5230, and provide the file number for this biological opinion (File No. 08ENVS00-2019-F-0171) along with the date of the biological opinion.

## ENVIRONMENTAL BASELINE

Environmental baseline refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

### Action Area

The implementing regulations for section 7(a)(2) of the Act define the "action area" as all areas to be affected directly or indirectly by the Federal action, including interrelated and interdependent actions, and not merely the immediate area involved in the action (50 CFR § 402.02). While the definition of the action area includes direct and indirect effects, the updated Endangered Species Act regulations (84 FR 44976) combine these into "all effects." Even though we discuss separate categories of effects, this biological opinion complies with the new regulations. Subsequent analyses of the environmental baseline, effects of the action, cumulative effects, and levels of incidental take are based upon the action area as determined by the Service.

Regulations implementing the Act define the environmental baseline as the past and present effects of all Federal, State, or private actions and other human activities in the action area (50 CFR § 402.02). Also included in the environmental baseline are the anticipated effects of all proposed Federal projects in the action area that have undergone section 7 consultation, and the effects of state and private actions that are contemporaneous with the consultation in progress.

The action area for the project includes areas with direct and indirect impacts:

- The area of direct impacts is the 227-acre Project Area containing the northern expansion of the SMR.
- The area of indirect impacts where federally protected species would be impacted is the surrounding desert tortoise habitat in Pahrump Valley.
    - Desert tortoises outside the action area whose home ranges intersect with the action area.
    - Desert tortoise recipient area, where tortoises from the Project Area would be released.

**Status of the Desert Tortoise in the Action Area**

*Eastern Mojave Recovery Unit*

The action area occurs within the Eastern Mojave Recovery Unit as described in the revised desert tortoise recovery plan (Service 2011). The Eastern Mojave Recovery Unit is bordered by the Western Mojave Recovery unit to the west, the Northeastern Mojave Recovery Unit to the east, and the Colorado Desert Recovery Unit to the Southeast. The Eastern Mojave Recovery Unit spans the border between California and Nevada, including Oasis Valley, Amargosa Desert, Shadow Valley, Ivanpah Valley and Pahrump Valley. Eastern Mojave Recovery unit also extends eastward to include part of Las Vegas Valley and Eldorado Valley as the southeastern border follows the Colorado River. The unit also includes the Spring Mountains east to the Sheep Mountains.

Recent DNA microsatellite analysis has shown this recovery unit has unique nuclear allele frequencies indicating that this unit is relatively isolated from other recovery units (Hagerty and Tracy 2010). Allele frequencies from tortoises at Amargosa Valley and Pahrump Valley form a cluster indicating they may be isolated from other sites within the unit (Britten et al. 1997). The Sheep Mountains appear to form a barrier to tortoise movement between the eastern side of the recovery unit and the Northeastern Mojave Recovery Unit. The New York and Providence mountains isolate Ivanpah/Shadow valleys from Eldorado and Fenner valleys in the Colorado Desert Recovery Unit to the east. Saline Valley and Death Valley extending south into Silurian Valley and Soda Dry Lake act as a barrier between this recovery unit and the Western Mojave Recovery Unit. Although gene flow likely occurred intermittently during favorable conditions across this western edge of the recovery unit, this area contains a portion of the Baker Sink, a low-elevation, extremely hot and arid strip that extends from Death Valley to Bristol Dry Lake. This area is generally inhospitable for desert tortoises.

Desert tortoises in this recovery unit are generally found in creosote bush scrub communities of flats, valley bottoms, alluvial fans, and bajadas, but they occasionally use other habitats such as rocky slopes and blackbrush scrub. As in the northeastern Mojave Desert, desert tortoises are often active in this recovery unit in late summer and early fall, in addition to spring, reflecting the fact that this region receives up to about 40 percent of its annual rainfall in summer and supports two distinct annual floras on which tortoises can feed. They typically eat summer and winter annuals, cacti, perennial grasses, and herbaceous perennials. Average daily winter temperatures usually fluctuate above freezing, except in the higher elevations. Summer temperatures are typically a few degrees cooler, except in the lowest elevations of Death Valley, than the recovery units to the south and west.

The recovery unit includes the east side of Death Valley National Park, much of Mojave National Preserve, and Lake Mead National Recreation Area between Las Vegas Bay and Cottonwood Cove, as well as the Nevada Test Site and the western end of Desert National Wildlife Range. It also includes the Ivanpah Valley critical habitat unit and the Eldorado Valley portion of the Piute-Eldorado critical habitat unit. A lack of desert tortoise habitat dedicated to conservation to the west of the Spring Mountains and in Las Vegas Valley highlights the need for careful management in these areas to maintain connectivity among populations and the genetic variation within this recovery unit. Corridors north and south of the Spring Mountains warrant particular management attention to prevent genetic isolation of populations on either side of this mountain range.

*Pahrump Valley Habitat*

Desert tortoise habitat quality varies throughout Pahrump Valley, with higher quality less-disturbed habitat occurring on the east side of State Route 160 and in the northern and northwestern edges of the town boundary. The habitat tends to be less disturbed and fragmented the farther east it occurs from the highway. Habitat also occurs in southern areas of Pahrump, but is patchy and interspersed with sandy mesquite hummocks. In general, the central area of Pahrump on the west side of State Route 160 has either been developed for residential and commercial purposes, or is dominated by abandoned agricultural fields and slat desert scrub, and for the most part does not provide suitable habitat for desert tortoise. The private lands that surround the Project Area are developed and do not support suitable habitat for desert tortoise. The Bureau of Land Management (BLM) lands that surround the Project Area to the north, northeast, east, and southeast support suitable habitat, but much of the land has been impacted by off road use, dumping, and target shooting.

The SMR expansion site is located within the Town of Pahrump, Nye County, Nevada and is adjacent to northern border of the existing 293-acre SMR. The raceway expansion will be constructed on 227 acres of vacant private land within Mount Diablo Meridian, Township 20, South Range 54 East, in portions of sections 27 and 28. The project falls within an area zoned for commercial development.

The climate in the Pahrump Valley is typical for the Mojave Desert, with very hot summers, cool winters, and arid conditions. Summer average temperatures range from 60 to 101 degrees F, and

winter average temperatures range from 26 to 62 degrees F (WRCC 2006). The southernmost part of Nye County receives an average annual precipitation of 5 inches or less. Most of the precipitation comes from winter rains from November to March, with summer thunderstorms also common.

The Pahrump Valley is located in south-southwestern Nevada within the Great Basin section of the Basin and Range geomorphic province. The Valley, which trends northwest to southeast, resides in a geologic basin that was formed through regional tectonic extension (Henry and Mossa 1995). The Project Area has an elevation near 2,900 feet and is composed of Quaternary alluvium. The Valley is bounded by fault block mountain ranges that are comprised of Paleozoic and Late Proterozoic carbonate and clastic rocks (Darling 2013). The Spring Mountains are to the east and the Nopah Mountains are to the west. The highest point in the area is Mount Charleston (11,916 feet), which is located in the Spring Mountains to the east. The faulting that produced these fault block mountains began in the Tertiary and continues to this day (Henry and Mossa 1995).

Soil type in the project area includes the Commski-Lastchance Association. These soils are derived from limestone and dolomite and formed in a fan environment. They occur on slopes ranging from 2% to 8%, are well drained, and are medium to high in runoff. The depth to the water table is greater than 80 inches (USDA 2019).

The Project Area is within the Pahrump Valley Hydrographic Area (No. 162). There are no rivers or streams within the Project Area; however, it is within an alluvial fan with several natural washes run generally from the north to the south through the Project Area.

The Project Area is located on vacant land within the town limits of Pahrump, with vegetation typical of the Mojave Desert. Being located near populated areas, the Project Area has been impacted from off road use, dumping, and target shooting. The land to the north, east, and southeast of the Project Area is similar, i.e., undeveloped Mojave Desert that provides suitable desert tortoise habitat. Land use is also similar, with exposure to off road use, dumping, and target shooting. The land to the northwest, west, and south of the Project Area have been developed and is not suitable as desert tortoise habitat.

*Population Monitoring Data in the Action Area*

Estimates of desert tortoise densities in Pahrump Valley are generally very low to moderate. Survey data for Pahrump Valley is limited and has been conducted mostly on the surrounding Federal lands managed by the BLM and on a few small privately-owned parcels that are covered under existing HCPs. A description of known desert tortoise surveys conducted in Pahrump Valley and in the Project Area are summarized below.

The town of Pahrump is surrounded by lands administered by the BLM. Most of the desert tortoise habitat in Pahrump Valley occurs on BLM-managed lands. The BLM collected data on 1,425 standard triangular strip transects from 1979 through the mid-1990s to determine relative densities of desert tortoise habitat in southern Nevada. Approximately 50 of these transects were conducted in Pahrump Valley. Standard transects consisted of walking the perimeter of an

equilateral triangle, 0.5 mile on each side, while recording observations of desert tortoise sign in a 33-foot wide area. Average total adjusted sign was determined, and relative desert tortoise density was calculated based on the formula developed by Berry and Nicholson (1984). Most transects were conducted southeast and northwest of Pahrump on BLM-managed land. No surveys were conducted on private land. Relative densities ranged from very low (0 to 10 tortoises per square mile) to high (90 to 140 tortoises per square mile), with most relative densities ranging between 10 and 45 tortoises per square mile.

In 1995, an 80-acre parcel of the Nye County landfill was surveyed for desert tortoises in conjunction with an incidental take permit issued for a habitat conservation plan for the site. The landfill is located in Township 20 South, Range 53 East, south half of the northeast quarter of section 2. The landfill occurs approximately 0.5 mile east of State Route 160. The site was surveyed for desert tortoises prior to initiation of construction activities. Four tortoises were found, which were relocated to adjacent suitable habitat (Coburn 1996). In 1998, the project proponent reported one dead tortoise which was found on the project site (Darling Environmental and Surveying 1999).

On November 12 and 13, 2007, 100 percent pedestrian presence/absence surveys were conducted within the 120-acre project site of a proposed Federal detention facility located at 2250 East Mesquite Avenue in Pahrump (Louis Berger Group 2008). The detention facility is located approximately one mile east of State Route 160. A total of 13 desert tortoise burrows were observed. Desert tortoise sign observed on the project site included six tortoise burrows and four burrows with tortoise scat, which indicates occupancy. One burrow was occupied by a burrowing owl, and two burrows were collapsed. No desert tortoises were encountered during the surveys. Based on results of the survey, the Service estimated a relative density of 0 to 10 tortoises per square mile (Service 2008).

A desert tortoise presence absence survey was conducted for the Pahrump Valley General Store Habitat Conservation Plan on January 20, 2009 (Jones and Krueger 2009). Six biologists walked transects 10 meters apart throughout the 60-acre site. The objective was to look for sign of desert tortoise. No live desert tortoises were found, which was not unusual since tortoises bromate during the colder months of the year. Several old tortoise burrows were found, but surveyors could not confirm occupancy. Four potential old burrows were observed during the survey. All burrows were found in the sandy mesquite hummocks scattered throughout the project site.

On May 18 and 19, 2012, the Spring Mountain Raceway Expansion project area was surveyed for desert tortoise using 100-percent clearance survey protocols. No desert tortoises were detected; however, eight burrows were noted within the project area.

Desert tortoise surveys for the VEA Community Solar Project were conducted in the 80-acre project area on April 1 and 2, 2015, following the methodology described in the Desert Tortoise Field Manual (Service 2009) to determine presence/absence and to estimate numbers of tortoises that may occur in the project area. Surveyors found two live tortoises, 47 burrows, 11 carcasses, and nine scat groupings. Seven burrows showed recent sign of tortoise use, 24 were in good

condition but showed no sign of recent use, and 14 were classified as deteriorated tortoise burrows.

Desert tortoise surveys for the Canyon Mesa Solar Project were conducted in the project area on October 20 and 21, 2018. No live tortoises were detected within the project area, and 14 burrows and 2 carcasses were found. All of the observed burrows were in an unused and deteriorated condition.

On April 24, May 18, and May 23, 2020, desert tortoise surveys were conducted in the Gamebird Substation Expansion Project. Biologists surveyed a total of 17.9 km of transects and found two burrows within the Project Area (Figure 2). No tortoises and two burrows were observed in the project area and two adult desert tortoises (midline carapace length greater than 180 mm) and four burrows were observed in adjacent habitat to the east of the project area.

*Desert tortoises in the Action Area*

On May 8, 9, and 10, 2018, desert tortoise surveys were conducted for the Environmental Assessment of the proposed transfer of 620 acres to SMR (Figure 5). These surveys covered a total of 692 acres, including the proposed 227-acre SMR northern expansion Project Area and a potential eastern expansion area located directly east of the current SMR facilities. SMR has no plans to develop the potential eastern expansion area at this time. Using 100-percent clearance survey protocols, approximately 252 acres were surveyed in the northern expansion Project Area and 440 acres were surveyed in the potential eastern expansion area. One live adult tortoise (230mm) was detected in the northern expansion Project Area, as well as 2 other tortoises of undetermined size (both estimated to be >180mm) underground in burrows. 43 burrows were identified in the northern expansion Project Area. One live adult tortoise estimated to be greater than 180mm was detected in the potential eastern expansion area, as well as five other tortoises of undetermined size but estimated to be greater than 180mm. 49 burrows were identified in the potential eastern expansion area. In total, 692 acres were surveyed, 9 desert tortoises were located, and 92 burrows were identified in the HCP (Appendix C). All surveys followed pre-project Service guidance (Service 2017).

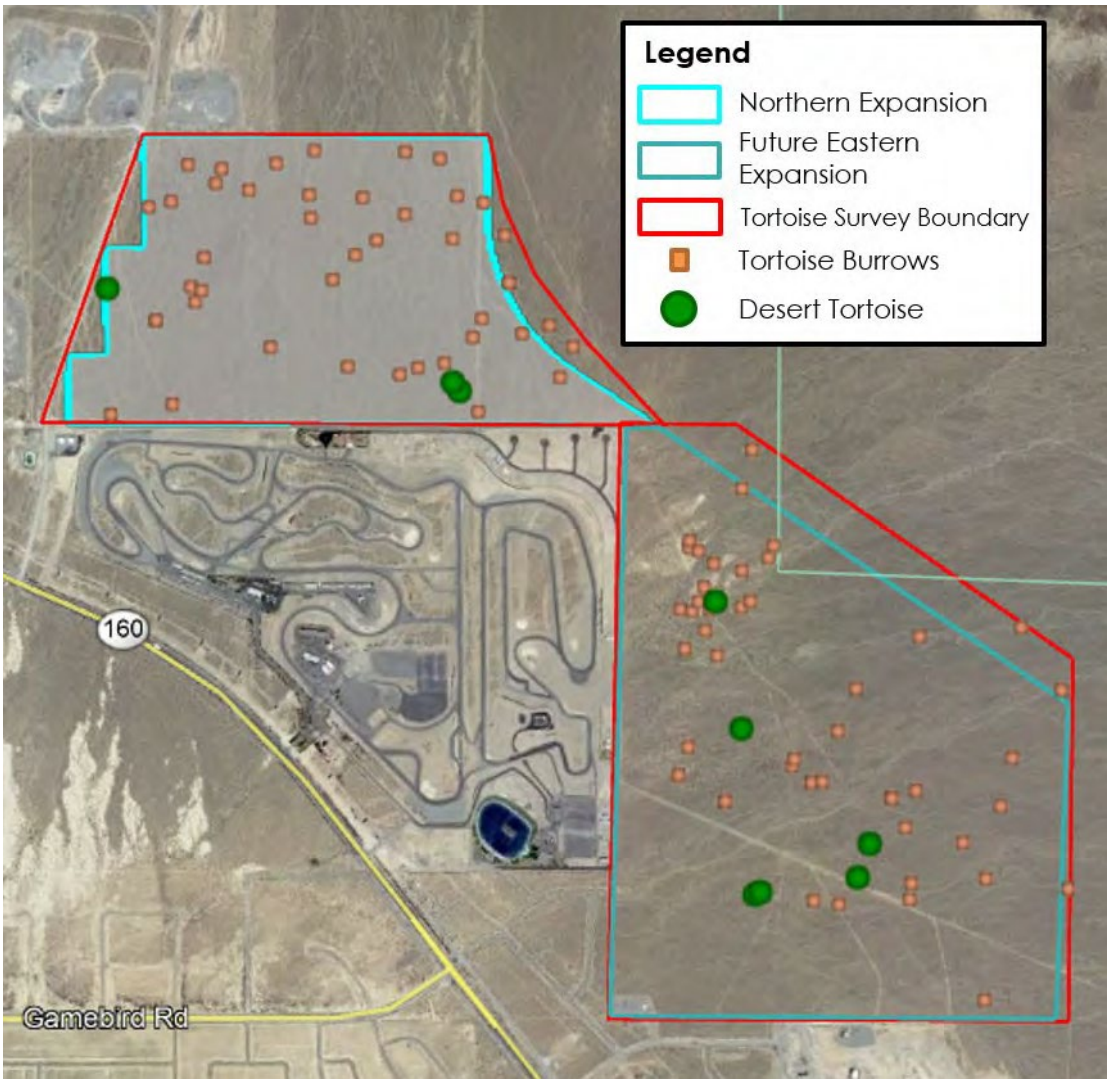


Figure 6. Results of desert tortoise surveys from May 8, 9, and 10, 2018

The total number of desert tortoises estimated to occur in the Project Area based on 2018 tortoise survey data is 6 or 14.6 per $mi^2$ (5.6 per $km^2$). The formula to estimate the number of tortoises that occur within a Project Survey Area is shown in Figure 6 (Service, 2017). The formula is calculated by taking the total number of tortoises found during the survey and dividing this number by the product of the probability that a tortoise is visible ($P_a$) and the probability of detecting a tortoise if visible ($P_d$). $P_a$ depends on precipitation during the previous winter (October-March) as recorded by the Western Regional Climate Center. Per protocol, $P_a$ for this project is 0.85 because rainfall values for the given time frame were above 1.5 inches, while $P_d$ is a constant 0.63 (Service, 2017).

$$\left(\begin{array}{c}\text{Estimated number of tortoises}\\ \text{within action area}\end{array}\right)=\frac{\left(\begin{array}{c}\text{Number of tortoises visible}\\ \text{above ground and in burrows}\end{array}\right)}{\left(\begin{array}{c}\text{Probability that}\\ \text{a tortoise is}\\ \text{visible } (P_a)\end{array}\right)\left(\begin{array}{c}\text{Probability of}\\ \text{detecting a tortoise,}\\ \text{if visible } (P_d)\end{array}\right)}\left(\frac{\text{Size of action area}}{\text{Size of area surveyed}}\right)$$

Figure 7. Equation used to estimate the number of desert tortoises within an action area

Tortoises smaller than 180 millimeters are estimated based on research from Goffs, California in 1983 (Turner et al., 1987). Turner et al. estimated that 13.2 percent of the desert tortoises in that population were larger than 180 millimeters. This study is used to estimate the total number of tortoises in a given population because tortoises smaller than 180 millimeters are difficult to locate during surveys. This estimate is based on the best available information and the actual number of tortoises in the project area may be different.

Table 1. Estimated number of tortoises to occur within the Project Area.

| **Tortoise Calculation** | **Tortoise Estimate** |
|---|---|
| Estimated number (point estimate) of desert tortoises larger than 180 mm (95% confidence interval) | 6 (3-11) |
| Percentage of desert tortoises in size classes larger than 180 mm (from Turner et al. 1987, Table 32) | 13.2% |
| Total number of desert tortoises (6/0.132) | 45 (23-83) |
| Number of juvenile desert tortoises (45-6) | 39 (17-77) |

In addition, we expect the project area to support desert tortoise eggs if cleared during the desert tortoise nesting period, approximately May and June (Turner et al. 1984; Wallis et al. 1999). Estimating the number of tortoise eggs is extremely difficult given that the eggs are buried beneath the soil surface. Applying any assumptions has an unknown and high level of uncertainty. Therefore, we cannot calculate a precise estimate for the number of eggs that may be impacted by the proposed project.

*Habitat and Population Connectivity*

Quantifying the degree to which a landscape promotes or hinders movements among patches of habitat for a given species, hereafter referred to as “habitat connectivity” (Fischer and Lindenmayer 2007), has become increasingly important relative to desert tortoise recovery. As we evaluate utility-scale solar development and other land uses within the range of the species, it is essential that habitat linkages between and among populations are conserved. For gene flow to

occur across the range, populations of desert tortoises need to be connected by areas of occupied habitat that support sustainable numbers of reproductive individuals. Recent research provides evidence that genetic differentiation within the Mojave desert tortoise is consistent with isolation by distance in a continuous-distribution model of gene flow. Populations at the farthest extremes of the distribution are therefore the most differentiated, and a gradient of genetic differentiation occurs between those populations across the range of the species (Britten et al. 1997, Edwards et al. 2004a, Murphy et al. 2007, Hagerty and Tracy 2010). Genetic analyses also suggest that levels of gene flow among subpopulations of desert tortoises likely were high, corresponding to high levels of habitat connectivity (Murphy et al. 2007, Hagerty 2008).

Demographic connectivity describes a pattern of habitat or vegetation that is connected with other areas of similar habitat or vegetation. It refers to the degree to which population growth and vital rates are affected by dispersal (BLM and DOE 2012). The concept of demographic connectivity differs subtly from genetic connectivity as it refers to a more geographic concept of how habitat, vegetation, and dispersal (immigration and emigration) affect survival of a species through birth and growth rates. Demographic connectivity would assume a greater geographic connectedness of habitat and vegetation than genetic connectivity, but both rely on suitable habitat that can be occupied by desert tortoises. The Mojave desert tortoise historically represents a series of continuous, overlapping home ranges within suitable habitats whose boundaries between divergent units may be validated by ecological or major topographic features, such as steep mountainous terrain or, even more significantly, the Colorado River (Germano et al. 1994, Nussear et al. 2009).

Individual desert tortoises can make long-distance movements through restricted habitats, which may contribute to gene flow (Berry 1986, Edwards et al. 2004b), though we do not know the extent to which individuals utilize narrow corridors of relatively intact habitat. The underpinning of the continuous-distribution model of gene flow described above, and the evidence from desert tortoise population genetic studies and distribution, is that individual desert tortoises breed with their neighbors, those desert tortoises breed with other neighbors, and so on. The movements that maintain the genetic diversity across populations occur over generations and not necessarily during the life span of a single desert tortoise. Therefore, for gene flow to happen reliably, populations need to be connected across the range by occupied areas of habitat linkages that support sustainable numbers of desert tortoises.

The desert tortoise population in the Project Area is likely connected to tortoises in the recipient area. Because both the Project Area and the recipient area are contiguous, we expect tortoises in both areas share genetic differences from other populations. Additionally, both the Project Area and the recipient area demonstrate a high degree of demographic connectivity. Therefore, despite the loss of 227 acres of suitable desert tortoise habitat, we expect translocated tortoises to show few effects after translocation.

*Desert Tortoise Translocation Area*

Translocated desert tortoises will be moved from the Project Area to the recipient area after the installation of desert tortoise fencing around the Project Area. The recipient area was identified

for translocation due to continuity of habitat, proximity, and contiguity with the Project Area. The recipient area contains approximately 500 acres of suitable desert tortoise habitat. Due to the short distance tortoises would be translocated from the Project Area to the recipient area, it is likely translocated tortoises may still reside within their home range and will have already come into contact with tortoises in the recipient area. Because tortoises may be missed during the clearance survey or may try to return to the Project Area after translocation, shade structures will be added to the interior and exterior of the desert tortoise fencing surrounding the Project Area. Shade structures will be placed at a minimum of every 300 meters. Interior shade structures will be maintained until after the first active season and after construction activities for the northern expansion are finished. Shade structures on the exterior of the fence will be maintained for the duration of operation and management of the facility.

The health of translocated tortoises and resident tortoises at the recipient area and the control area will be assessed and a radio transmitter attached to each tortoise (Service 2018). The translocation process includes gathering data on sex, age, and health conditions of resident tortoises. This information will be used in conjunction with the same information collected from desert tortoises in the project area during clearance surveys to develop desert tortoise disposition plans and determine placement of translocated tortoises.

**Factors Affecting Desert Tortoise in the Action Area**

This analysis describes factors affecting the environment of the species in the action area. It is to be considered part of the baseline and includes State, tribal, local, and private actions in the action area already affecting the species or that will occur contemporaneously with the proposed action, as well as unrelated Federal actions in the action area affecting (negatively or beneficially) the same species that have completed formal or informal consultation.

The Project Area is located on private land zoned for commercial development. The project area is suitable tortoise habitat, but has been impacted from off road use, dumping, and target shooting. The land to the north, northeast, east, and southeast of the project area is similar, i.e., undeveloped Mojave Desert that provides suitable desert tortoise habitat. Land use is also similar, with exposure to off road use, some dumping and target shooting. The land to the northwest, west, and south of the project area have been developed and is not suitable as desert tortoise habitat.

A habitat conservation plan for the Nye County landfill was completed in 1995 (see above). The Service issued a 30-year incidental take permit (No. PRT-776604 issued February 10, 1995) to Nye County for the take of desert tortoise associated with the disturbance of 80 acres of tortoise habitat. In support of the permit application, Nye County completed a habitat conservation plan to minimize and mitigate the impact of the take. As part of the conservation plan, Nye County agreed to deposit funding into a trust fund to cover the cost of purchasing, installing, and maintaining desert tortoise crossing signs along State and County roads in Nye County. In addition, the 80-acre project site was surveyed for desert tortoises prior to initiation of construction activities to minimize take in the form of injury or mortality.

On June 18, 1998, the Service issued a Programmatic Biological Opinion (File No. 1-5-98-F-053) to BLM for implementation of various land management programs described in their Resource Management Plan within desert tortoise habitat. The plan area includes southern Nye County and the Pahrump Valley. Activities that were proposed that may affect the desert tortoise in the action area include recreation; designation of utility corridors and mineral material extraction areas; land disposals; and land leases under the Recreation and Public Purposes Act.

On September 30, 2008, a biological opinion was issued to the Office of the Federal Detention Trustee for the construction of a Federal Detention Facility located south of the Project Site (File No. 84320-2008-F-0349). Based on survey results, information provided in the Federal action agency's biological assessment, and the reasonable and prudent measures and terms and conditions of the biological opinion, it was estimated that the proposed project may result in the mortality of two tortoises, the displacement of four tortoises, and the loss of 69 acres of desert tortoise habitat.

A habitat conservation plan for the Pahrump General Store shopping center was completed in 2009 (Jones and Krueger 2009). The Service issued a 7-year incidental take permit (No. TE-223744-0) on December 8, 2009 for the take of desert tortoise associated with the disturbance of 60 acres of tortoise habitat. The habitat conservation plan provided measures to minimize and mitigate the impacts of the taking authorized by the permit. As part of the conservation plan, the permittee agreed to survey for and remove tortoises from the project area prior to commencement of construction activities, to educate onsite workers on the desert tortoise and actions to be taken if a tortoise was encountered, and to provide funding to contribute to desert tortoise conservation and recovery efforts. The shopping center was never built, and the site remains vacant.

A habitat conservation plan for the Spring Mountain Raceway Expansion project was completed in September 2012 (Darling Environmental and Surveying, Ltd. 2013). The Service issued a 4-year incidental take permit (No. TE-95410A) on January 28, 2013 for the take of desert tortoise associated with the disturbance of 120 acres of desert tortoise habitat. The project site is located adjacent to the original raceway facility to the west and State Route 160 to the southwest. Surrounding urban development had affected the quality of the habitat in the general vicinity of the project, although the actual project site was relatively undisturbed until the raceway expansion was constructed. Surveys conducted on the project site did not detect desert tortoises; however, eight burrows were noted within the site. To minimize and mitigate the impacts of the taking authorized by the permit, the permittee agreed to fence the property with tortoise-proof fencing, clear all tortoises from the project area prior to commencement of construction activities, provide desert tortoise awareness information to all construction workers, control and contain trash, and provide funding to contribute to desert tortoise conservation and recovery efforts.

A habitat conservation plan for the VEA Community Solar project was completed in August 2015 (Stantec 2015). The Service issued a 30-year incidental take permit (No. TE-78773B-0) on October 8, 2015 for the take of desert tortoise associated with the disturbance of 80 acres of tortoise habitat. The habitat conservation plan provided measures to minimize and mitigate the

impacts of the taking authorized by the permit. The permittee agreed to survey for and temporarily remove tortoises from the project area prior to commencement of construction activities, to install openings periodically along the bottom of the permanent security fence surrounding the site to allow tortoise egress and ingress, and to return tortoises back to the project site after construction was completed. Additionally, the permitee did not remove native vegetation from the site, and increased the solar panel height and solar array spacing to allow more light to reach vegetation under panels. Finally, the permittee agreed to fund research and monitoring studies designed to evaluate the effects of solar panels on native vegetation and habitat quality, to provide new information on the ability of desert tortoises to persist underneath solar panels. Two adult tortoises, one sub-adult tortoise, and one juvenile tortoise were found within the project area during preconstruction surveys, and all tortoises were released back into the site after the solar facility was completed in September 2017.

A habitat conservation plan for Canyon Mesa Solar project was completed in August 2019 (Newfield 2019). The Service issued a 30-year incidental take permit (No. TE-53923D) on September 6, 2019 for the take of desert tortoise associated with the disturbance of 165.6 acres of tortoise habitat. The habitat conservation plan provided measures to minimize and mitigate the impacts of the taking authorized by the permit. The permittee agreed to install a permanent desert tortoise exclusion fence and access gate along the perimeter of the project site prior to the commencement of construction activities and to perform desert tortoise clearance surveys to move tortoises out of harm's way during construction of the facility. The permanent security fence around the perimeter of the solar project area would have tortoise access points constructed to allow tortoises to access and occupy the project site after construction is completed. Vegetation will be mowed, clipped, or crushed (rather than bladed) within the solar site to maintain root structure of vegetation and to keep the existing seed bed. PV panels would be mounted on driven piers to minimize site disturbance by avoiding the need for excavation and concrete placement. PV panels would be elevated above industry standard, and spacing increased between arrays, to accommodate tortoise movement and vegetation growth beneath arrays. Combiner boxes would be relocated to the center roadway to minimize trenching. Overall, ground disturbance would be kept to the minimum required.

On July 14, 2020, the Service issued a Programmatic Biological Opinion (File No. 08ENVS00-2020-F-0071) to BLM for construction, operation, maintenance, and decommission of the Yellow Pine Solar, LLC and GridLiance West, LLC to construct a solar energy generating facility and substation on public land within desert tortoise habitat. The plan area includes southwestern Clark County in the Pahrump Valley. Based on the biological assessment, desert tortoise survey data in the action area, and the proposed minimization measures and terms and conditions of the biological opinion, it was estimated that the proposed project may result in the mortality of two adult or sub-adult tortoises, the displacement of 66 adult or sub-adult tortoises, and the loss of 3,006.7 acres of desert tortoise habitat. All areas where construction would occur would be fenced off and clearance surveys would remove tortoises prior to construction activities. Health of desert tortoises would be assessed during clearance surveys. Desert tortoises would be monitored with radio-tags once within 24 hours of release, at least twice for the first 2 weeks after release, and beginning the third week after releases, once a week from March through October and once every other week from November through February. The Service

recommended the solar projects allow all vegetation to remain underneath the solar panels and allow desert tortoises to repatriate the area following construction. The Service also recommended salvaging plants which could not be left in place for use in habitat or restoration activities after construction. Overall, ground disturbance would be kept to a minimum.

An HCP is currently in development for the Gamebird Electrical Substation (Gamebird Substation). The Gamebird Substation would be developed on private land owned by SMR and cause the permanent loss of 14 acres for a substation upgrade and the temporary disturbance of an additional 4.2 acres to install a new 230-kV monopole transmission line. Pre-project surveys located two burrows and no tortoises in the Gamebird Substation project area. The Gamebird Substation upgrade is estimated to result in the take of 2 adult and 4 juvenile desert tortoises and an unknown number of eggs.

## EFFECTS OF THE PROPOSED ACTION

Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action.

The updated Endangered Species Act regulations (84 FR 44976) combine effects into “all effects.” Even though we discuss separate categories of effects, direct and indirect effects, this biological opinion complies with the new regulations.

### General Effects Analysis

The various activities proposed by SMR are anticipated to affect desert tortoises in several ways. Desert tortoises will be captured, handled, and translocated to the recipient site; they may be killed by heavy equipment and vehicles if not observed. Disturbance of desert tortoise habitat will result in degradation, and fragmentation of habitat and increased predation pressure from human-subsidized predators.

To analyze how the various activities of the proposed action may affect desert tortoises, we will qualitatively describe effects and then consider the best available information with regard to the effects to the reproduction, numbers, and distribution of desert tortoises in the action area and recovery units to determine whether the proposed action is likely to jeopardize the continued existence of the species.

Prior to construction activities for the SMR expansion, the site will be permanently fenced with tortoise exclusion fencing to ensure tortoises from adjacent habitat do not wander into the project area. After the exclusion fence is installed, clearance surveys will be conducted to move any desert tortoises found within the project area out of harm’s way by translocating them to the recipient site. These tortoises will be subject to harm through handling and displacement from the project area. The project proponent’s proposal to use only qualified desert tortoise biologists to handle, care for, and monitor tortoises will minimize impacts from capture.

The construction of the SMR expansion facilities will result in the permanent loss of approximately 227 acres of desert tortoise habitat from grading areas for the race track, paved paddock, classroom facility, parking lot, stormwater detention basin, and desert tortoise exclusion fencing.

Due to the size of the project area, the limited number of tortoises found on site, and the project proponent's proposed protective measures, we expect that the construction of the proposed track and facility is likely to injure or kill few, if any, adult desert tortoises. Any tortoises encountered on the project site prior to construction activities will be moved out of harm's way by qualified biologists to the recipient site. The tortoise exclusion fence that will be constructed around the main project site will prevent translocated tortoises or tortoises that may occupy adjacent habitat from wandering into the Project Area.

The Service (2019) estimates that 24,664 adult desert tortoises (i.e., those greater than 180 millimeters in length) occupy modeled habitat within the Eastern Mojave Recovery Unit. The overall number of desert tortoises would increase if we included individuals smaller than 180 millimeters. Consequently, the loss of 6 adult desert tortoises potentially exposed to injury or mortality during construction, would comprise a very small portion (less than one-tenth of a percent) of the overall population within the Eastern Mojave Recovery Unit. We expect that juvenile desert tortoises and eggs within the project area are likely to be killed or injured during construction because of the difficulty in detecting juveniles and eggs. However, we expect that the applicants may find juveniles during the clearance survey and move them out of harm's way by translocating them to the recipient site. Few, if any, desert tortoises are likely to die during operations and maintenance because the applicants proposed permanent tortoise exclusion fencing will prevent their movement into the Project Area. Tortoise exclusion fencing inspection and maintenance will further minimize any effect to desert tortoises within the Project Area.

The long-term loss of approximately 227 acres of desert tortoise habitat would not appreciably reduce the distribution of the desert tortoise. The Service (2019) estimates that 3,937,849 acres of desert tortoise habitat remain in the Eastern Mojave Recovery Unit. The long-term loss of 227 acres of desert tortoise habitat therefore will result in an insignificant reduction in the distribution of desert tortoise relative to that available within the Eastern Mojave Recovery Unit. The remaining 130 acres of habitat within the project area will be left in place but will not be available for tortoises to occupy.

**Effects of Capturing, Handling, and Moving Desert Tortoises**

Desert tortoises observed in harm's way will be captured and moved to the recipient site prior to ground-disturbing activities in the Project Area. Desert tortoises will be translocated outside the perimeter of the project to the recipient site northeast of the project area. Because of the difficulty in locating small desert tortoises and eggs, an unknown number of tortoises and eggs may not be observed prior to ground-disturbing activities and may consequently be killed by project activities. Capturing, handling, and moving tortoises may result in accidental death or injury if performed improperly, such as during extreme temperatures, or if individuals void their bladders and are not rehydrated. To minimize these potential effects, SMR proposes that an

ADTB will follow the most current version of the Desert Tortoise Field Manual (Service 2009) when capturing, handling, and moving tortoises. These personnel also will use appropriate protective measures and procedures to reduce the spread of pathogens among individuals by using new latex gloves for each tortoise handled.

The desert tortoise population in the Project Area is likely connected to tortoises in the recipient area. Because both the Project Area and the recipient area are relatively small and contiguous, we expect tortoises in both areas share genetic differences from other populations and individual tortoises from the Project Area are likely already familiar with the tortoises in the recipient area. The translocation of 6 tortoises form the Project Area to the recipient area will not appreciably change the density of tortoises in the recipient area. Additionally, both the Project Area and the recipient area demonstrate a high degree of demographic connectivity. Therefore, despite the loss of 227 acres of suitable desert tortoise habitat, we expect translocated tortoises to show few effects after translocation. Translocated tortoises will undergo a health assessment prior to translocation. Tortoises larger than 180 mm will have radio transmitters attached. Tortoises with radio transmitters will be monitored weekly during the active season to provide information regarding interactions with the tortoise fencing of the Project Area and for one year post-translocation to determine maximum dispersal due to translocation.

**Effects of Roads, Vehicles, and Project Access on Desert Tortoises**

The risk to desert tortoises on access roads is affected by variables such as speed limits, weather conditions, the nature and condition of the roads, and activity patterns of desert tortoises at the time the roads are in use. Access to the project site is through the currently developed SMR Use of roads within the SMR project site may result in injury or mortality of desert tortoises not observed by vehicles, introduction of non-native plants and animals, and road kills and litter from vehicles may attract subsidized tortoise predators. SMR will minimize these potential effects by installing desert tortoise exclusion fencing prior to a clearance survey of the Project Area and other construction activities. SMR will also minimize theses potential effects by inspecting the ground underneath vehicles prior to moving the vehicle and implementing a sensitive resources education program for employees and contractors involved with the project.

**Non-Native Plant Species Effects on the Desert Tortoise**

Surface disturbance from SMR proposed actions will increase the potential introduction and spread of nonnative, potentially invasive plant species. Vehicles, roads, and other ground-disturbing activities contribute to the spread of nonnative species (or the displacement of native species) and the direct loss and degradation of habitats (Brooks 1995; Avery 1998). Project vehicles and equipment may transport nonnative propagules into the project area where they may become established and proliferate. In addition, the introduction of nonnative plant species may lead to increased wildfire risk, which ultimately may result in future habitat losses (Service 2011; Brooks et al. 2003) and changes in forage opportunities for desert tortoises. If herbicides are used, tortoises may be directly or indirectly affected. SMR will minimize these potential effects by using certified weed-free seed, cleaning vehicles and equipment to avoid introducing more

invasive weeds, educating personnel on the identification, spread, and treatment of weeds, and using only herbicides with low toxicity to wildlife.

**Effects of Subsidized Desert Tortoise Predators**

The common raven is a known predator of the desert tortoise. Human activities in desert tortoise habitat potentially subsidize limited resources available for ravens and other desert tortoise predators. Habitat disturbance may remove shrubs and cover for desert tortoises exposing them to avian and other predators. Animals killed by vehicles on roads provide food for desert tortoise predators. Other human sources of desert tortoise predator subsidies include trash and discarded food, ponded water, and raven roosting and nesting sites.

Natural predation rates may be altered or increased when natural habitats are disturbed or modified and human presence in otherwise remote desert areas increases. During the past few decades, the population of the common raven has increased substantially in the desert southwest, primarily in response to human-provided subsidies of food, water, and nest sites. There is documentation of numerous carcasses of hatchling and juvenile desert tortoises under the nests of common ravens and a reduction in the proportion of hatchling and juvenile desert tortoise at several locations in the Mojave Desert. Human activities that attract common ravens, desert kit foxes, feral dogs, and coyotes by providing resources in the form of food or water that would otherwise be unavailable may substantially increase predation of tortoises in the area (Berry 1986). Road-kill of wildlife provides additional attractants and subsidies for opportunistic predators and scavengers. SMR will minimize these potential effects by utilizing predator-proof containers with re-sealing lids, removing trash containers and construction waste from the project site on a daily basis, and implementing a sensitive resources education program and a desert tortoise awareness training.

**Effects of Construction, Operation and Maintenance on Desert Tortoises**

Activities associated with infrastructure construction and maintenance could affect desert tortoise habitat. Although SMR will attempt to move all desert tortoises in the project area to the recipient site prior to construction, some desert tortoises may remain and be harmed or killed by heavy equipment and vehicles if not observed. Similarly, any desert tortoise eggs in the project area will also likely be killed. SMR will minimize these potential effects by minimizing the disturbance area, and implementing desert tortoise clearance surveys and desert tortoise awareness training. Due to the presence of the exclusion fence, we do not anticipate any adverse effects to desert tortoise from operation and maintenance of the facility.

**Edge Effects**

The edge effect is a term commonly used in conjunction with the boundary between natural habitats and disturbed or developed land. Typical edge effects that can degrade the surrounding habitat include increased human foot traffic, vehicle use, trash, predation, and invasive species. Due to construction vehicles and traffic, the introduction of weeds from construction or soil disturbance has been addressed. SMR will maintain a weed management plan for the life of the

facility to control invasive plants. Increased trash from workers could attract and subsidize ravens or birds of prey. SMR will maintain a little control plan to limit subsidy of predators.

Because few data exist relative to edge effects from noise, light, vibration, and increased dust from construction and O&M activities, we cannot determine how these potential impacts may affect desert tortoise populations adjacent to the development sites. The lack of information is especially relevant when evaluating effects to individuals within the habitat linkage that would be impacted by the proposed project. Thus, the magnitude and extent of these edge effects cannot be articulated at this time but could conceivably disturb individual desert tortoises to the extent that they abandon all or a portion of their established home ranges and move elsewhere.

**Effects of Population Connectivity**

The Project Area is located in southeastern Pahrump near the border between Nye County and Clark County. SMR is located north of Nevada State Route 160. Areas south, west, and northwest of the Project Area are developed as residential or commercial properties. The Project Area is adjacent to existing SMR facilities and has been fully developed as the Spring Mountain Raceway and Motor Resort, including the track and associated facilities, a Country Club, and low-density residential development. The Project Area will connect to the current raceway. The area due north of the Project Area includes an existing aggregate pit and an adjacent, undeveloped material pit expansion area under lease from the BLM. The existing pit and expansion area are enclosed by security fencing fitted with material that would preclude tortoises from entering. The area west of the project is a 40-acre area of moderately disturbed native desert which consists of Mojave Desert scrub consistent with the vegetation within the Project Area. The area is bisected by Wheeler Pass Road. This area is bound to the north and west by an existing aggregate mine enclosed with desert tortoise exclusion fencing. The area is bound to the south by existing development which would be difficult for desert tortoises to safely traverse. The area to the east of the Project Area is the proposed tortoise release area. The release area is Mojave Desert Scrub administered by BLM for multiple uses as described in the Las Vegas Field Office Resource Management Plan (BLM, 1998). This area supports occupied, suitable desert tortoise habitat. Much of this land is within dedicated corridor for future development of power transmission and distribution infrastructure.

As the Project Area is already surrounded by human disturbance, the development of the Project Area on the proposed land parcel will allow for an important habitat corridor to continue to pass just east of the project area and north into the northern edge of the Eastern Mojave Recovery Unit and southeast into important population augmentation sites at Stump Springs and Trout Canyon. The use of in-lieu fees to restore habitat in Stump Springs and Trout Canyon will also serve to improve the ability for this corridor to allow gene flow from the northern portions of the Eastern Mojave Recovery Unit south. Without suitable habitat in this corridor, the northern and southern portions of the Eastern Mojave Recovery Unit is under threat of fragmentation and loss of gene flow. Landscape genetic analysis performed by Latch et al. (2011) identified both natural (slope) and anthropogenic (roads) landscape variables that significantly influenced desert tortoise gene flow of a local population. Although they found a higher correlation of genetic distance with slope compared to roads, desert tortoise pairs from the same side of a road exhibited

significantly less genetic differentiation than tortoise pairs from opposite sides of a road. By selecting a land parcel to develop that is already bound by human disturbance and development, the Project Area is not anticipated to decrease population connectivity substantially beyond the existing conditions. Additionally, by selecting an off-site restoration project to address habitat improvements within an important corridor, the mitigation for the project could potentially improve gene flow within the recovery unit.

**Desert Tortoise Conclusions**

*Reproduction*

We did not attempt to estimate the number of small tortoises and eggs that may be impacted by the proposed action, however, we acknowledge some number are likely to be killed. Because they are difficult to observe, proposed actions resulting in habitat disturbance are likely to kill small tortoises and eggs occurring in those areas, although SMR would likely find some small animals and move them out of harm's way. This may reduce population recruitment or create demographic imbalances. Although we are not comparing the overall estimate of the numbers of small desert tortoises and eggs likely to be killed or injured to the overall numbers within the recovery units, we can reasonably conclude that the estimate is a very small percentage of the overall numbers of small desert tortoises and eggs, because the number of large desert tortoises affected by the proposed actions is a small percentage of the population in the Eastern Mojave Recovery Unit. Consequently, although actions that disturb habitat are likely to kill some small desert tortoises and eggs, the proposed action is not likely to appreciably diminish the number of small desert tortoises or eggs in the action area.

For these reasons, we expect that the proposed action is likely to have a negligible effect on the reproductive capacity of desert tortoises in the action area.

*Numbers*

Desert tortoise abundance in the action area is estimated to be very low. We estimate approximately 6 adult tortoises may occur in areas of desert tortoise habitat that may be disturbed. The Service (2019) estimates that 24,664 adult desert tortoises (i.e., those greater than 180 millimeters in length) occupy modeled habitat within the Eastern Mojave Recovery Unit. Consequently, the loss of 6 adult desert tortoises potentially exposed to injury or mortality during construction would comprise a very small portion (less than one-tenth of a percent) of the overall population within the Eastern Mojave Recovery Unit. More tortoises are likely to be captured and moved prior to project activities.

For these reasons, we expect that the proposed action is likely to have a negligible effect on the numbers of desert tortoises in the action area.

*Distribution*

Direct impacts to desert tortoise habitat from implementation of the project would be no more than 227 acres of non-critical desert tortoise habitat and 0 acres of designated critical habitat.

This represents a small percentage (approximately 0.006 percent) of the estimated desert tortoise habitat in the Eastern Mojave recovery unit (approximately 3,937,849 acres), and an even smaller percentage range wide. This loss would not appreciably reduce the distribution of the desert tortoise in the Eastern Mojave recovery unit or range wide.

For these reasons, we expect that the proposed action is likely to have a negligible effect on the distribution of desert tortoises in the action area.

**Effects of the Action on Desert Tortoise Recovery**

To achieve recovery, each recovery unit must contain well distributed, self-sustaining populations across a sufficient amount of protected habitat to maintain long-term population viability and persistence (Service 2011).

We do not have the ability to place a numerical value on edge effects, habitat degradation, impacts to habitat connectivity, and overall fragmentation that the proposed action may cause. As a result, the percentage of habitat within the recovery units that would be affected may be greater than the area physically disturbed; however, we still expect the direct and indirect disturbance would not constitute a numerically significant portion of the three affected recovery units. Therefore, we anticipate adequate intact habitat will remain in which desert tortoises will be able to forage, breed, and shelter.

Based on these considerations, the proposed action is expected to have a negligible effect on the reproduction, numbers, and distribution of desert tortoises in the action area, will not appreciably diminish the ability of the desert tortoise to reach stable or increasing population trends in the future.

CUMULATIVE EFFECTS

Cumulative effects are those effects of future State, private, or Tribal activities, not involving Federal activities that are reasonably certain to occur within the action area of the particular Federal action subject to consultation pursuant to section 7 of the Act. Cumulative effects do not include future Federal activities that are physically located within the action area of the particular Federal action under consultation. Past and present impacts of non-federal actions are considered part of environmental baseline conditions. Most of the action area is federally owned, and any future projects on these lands would be subject to separate section 7 consultation. Projects that may result in adverse effects to the desert tortoise on private and non-Federal land are anticipated to be subject to future HCP and incidental take permits.

Increased development would cause continued habitat loss, degradation, and fragmentation for the local desert tortoise population, as well as increased harm of individual desert tortoises, contributing to the cumulative degradation of the area. Planned future actions such as future transmission line and road corridors, electrical power substations, and industrial solar power plants would likely continue this trend. Most other future actions in the action area would likely require section 7 consultation.

An HCP is currently in development for the Gamebird Electrical Substation (Gamebird Substation). The Gamebird Substation would be developed on private land owned by SMR and cause the

permanent loss of 14 acres for a substation upgrade and the temporary disturbance of an additional 4.2 acres to install a new 230-kV monopole transmission line. Pre-project surveys located two burrows and no tortoises in the Gamebird Substation project area. The Gamebird Substation upgrade is estimated to result in the take of 2 adult and 4 juvenile desert tortoises and an unknown number of eggs.

## CONCLUSION

### Jeopardy Conclusion

When determining whether a proposed action is likely to jeopardize the continued existence of a species, we are required to consider whether the action would "reasonably be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 CFR 402.02).

After reviewing the current status of the species, the environmental baseline for the project area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that implementation of the proposed action is not likely to jeopardize the continued existence of the desert tortoise. The Service has reached this conclusion based on the following:

1. Project impacts to desert tortoise will be minimized or avoided through implementation of measures described in the proposed action. The project proponent and their contractors will implement numerous measures (e.g., clearance surveys, authorized desert tortoise biologists, desert tortoise monitors) to ensure that most tortoises are located and moved out of harm's way and potential desert tortoise injury and mortality is minimized on project work sites.
2. Most adult desert tortoises on the project site will be found and translocated; most or all of these tortoises are expected to survive translocation.
3. The Applicant will provide funding as mitigation for a habitat restoration project in the Trout Canyon and Stump Springs Translocation Areas that will benefit desert tortoise recovery by improving habitat conditions in a important focus area for desert tortoise population augmentation.
4. Effects to genetic and demographic connectivity are expected be negligible from the project, and mitigation to improve habitat in the Trout Canyon and Stump Springs translocation areas are expected to benefit connectivity.
5. The project would not significantly affect the rangewide number, distribution, population connectivity, or reproduction of the desert tortoise. Desert tortoises that are moved out of harm's way and placed within their home range will remain in the wild with no long-term adverse effects to survival and reproduction.
6. The number of desert tortoises anticipated to be killed or injured is very low relative to the estimated number of tortoises occurring within the action area and impacted recovery unit.
7. The amount of desert tortoise habitat proposed to be permanently disturbed is very small relative to the amount available within the Eastern Mojave recovery unit.
8. There will be no impacts to desert tortoise designated critical habitat.

9. The magnitude of the effects to desert tortoise will not delay or preclude recovery of the species.

## INCIDENTAL TAKE STATEMENT

Section 9 of the Act, as amended, prohibits take (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. "Harm" is defined to mean any act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering (50 CFR § 17.3). Incidental take is any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant. Under the terms of sections 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to, and not the purpose of, the agency action is not considered a prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

In June 2015, the Service finalized new regulations implementing the incidental take provisions of section 7(a)(2) of the Act. The new regulations also clarify the standard regarding when the Service formulates an incidental take statement [50 CFR 402.14(g)(7)], from "…if such take may occur" to "…if such take is reasonably certain to occur." This is not a new standard, but merely a clarification and codification of the applicable standard that the Service has been using and is consistent with case law. The standard does not require a guarantee that take will result; only that the Service establishes a rational basis for a finding of take. The Service continues to rely on the best available scientific and commercial data, as well as professional judgment, in reaching these determinations and resolving uncertainties or information gaps.

### AMOUNT OR EXTENT OF TAKE ANTICIPATED

The Service proposes to issue a Permit to the project proponent, under the authority of section 10(a)(1)(B) and section 7(o)(2) of the Act for a period of 5 years. The Permit would authorize the incidental take of the desert tortoise within the 227-acre proposed Project Area. The project proponent has developed the Spring Mountain Raceway HCP in coordination with the Service to minimize and mitigate the impacts of the taking that would be authorized by the Permit.

Based on the analysis of effects provided above, measures proposed by the project proponent in the HCP, and anticipated project duration, the Service anticipates that the following take could occur as a result of the proposed action.

Construction of the SMR expansion will result in the long-term loss of approximately 227 acres of desert tortoise habitat that will be graded for the additional 3.6 miles of racetrack, stormwater detention basin, two 4,800 square foot classroom buildings with guest parking, and paddock, allowing for up to an additional ten vehicles to use the track daily. Due to tortoise exclusion fencing, the entire 227-acre SMR expansion area will be unavailable to desert tortoises.

Prior to construction activities, a permanent desert tortoise enclosure fence will be installed along the west, north and east perimeter of the Project Area and attached to the existing SMR fence south of the Project Area. SMR will maintain the permanent desert tortoise exclusion fence for the life of the project and operations thereafter, beyond the 5-year permit term. Clearance surveys will be conducted to relocate tortoises to the recipient site northeast of the Project Area using appropriate protocols stated in the HCP. The applicant's proposal to use ADTB to conduct clearance surveys and move tortoises out of harm's way will minimize effects from handling and moving tortoises.

As summarized in Table 2, based on our estimates of tortoises in the action area (Table 1), we estimate that take of desert tortoises from capture and translocation will result to 5 adult/subadult and 10 juvenile/hatchling desert tortoises. Any desert tortoises not captured may be harmed or killed from construction activities. We estimate that 1 adult/subadult desert tortoise may be killed and up to 10 juvenile/hatchling desert tortoises may be killed and detected, and up to 12 juvenile/hatchling desert tortoises may be killed and not detected (we estimate that all adult desert tortoises killed would be detected).

We cannot precisely quantify the number of desert tortoise eggs that may be killed during construction of the proposed SMR expansion. We will consider the amount or extent of take for all life stages to be exceeded if more than 1 adult desert tortoise or more than 10 juvenile desert tortoise mortalities are detected during construction.

In addition, given vegetation in portions of the project area will not be removed during construction, it is possible juvenile tortoises may not be detected during the construction period, or hatchling tortoises may hatch and emerge from these areas soon after the construction period, and may be killed or require removal from the site. We estimate that take of desert tortoises from capture and translocation will result to 4 juvenile/hatchling desert tortoises during operation & maintenance phase of the project. We will consider the amount or extent of take for all stages to be exceeded if any adult desert tortoises or more than 3 juvenile/hatchling desert tortoise mortalities are detected during the operation & maintenance phase of the project.

Table 2. Desert tortoise incidental take thresholds.

| Type of take | Construction (detected) | Construction (not detected) | Operation & Maintenance | Total Incidental Take |
|---|---|---|---|---|
| Death or injury- subadults & adults (≥180 mm) | 1 | 0 | 0 | 1 |
| Death or injury- hatchlings & juveniles (<180 mm) | 10 | 12[1] | 3 | 25 |
| Capture- subadults & adults (≥180 mm) | We estimate that 5 adults/subadults may be moved out | N/A[2] | 0 | 5 |

| | | | | |
|---|---|---|---|---|
| both moved out of harm's way and handled for monitoring | of harm's way during construction activities | | | |
| Capture- hatchlings & juveniles (<180 mm) both moved out of harm's way and handled for monitoring | We estimate that 10 juveniles may be moved out of harm's way during construction activities | N/A[2] | We estimate that 4 juveniles may be moved out of harm's way during operation & maintenance activities | 14 |

[1] Not detected due to their small size and location underground.
[2] Not applicable - It is not possible to not detect a tortoise that has been captured and moved.

EFFECT OF TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the Mojave desert tortoise.

REASONABLE AND PUDENT MEASURES AND TERMS AND CONDITIONS

The proposed Spring Mountain Raceway HCP and the Special Terms and Conditions of the section 10(a)(1)(B) Permit issued with respect to the proposed HCP identify the specific conservation measures necessary and appropriate to minimize the adverse effects of issuing the Permit to the applicant. All of the conservation measures described in the HCP and the Special Terms and Conditions of the Permit are hereby incorporated by reference as reasonable and prudent measures, and terms and conditions for this incidental take statement pursuant to 50 CFR § 402.14(i). Such terms and conditions are non-discretionary and must be undertaken by the Permittee for the exemptions under section 10(a)(1)(B) and section 7(o)(2) of the Act to apply. If the Permittee fails to adhere to these terms and conditions, the protective coverage of the Permit and section 7(o)(2) may lapse.

REPORTING REQUIREMENTS

Section 5.7 of the HCP includes a description of reporting requirements. The Special Terms and Conditions of the Permit include reporting requirements for dead or injured desert tortoises.

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.

We do not offer any conservation recommendations at this time.

REINITIATION NOTICE

This concludes formal consultation on implementation of the Spring Mountain Raceway Project HCP and issuance of an incidental take permit to the project proponent. As required by 50 CFR § 402.16, reinitiation of consultation is required and shall be requested by the Federal agency or by the Service, where discretionary Federal 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 that was not considered in the biological opinion or written concurrence; 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 any questions or inquiries regarding this consultation, please contact Vance Imhoff in the Southern Nevada Fish and Wildlife Office at (702) 515-5253. Please reference the above file number in future correspondence concerning this consultation.

cc: Supervisory Biologist - Habitat, Nevada Department of Wildlife, Las Vegas, Nevada

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