Habitat Conservation Plan

Proposed 227-acre Northern Expansion of the Spring Mountain Raceway and Motor Resort Nye County, Nevada

SPRING MOUNTAIN
MOTOR RESORT and COUNTRY CLUB

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Table of Contents

List of Tables

List of Appendices

ACRONYMS

ACHP	Advisory Council on Historic Preservation
AMSL	Above Mean Sea Level
CAAP	Clean Air Action Plan
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EA	Environmental Assessment
EPA	Environmental Protection Agency (US)
DOI	Department of the Interior
ESA	Endangered Species Act of 1973, as amended
FR	Federal Register
HCP	Habitat Conservation Plan
ITP	Incidental Take Permit
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standards
NDEP	Nevada Division of Environmental Protection
NDOW	Nevada Division of Wildlife
NEPA	National Environmental Policy Act of 1970
NHPA	National Historic Preservation Act of 1966
NWI	National Wetland Inventory
PM_{10}	Ten-micron Particulate Matter
SHPO	State Historic Preservation Office
SMR	Spring Mountain Raceway, LLC
T/E	Threatened and Endangered
THPO	Tribal Historic Preservation Office
USC	United State Code

EXECUTIVE SUMMARY

Spring Mountain Raceway and Motor Resort, LLC (referred to as SMR) is applying for an Incidental Take Permit under Section 10(a)(1)(B) of the Endangered Species Act (ESA) for activities associated with the development of 227 acres of undeveloped private land in Pahrump, Nye County, Nevada. The activities may affect the Mojave desert tortoise, *(Gopherus agassizii)*, a species listed as threatened under the ESA. In accordance with the requirements of the ESA, SMR has developed and is submitting this Habitat Conservation Plan as part of the application package for the Incidental Take Permit.

SMR is an independently owned and operated Nevada LLC located in the town of Pahrump, approximately 55 miles west of downtown Las Vegas. Comprising over six miles of track, SMR facilities include the longest road course in North America.

SMR purchased from the Bureau of Land Management more than 600 acres of surrounding, undeveloped land to expand their existing facilities; of the total purchase, a 227-acre portion located to the north of the current facility is being proposed for development at this time. Current plans do not include expansion or development in the purchased area east of the existing facilities, and that project would be addressed in a separate HCP if SMR decides to proceed with it.

The northern expansion project includes a 3.6-mile track extension connecting to the existing track, classroom and bathroom facilities to accommodate students/customers, a vehicle paddock to stage cars during events, and associated environmental measures in accordance with regulations and best management practices.

The project is bounded to the south by the existing raceway facility, which is fully-contained and inaccessible to desert tortoises; to the west by established gravel pits; and to the north by an established gravel pit and additional lands granted for expansion of the existing facility which is surrounded by a tortoise exclusion fence.

The proposed project is within suitable, occupied habitat for the Mojave desert tortoise, and the construction of this project will impact these individuals and result in the loss of habitat. The area is not designated as Critical Habitat, nor was it within an area designated as an Area of Critical Environmental Concern when it was purchased from the BLM. No other species listed under the ESA are likely to be affected by construction or operation of the proposed project.

SMR proposes a series of measures to avoid and minimize the impacts of the project on this species, as well as off-setting the unavoidable loss of 227 acres of occupied desert tortoise habitat. Proposed avoidance and minimization measures include installation of tortoise exclusion fencing, clearance surveys, translocation and monitoring of desert tortoises found within the project area, and the extension to this area of weed management and litter control practices from the existing facility. SMR agrees to provide remuneration funding for the unavoidable loss of habitat at a total of $209,521. The U.S. Fish and Wildlife Service (USFWS) will direct the expenditure of these funds toward the Habitat Restoration Project for the Stump Springs and Trout Canyon Translocation Areas.

1 INTRODUCTION AND BACKGROUND

1.1 Overview

Spring Mountain Raceway LLC. (referred to as SMR) is applying for an incidental take permit (ITP) under Section 10(a)(1)(B) of the Endangered Species Act as amended (ESA) for activities proposed in association with the development of 227 acres of undeveloped land in Pahrump, Nevada, owned by SMR as part of a northern expansion of the existing Spring Mountain Raceway and Motor Resort **(Appendix A, Figure 1).**

As stated in ESA Sections 10(a)(2)(A) and 10(a)(2)(B), a conservation plan is a mandatory component of all ITP applications. As such, SMR herein provides a Habitat Conservation Plan (HCP) in support of their permit application. The HCP describes activities associated with development of the track expansion, the effects of those activities on the Mojave desert tortoise *(Gopherus agassizii)*, a species listed as threatened under the ESA, and measures SMR will take to avoid, minimize and mitigate the effects of this activity on that species.

SMR acquired the land from the Bureau of Land Management (BLM) through a modified competitive land sale, which was completed on February 19, 2020, with the objective of expanding the current layout of the Spring Mountain Raceway and Motor Resort to the north and to the east of the current facilities **(Appendix A, Figure 2).**

An evaluation of the potential impacts of the land purchase was completed and documented in accordance with the BLM Federal Land Planning and Management Act (FLPMA) and the National Environmental Policy Act (NEPA). The Environmental Assessment was developed, and a Record of Decision was published. The BLM evaluated the potential impacts of the land transfer on the environment, but did not consult with the U.S. Fish and Wildlife Service (USFWS) under the ESA as the act of transferring ownership of the property did not result in the take of a species listed as Threatened or Endangered under the ESA. As such, the responsibility of consulting with the USFWS for development of the land and obtaining an ITP resides with SMR before any actions potentially resulting in take of listed species may occur.

The Spring Mountain Raceway and Motor Resort is within the town limits of Pahrump, in an area zoned for commercial development.

1.2 Background

1.2.1 Existing Facilities

Founded in 2004 by partners John Morris and Brad Rambo, SMR is an independently owned and operated Nevada LLC privately funded and headquartered in Pahrump, Nevada. SMR owns and operates Spring Mountain Raceway and Motor Resort, which currently encompasses approximately 250-acres of state-of-the-art racing facilities, a motorsports country club, and a residential community. The facility is located approximately 55 miles west of downtown Las Vegas, Nevada, within the Town of Pahrump **(Appendix A, Figure 1).**

The Spring Mountain Raceway and Motor Resort includes over 6 miles of track, the longest road course in North America, classrooms and training facilities, maintenance facilities, and associated support amenities. The Resort and Country Club also provide an array of amenities including club house, luxury condominiums, Spring Mountain Estates residential community, and a constructed freshwater lake.

Spring Mountain Raceway and Motor Resort is home to the Ron Fellows Corvette School and Ron Fellows Cadillac Academy as wells as Spring Mountain Racing. The resort offers a variety of services, including performance driving instruction, track rentals, team building activities, performance vehicle sales and more.

The existing facility is bounded on all sides by desert tortoise exclusion fencing, block walls and residences, or other commercial development and is not accessible to desert tortoises. The existing facility was surveyed prior to the construction of the facility; therefore, no tortoises could access the northern expansion from or through the existing facility.

1.2.2 Potential Future Development

In addition to the 227 acres of land purchased on February 19, 2020, SMR purchased 420 acres of land from the BLM to the east of the existing facility with the objective of potential future expansion of the Spring Mountain Raceway and Motor Resort **(Appendix A, Figure 2).**

If the remaining 420 acres to the east of the existing facility is developed, it will occur three or more years in the future, though at this time no plans for such development are in place. At that time, SMR will complete the process for obtaining an ITP for that activity. Development of that expansion is not dependent or otherwise connected to the current proposed expansion.

1.3 Plan Area

The Plan Area for this HCP includes the footprint of the proposed construction project (Permit or Project Area), the adjacent area where desert tortoises would be released if found within the Project Area during construction (Tortoise Release Area), and the selected off-site mitigation areas **(Appendix A, Figure 3).**

1.3.1 Permit (or Project) Area

The proposed Project is an approximately 227-acre expansion of the existing Spring Mountain Raceway and Motor Resort facility, located in the town of Pahrump, on the northeast side of State Route 160 **(Appendix A**, **Figure 1)**. The Project site is north of the existing facility, east of Wheeler Pass Road extending to the east to the edge of the utility corridor.

The Project Area is within Mount Diablo Meridian, Township 20, South Range 54 East:

- Section 27
  - SW ¼, that part lying outside of the utility corridor
- Section 28
  - E ½ of NE ¼ of NE ¼ of SW ¼,
  - NE ¼ of SE ¼ of NE ¼ of SW ¼,
  - S ½ of SE ¼ of NE ¼ of SW ¼,
  - NE ¼ of SE ¼ of SW ¼,
  - E ½ of SW ¼ of SE ¼ of SW ¼,
  - SE ¼ of SE ¼ of SW ¼
  - SE ¼

1.3.2 Tortoise Release Area

During preliminary discussions with the USFWS, the proponent identified the potential for moving the relatively small number of tortoises from the Project Area to an adjacent recipient site rather than to a distant location. The recipient site supports the following elements:

- Contiguous public lands to the north and east;
- High likelihood of being within the existing home range of translocated desert tortoises;

- Habitat suitable for all life stages of the desert tortoise;
- Similar habitat type/quality as the Project Area;
- Documented occurrence of resident tortoises and numerous shelter sites; and
- No foreseeable development or other impacts precluding tortoise occupancy.

Given the short distance of the translocation, similarities in the general habitat and threat factors between the release area, the project area, and the federal control of the lands, the release area was proposed to provide the tortoises an area with no meaningful difference between what the tortoises encounter at their current location and the new location, decreasing potential impacts to the individuals.

1.3.3 Off-Site Mitigation Areas

SMR will provide $209,521 for desert tortoise recovery to mitigate impacts from the Project. Specifically, this fee will provide funding for a habitat restoration project within the Stump Springs and Trout Canyon translocation areas (**Appendix A, Figure 3**). These areas have been used and will continue to be used as locations where tortoises captured within approved projects can be released to augment the local desert tortoise populations. Both locations are located within the southern extent of the Pahrump Valley, in the same general population as the project area. Conservation measures to be implemented within these areas that include habitat restoration and research on methods to improve habitat for the desert tortoise. Additional information on the measures to be implemented in these areas is provided in Section 6.7 of this HCP.

1.4 Permit Duration

The permit shall become effective on the date the USFWS issues the permit authorizing take of the species. The development of the track expansion is expected to take one to five years; therefore, SMR requests a permit period of five (5) years with the option to extend the duration if needed. All construction activities, as well as implementation of the conservation actions in the HCP, are expected to be completed within the 5-year term of the permit. After the 5-year term of the permit, all activities associated with operation and maintenance of this project will be within the developed area inside the desert tortoise exclusion fencing, which will be inspected and maintained by SMR until other development precludes tortoises from having access to the project boundary. After the 5-year term of the permit, death or injury of a tortoise by the project would not be exempt or otherwise authorized.

1.5 Species to be Covered by the Permit

This HCP has been developed to obtain Section 10 permit coverage for the Mojave desert tortoise. The Mojave desert tortoise was listed as a threatened species under the provisions of the ESA on April 2, 1990 (55 FR 12178, 1990). Critical habitat has been designated for this species on February 8, 1994 (59 FR 5820, 1994).

The Mojave desert tortoise is listed by the State of Nevada as a Protected Reptile, further listed as Threatened in the Nevada Administrative Code (NAC) in 2002 (NAC 803.080, 2002). Prior to any handling of the Mojave desert tortoise, Special Purpose Permits will be obtained from Nevada Department of Wildlife (NDOW).

1.6 ALTERNATIVES

SMR has not identified construction alternatives other than the proposed development of the facility as planned. The land was purchased for the expressed purpose of expanding the existing facility to the north and adding the new track. While only a portion of the area would be converted to paved track, the entire 227 acres would be unavailable to desert tortoises to prevent their mortality if crossing the road and protect the drivers from the potential obstruction on the track while driving at high speeds. Development

on lands to the east of the current facilities was not evaluated in this HCP given tortoises also occupy this area. No other parcels in the region were considered as alternatives given the project objective is to expand the existing facility, which requires parcels contiguous with the existing facility.

A No Action alternative was not considered as the construction of the project as described was the objective of the land purchase.

1.7 Summary of Relevant Laws and/or Regulations/Legal Framework

1.7.1 Sections 7, 9, and 10 of the Endangered Species Act (ESA)

Section 9 of the ESA and Federal regulation pursuant to Section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as actions that "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct". Harm is further defined by the USFWS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the USFWS as intentional or negligent actions that create the likelihood of injury to listed species by annoying them to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.

Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Pursuant to Section 11(a) and (b) of the Act, any person who knowingly violates this Section 9 of the Act or any permit, certificate, or regulation related to Section 9, may be subject to civil penalties of up to $25,000 for each violation or criminal penalties up to $50,000 and/or imprisonment of up to one year.

Individuals and State and local agencies proposing an action that is expected to result in the take of federally listed species are encouraged to apply for an incidental take permit under Section 10(a)(1)(B) of the Act to be in compliance with the law. Such permits are issued by the USFWS when take is not the intention of and is incidental to otherwise legal activities. An application for an incidental take permit must be accompanied by a habitat conservation plan, commonly referred to as an HCP. The regulatory standard under Section 10 of the Act is that the effects of authorized incidental take must be avoided, minimized, and mitigated to the extent practicable. Under Section 10 of the Act, a proposed project also must not appreciably reduce the likelihood of the survival and recovery of the species in the wild, and adequate funding for a plan to avoid, minimize and mitigate impacts must be ensured.

Section 7 of the Act requires Federal agencies to ensure that their actions, including issuing permits, do not jeopardize the continued existence of listed species or destroy or adversely modify listed species' critical habitat. "Jeopardize the continued existence of ..." pursuant to 50 CFR 402.2, 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.

Issuance of an incidental take permit under Section 10(a)(1)(B) of the Act by the USFWS is a Federal action subject to Section 7 of the Act. As a Federal agency issuing a discretionary permit, the USFWS is required to consult with itself (i.e., conduct an internal consultation).

Delivery of the HCP and a Section 10 permit application initiates the Section 7 consultation process within the USFWS.

The requirements of Section 7 and Section 10 substantially overlap. Elements unique to Section 7 include analyses of impacts on designated critical habitat, analyses of impacts on listed plant species, if any, and analyses of indirect and cumulative impacts on listed species. Cumulative effects are effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area, pursuant to Section 7(a)(2) of the Act. The action area is defined by the influence of direct and indirect impacts of covered activities. The action area may or may not be solely contained within the HCP boundary. These additional analyses are included in this HCP to meet the requirements of Section 7 and to assist the USFWS with its internal consultation.

1.7.2 National Environmental Policy Act

The purpose of the National Environmental Policy Act (NEPA) is two-fold: to ensure that Federal agencies examine environmental impacts of their actions (in this case deciding whether to issue an incidental take permit) and to utilize public participation. NEPA serves as an analytical tool on direct, indirect, and cumulative impacts of the proposed project alternatives to help the USFWS decide whether to issue an incidental take permit (ITP or Section 10(a)(1)(B) permit). NEPA analysis must be done by the USFWS for each HCP as part of the incidental take permit application process.

1.7.3 National Historic Preservation Act

All Federal agencies are required to examine the cultural impacts of their actions (e.g. issuance of a permit). This may require consultation with the State Historic Preservation Office (SHPO) and appropriate American Indian tribes.

During the NEPA process to support BLM land sale of the Project Area (DOI-BLM-NV-S030-2018-0004-EA), a cultural resource survey of the entire 227-acre parcel was performed. The survey identified two recent scatters but found no National Register of Historic Places-eligible properties on the parcel.

1.7.4 Other Relevant Laws and Regulations

Other federal laws relevant to the HCP and Incidental Take Permit include the Migratory Bird Treaty Act, the Clean Water Act, and the Clean Air Act. Multiple state and local legislation and regulations are relevant to the process addressing biological resources, air quality, water quality, and other resources and issues. **Sections 3** through **5** of this HCP and the associated Environmental Assessment summarize the resources potentially affected, the potential impacts on them, and the measures to be taken to minimize those impacts.

2 PROJECT DESCRIPTION AND ACTIVITIES COVERED BY THE PERMIT

2.1 Project Description

Spring Mountain, LLC, referred to as SMR hereafter, plans to construct approximately 3.6 miles of new track and associated facilities to expand the existing operations of the Spring Mountain Raceway and Motor Resort. The expansion will connect with the existing track to the south. With this expansion, SMR will be able to run simultaneous track configurations and multiple long track variations for country club members, driving school operations, track rentals and corporate events.

In addition to the track, the expansion will include a new building for use as one or more classrooms and an associated parking lot for employees, students and customers, and a paddock area for parking and preparation of cars for use on the track. A stormwater management detention basin, including berm and swale drainage controls, will also be constructed. Utilities, such as water, sewer, power, telephone, and other services, will be constructed to interconnect with the new classroom and paddock. Finally, to prevent desert tortoises from entering the facility and being injured or killed, a desert tortoise exclusion fence will be constructed around the facility. These components and the activities associated with their construction are further described in subsequent subsections. **Appendix B; Construction Components** includes preliminary site plans for this facility where available.

The total area of potential construction is the 227-acre property shown in **Appendix A**, **Figure 4.** However, based on preliminary design and construction plans, only a portion of the native vegetation will be removed during the construction of this expansion. The estimated disturbance area associated with each development component is provided in **Table 1**. During final design or future operation evaluations, SMR may expand or reconfigure the track layout to accommodate improved safety or other operational goals.

Table 1. Preliminary Estimates of the footprint of the Project Components.

Development Component	**Acreage Estimate Upon Completion***
Track Expansion	70
Paved Paddock	10
Classroom Facility and Paved Parking Lot	3
Tortoise Exclusion Fencing	4
Stormwater Detention Basin	10
Total	**97**

*Denotes estimates based on preliminary design and construction plans; facilities and associated disturbance may be expanded during final design or during operations to accommodate improved safety or other operations goals.

2.1.1 Project Components

The sections below provide a general description of the proposed facilities to be constructed within the proposed project area. While the exact location, configuration, and size of these components may be revised or adjusted as the final layout and design of the development is refined, the general description of the structures and components reflect the proposed project. All components will remain within the boundaries of the private parcel as defined throughout the document.

2.1.1.1 Desert Tortoise Exclusion Fence

The western, northern and eastern side of the proposed project, which are exposed to areas potentially occupied by desert tortoises, amounting to an estimated 10,000 feet of fencing, will be fitted with desert tortoise exclusionary fencing in accordance with the most current USFWS guidelines available at the time of construction. The fence is reflected by the western, northern, and eastern sections of the northern expansion area boundary line in **Appendix A, Figure 4**; the southern portion of the northern expansion area will not be fenced because it will connect with the existing facility to the south. The active, expanding gravel pit to the north of the expansion is a fenced, but given SMR has no control of the integrity or future of that fence, SMR plans to install fencing along this boundary. The existing facility to the south is bounded on all sides by desert tortoise exclusion fencing, block walls and residences, or other commercial development and is not accessible to desert tortoises; surveys prior to the construction of the facility were also conducted, and therefore no tortoises from this area could access the northern expansion. The new fence will connect directly with the walls or fencing of the existing facilities. Current guidelines are included in **Appendix E**.

The fence will be fitted with shade structures to provide any tortoise encountering the fence with shelter from the sun and extreme temperatures. Shade structures outside the fence will remain in place and functional for the duration of the operation and management of the facility, and shade structures within the fence may be removed following the first desert tortoise active season after construction. Access to this project area will be achieved from the south through the existing Spring Mountain Raceway and Motor Resort facility. No additional access points will be required; therefore, no gates or associated tortoise guards will be installed along the new fence. In the event such access is required for construction or operation, and the access opens to known occupied habitat, SMR will install a tortoise guard to prevent access to the facility by tortoises.

2.1.1.2 The Track

The proposed expansion will include construction of approximately 3.6 miles of new track **(Appendix A, Figure 4)** paved with a specific emollient mixed with the asphalt to provide an extremely smooth surface with excellent grip for extra safety during enhanced motorsports operations. This track will connect with the existing track system on the parcel south of the proposed expansion to provide multiple configuration options. The exact alignment of the track is subject to change based on the contour of the land which will be determined during final design. The footprint for the track and associated vehicle run-off areas (i.e. shoulders) will be 150 feet wide for the length of the track The paved track will be 50 feet wide, and composed of a crushed aggregate base, an Asphaltic Concrete binder, and a Asphaltic Concrete track surface **(See Appendix B; Pavement Details).** Vehicle run-off areas adjacent to the paved track within the remaining disturbed area will be bladed and graded to provide vehicles additional space to safely exit the track if needed.

Additionally, areas immediately adjacent to the track may include paved aprons or gravel traps in areas deemed necessary to decelerate vehicles leaving the track at speed to minimize vehicle damage and driver injury. Tire or other barriers may be constructed where appropriate to further enhance safety. Each of these features will be constructed in accordance with industry best practices for safety. The exact location of these features, if needed, will be determined during final design.

The track will not include permanent lighting structures, therefore avoiding vertical structures that ravens and raptors (natural predators of the desert tortoise) could use for roosting or nesting.

2.1.1.3 Classroom Facility, Parking Lot, and Paddock Area

The expansion will include construction of a new building, parking lot, and a paddock area **(Appendix A, Figure 4)**. The building will provide classrooms for the instruction of drivers. The paddock area will be used for parking and preparation of vehicles.

The classroom building will be a single-story structure comprised of two approximately 4,800 feet^2 sections with classrooms, restrooms, and storage areas. The classroom building will be fitted with common utilities provided by existing sources in the area, including electricity, telecommunication systems, water, and sewage. The facility will also utilize a 1000-gallon trailer-mounted fuel tank to be refilled off-site for track and maintenance vehicle use. Building design and construction will follow with Nye County Building Codes. Nye County Public Works Department will review and permit the design and construction. A paved parking lot will also be constructed around the classroom building for employee, student, and customer use; this parking lot will be approximately the same size as the classroom. The classroom building and associated parking lot will cover approximately three acres **(See Appendix B; Building Details)**.

A paved paddock area will also be constructed near the classroom building to provide a staging location for track and maintenance vehicles; the paddock is currently estimated to be 10 acres **(Appendix A, Figure 4)**.

2.1.1.4 Stormwater Detention Basin

The project area is bisected by ephemeral washes flowing from north to south, draining small water sheds in the local area. These washes drain onto SMR's existing facility. A detention basin has been incorporated into the design of the expansion area to safely capture and retain stormwater flows. The structure will be designed to provide the appropriate protection for the facilities within the expansion area, as well as the track, facilities, and homes within the existing Spring Mountain Raceway and Motor Resort area down-gradient of the project. Directional berms, swale drainage controls and low-water crossings will also be incorporated into the design of the track facility to release flow downstream at a reduced rate. The detention basin will be constructed entirely in the northeast corner of the enclosed (fenced) and surveyed expansion area to approximately 10 acres **(Appendix A, Figure 4)**.

All drainage and flood control features will be developed following appropriate drainage studies and in accordance with specifications of and review by Nye County Public Works Department. Operation and maintenance of the basin will be included as part of the facility-wide operations and maintenance plan, including measures for litter and weed management for the life of the project.

2.1.1.5 Open Areas

Areas not impacted by current or future construction of the track and associated surfaces, stormwater management features, access roads, the tortoise exclusion fence, classroom facility, paddock area, will be left as native desert. Approximately half of the area may remain as native desert under the current design configurations.

2.1.1.6 Utilities

Utilities will be installed to provide power, phone, water, sewer, and other services as deemed necessary to the Classroom Facilities described in **Section 2.1.1.3.** All utilities will be constructed subsurface and will connect to existing service lines within the previously developed portions of the track facility to the south.

Infrastructure for utilities and services to support the proposed expansion is largely already in place. The facility currently receives power from Valley Electric Association, and water and sewer are provided through onsite facilities operated by the Great Basin Water Company. Solid waste collection services are provided by C&S Waste Solution's Pahrump Valley Disposal. Projected construction activities, including soil/gravel compaction and dust control, will necessitate use of up to 15 acre-feet (4,900,000 gallons) over the course of the approximately 10-month construction period. Projected maximum water use in support of the classrooms, vehicle paddock skid pads, track

maintenance, and up to 50 additional full-time employees and additional resort guests each year is 7.5 acre-feet per year (2,500,000 gallons/year).

Classroom facility water use by employees, students and customers, water staging for intermittent photo shoots and track upkeep and cleaning using a PM10-compliant street sweeper represent the only significant uses of water at the site after development and during normal business operations.

The specific water rights dedication requirement in support of the proposed development will be determined and managed by the utility company in accordance with established Orders of the State Engineer and Nye County Code.

2.2 Activities Covered by the Permit

The Activities to be covered by this HCP and ITP are summarized in **Table 2** and described in further detail throughout this section. Activities to be covered by Section 10(a)(1)(b) of the permit include all associated activities with the construction of the track expansion and the measures to be implemented to minimize or mitigate the effects of the project on desert tortoises.

Table 2. Permit Covered Construction Activities.

Activity Number	Description
Activity 1.	Installation of security and tortoise exclusion fencing, including the clearing of vegetation along the fence alignment for an access road and monitoring to be conducted during construction.
Activity 2.	Land survey to establish the track centerline and detention basin location.
Activity 3.	Clearing the detention basin, paddock area, classroom/parking lot, and track alignment of vegetation. Establishing a track surface drivable by construction vehicles and water trucks, and infusing water into the soils in preparation of grading.
Activity 4.	Grading and contouring the paddock area, detention basin, and track alignment, and establishment of a road base using locally sourced materials in accordance with the grading plan to be developed by SMR and approved by Nye County.
Activity 5.	Construction of paved road surface, shoulders, safety features, and other associated features.
Activity 6.	Construction of the classroom structure, parking lot, and paddock area.
Activity 7.	Inspection and maintenance of the desert tortoise exclusion fencing. The exclusion fencing will be maintained and inspected during construction; inspection and maintenance activities during business operations are described further in **Section 2.3.2**.
Activity 8.	Operation and Maintenance of the track facility (5 years)
Activity 9.	Measures to be implemented to avoid and minimize impacts to desert tortoises including clearance surveys, translocation of desert tortoises out of harm's way, monitoring of initial construction activities for desert tortoises, and other tasks as described in **Section 6**, "Conservation Program/Measures to Minimize and Mitigate for Impacts".
Activity 10.	Measures to be implemented to off-set the loss of desert tortoise habitat as described in **Section 6**, "Conservation Program/Measures to Minimize and Mitigate for Impacts".

Construction will follow the sequence described below. Construction will be initiated after the USFWS approval of the HCP and issuance of the ITP, and subsequent translocation of the desert tortoises from the area. Construction will require approximately 10 months to complete, however, due to the uncertainty of the timing of the issuance of the ITP, the construction start date is uncertain at this time.

Measures to be implemented to avoid, minimize or mitigate impacts to tortoises are not included in the description of the construction activities, but are summarized at the end of this section and described in further detail in **Section 5**, "Conservation Program/Measures to Minimize and Mitigate for Impacts".

2.2.1 Desert Tortoise Exclusion Fence Installation

In accordance with the guidelines developed and presented in this HCP, SMR will install a fence to exclude desert tortoises from entering the project area during construction and operation of the planned facility. The location of the fence will be staked to identify the boundaries of the project area.

A Cat 140 blade or similar equipment will be used to clear a path wide enough for a full-size pickup truck to navigate effectively for installation of the fence. A water truck will be used to keep dust accumulation to a minimum. The total acreage of vegetation to be cleared is approximately 4 acres. This estimate includes areas for material laydown and work areas.

Construction of the fence will follow the guidelines established and set forth in the most recent publications from the USFWS, currently dated 2009, as shown in **Appendix E.** The ends of the fence will tie into existing tortoise exclusion fencing or existing block walls on both sides of the project area to the south. No fence will be constructed on the south side of the expansion area given the existing facility has been cleared of tortoises and is not accessible to tortoises. The existing fence on the north boundary of the existing facility will remain in place until the expansion area is fenced, clearance surveys have been conducted, and tortoises in the expansion area have been removed.

A skid-steer tractor will be utilized to dig and install fence posts. Fencing will be buried to the correct depth, to meet USFWS standards, with three horizontal strands of barbed wire to prevent wild horses or burros from entering the property. Shade structures will be constructed on both sides of the fence to provide protection for tortoises attempting to move through the fence, either exiting the area prior to clearance surveys and translocation or attempting to enter the site. Shade structures outside the fence will remain in place for the duration of operation and management of the facility and shade structures inside the fence may be removed following the first desert tortoise active season after construction is complete. Fence construction activities will take approximately six weeks to complete.

A qualified, trained individual will inspect the desert tortoise exclusion fence during construction, as described in **Section 6.5.2**, and make necessary repairs to ensure the fence maintains its integrity. In the event damage to the fence cannot be completed by this individual, a temporary repair will be attempted, and arrangements will be made for a more permanent repair solution.

2.2.2 Land Survey

Concurrent with the above actions, SMR will continue development of the detailed design of the proposed project tin coordination and review by the Nye County Development and Planning Department.

Upon completion of final design and acquisition of necessary permits, land survey will be conducted. Surveying will result in staking the track layout, the detention basin, and other facilities as needed. Using a full-size utility truck, the survey equipment will be setup to enable a surveyor to walk the track layout and set stakes at 50' intervals. Surveying activities will take approximately five days.

2.2.3 Blading and Vegetation Management of the Interior Components

Blading the classroom facility and parking lot location, detention basin, track layout and the paddock area will be conducted as described in **Section 2.2.1** to allow access of heavy equipment and construction vehicles. The track footprint (75 feet on each side of the track's centerline) will be cleared of debris and vegetation in preparation for grading and paving of the 50-foot track surface. The remaining facilities will be bladed according to final, approved design. Blading will be completed using best management practices using a 15,000-gallon CAT water pull, a CAT 140 Blade and CAT 631 scraper or similar equipment to those mentioned here, resulting in a drivable surface for water trucks and construction equipment. The track alignment and other areas to be graded will be infused with water to reduce dust generation during grading activities and support soil compaction. Blading and water infusion each will take approximately two weeks, therefore these activities will take approximately four weeks.

SMR will consider the salvage of cactus and yucca prior or during this activity. All cactus or yucca salvaged during blading/clearing activities from the property will be transplanted in areas adjacent to the bladed area within the project area, or used in landscaping by SMR throughout the new track or classroom facility, or elsewhere on SMR's private property, in accordance with the Nevada Revised Statutes (NRS) 527.050, 527.070, and NAC Section 527.500. If SMR decides to sell or allow the sale of these resources, or to transport them to other properties, SMR will obtain the necessary authorizations, permits and documents described in NRS 527.070 and NAC 527.500.

Track and classroom landscape design will be xeric to eliminate the need for irrigation, incorporating salvaged vegetation to the extent practicable. All other vegetation removed during construction will be disposed of in accordance with Nye County ordinances.

2.2.4 Grading and Contouring

Earth-moving equipment will be used to grade and contour the track, pads for the classroom facility and its parking lot, the vehicle paddock, and the stormwater detention basin. A variety of equipment will be used for this task based on the geology and soils encountered in the area. Land disturbing activities will be kept to a minimum to prevent disturbance of undeveloped areas in order to retain the desert character.

Fugitive dust emissions will be mitigated during construction using Best Management Practices identified in the Nye County-required Dust Control Plan, and NDEP required Surface Area Disturbance permit. About 15 acre-feet of water will be required during construction.

Grading of the 50-foot track area will consider moving a minimal amount of material to keep the track as close to the original surface contour as possible. The track will be built approximately one foot above the natural grade to prevent ponding. To accomplish this, two CAT 631 scrapers, two CAT water pulls, two CAT 140 Blades, a CAT 966 loader or similar equipment to those mentioned here will be utilized. A rough grade using onsite materials will reach a compaction of 90 percent minimum below the finished grade. After completing the rough grade, a crushed aggregate material will be distributed six inches deep to prepare the surface for the asphaltic concrete. All materials will be sourced from a local, certified weed-free gravel pit operation and hauled onsite using existing paved roads along State Highway 160 and via existing paved roads throughout the Spring Mountain Raceway and Motor Resort facility. Belly dumps will haul and dump the materials and dust accumulation will be minimized by correctly wetted/maintained haul roads.

Grading and construction of the detention basin will be accomplished by removal of the necessary materials to achieve the approved design specifications using the equipment described above. Surplus material from construction of the detention basin will be managed onsite.

These activities are anticipated to take eight weeks to complete.

2.2.5 Track Construction

The surface of the track expansion will be paved with an asphaltic concrete mix using AC-30 asphalt oil and locally sourced materials. A 2.5-inch bottom binding course will be laid using a CAT paver, a rubber tire roller, two steel drum rollers or similar equipment to those mentioned here. A 90% compaction of the materials will be reached. After the initial paving, a wear surface using the same oil mixture and a small amount of binding materials comprised of fly ash and cement powder will be laid to ensure early stability and long-term wear resistance. The track surface will have an estimated life span of 20 years; refer to **Appendix B (Pavement Details)** for additional information. The full process will take two weeks to complete.

After the track has cured for a week, shoulders on the track edges and vehicle runoff areas will be cleared of debris. The edges will be watered and rolled to create a solid crust, eliminating the potential for dust pollution and dust accumulation on the track surface. This activity will use a water truck, a CAT 140 blade, a steel drum roller or similar equipment to those mentioned here; this task will take approximately three weeks to complete.

2.2.6 Classroom, Parking Lot, and Paddock Construction

An approximate total, based on current construction planning and mapping, of three acres will be cleared of vegetation for construction purposes. This total includes implementation and development of safety measures throughout the classroom and parking lot area.

Classroom building construction will begin after completion of the track and after a Nye County Building Permit and all local jurisdictional permits are acquired. The building will be a slab-on-grade, wood-framed structure with a stucco and stone exterior, a paved parking lot and minimal landscaping per a development agreement with Nye County. The contractors will access the project via the Spring Mountain Raceway and Motor Resort. Approximately 120 days will be needed to complete building construction. Additionally, no permanent vertical lighting structures will be installed to avoid roosting opportunities for ravens or raptors; however, initial planning of the classroom building construction includes palm trees as part of the landscaping surrounding the building; refer to **Appendix B** for additional information.

Construction of the paved parking lot and paddock area will be completed using similar methods as described in **Sections 2.2.4 and 2.2.5** and during the same construction phase as the classroom facility.

2.3 Operation and Maintenance

Operation and maintenance of the facility will be contained within the boundaries of the private property and would be an extension of the current operating procedures and business practices in use at the existing Spring Mountain Raceway and Motor Resort facilities. These activities include regular inspection of the track, gravel pits, safety barriers, and other infrastructure; regular sweeping of the track to remove dust, gravel and other debris as needed; and collection and removal of trash and other debris from undisturbed areas within the parcel.

The existing facility operates seven days per week, year-round. Typical use of the track is limited to daylight hours; however, special night events may be hosted by the facility upon approval by Nye County Board of Commissioners.

Maintenance of the expanded track would occur on an as-needed basis. Maintenance may include patching or replacement of paved surfaces due to wear or accidents, replacement or repair of safety barriers or other structures throughout the area, and similar tasks.

Operation of the Classroom and Maintenance Building would entail instructors and clientele parking at the Classroom building, participating in training courses inside the classroom, and on the paddock. Operation of the Classroom building would entail standard building maintenance practices.

2.3.1 Water Use During Normal Operations

Classroom facility water use by employees, students and customers, water staging for intermittent photo shoots and track upkeep and cleaning using a PM10-compliant street sweeper will be the only significant uses of water at the site after development and during normal business operations.

2.3.2 Inspection and Maintenance of the Desert Tortoise Exclusion Fence

An individual trained and authorized to do so will inspect the desert tortoise exclusion fence on a regular basis for the life of the project, as described in **Section 6.6.2**, and make necessary repairs to ensure the fence maintains its integrity or until adjacent development otherwise precludes tortoises from accessing the area. In the event damage to the fence cannot be completed by this individual, a temporary repair will be attempted, and arrangements will be made for a more permanent repair solution.

2.4 Implementation of Conservation Strategy

In addition to the construction, operation and maintenance of the facility, this HCP and ITP covers implementation of the conservation strategy described in **Section 6**. The conservation strategy includes a series of measures to minimize the impacts on desert tortoises from the construction of the project and to mitigate the unavoidable impacts from the loss of desert tortoise habitat.

2.4.1 Minimization and Mitigation Measures

Measures to minimize impacts on desert tortoises and their habitat include worker environmental and desert tortoise awareness training; pre-activity surveys, installation, construction monitoring, and inspection and maintenance of desert tortoise exclusion fencing; clearance surveys and translocation of tortoises from within the project area; desert tortoise monitoring during preliminary vegetation removal; on-call authorized desert tortoise biologist response during final grading and other construction activities; and reporting to USFWS regarding implementation of minimization measures and observations of desert tortoises.

2.4.2 Measures to Off-Set Habitat Loss

Loss of desert tortoise habitat during construction and associated measures to be implemented to off-set this loss are addressed in this HCP and described further in **Section 6**.

3 COVERED WILDLIFE SPECIES

3.1 Desert Tortoise

3.1.1 Status, Distribution, Habitat Characteristics, and General Information

The desert tortoise is found throughout the Mojave, Sonoran, and Colorado deserts, with two distinct populations: the Sonoran population (*Gopherus morafkai*) and the Mojave population (*Gopherus agassizii*). The Mojave desert tortoise populations north and west of the Colorado River in Arizona and Utah (excluding the Beaver Dam slope population in southwestern Utah) were listed as endangered under an emergency rule on August 4, 1989 (54 FR 42270, 1989). Subsequently, the entire Mojave population of the desert tortoise west of the Colorado River in California and Nevada, and north of the river in Arizona and Utah, including the Beaver Dam slope, was listed as a threatened species on April 2, 1990 (55 FR 12178, 1990). Critical habitat was designated in 1994 (59 FR 5820, 1994) also see corrections 59 FR 9032. The Revised Desert Tortoise (Mojave Population) Recovery Plan (USFWS, 2011) was signed on May 6, 2011.

The desert tortoise is an arid land reptile associated with desert scrub vegetation types, primarily creosote bush flats, washes, and hillside slopes or bajadas. Within these vegetation types, desert tortoises potentially can survive and reproduce where their basic habitat requirements are met: annual forage species; adequate shelter sites; suitable substrates for burrowing and nesting; perennial vegetation structure for cover; and adequate area for movement, dispersal, and gene flow.

Threats to desert tortoise are various (Boarman, 2002). In summary, direct loss of tortoises has occurred from illegal collection by humans for pets or consumption, disease (e.g., upper respiratory tract disease, herpesvirus, shell disease), predation (e.g., by common ravens (*Corvus corax*), kit foxes (*Vulpes macrotis*), feral dogs, coyotes) and collisions with vehicles on paved and unpaved roads. Other threats affecting the desert tortoise include loss of habitat from construction projects such as roads, housing, utility corridors and energy developments, invasive species, fire, and conversion of native habitat to agriculture (USFWS, 2011).

3.1.2 Occurrence, Population Trends, or Status in the Eastern and Northeastern Recovery Units

Five recovery units have been established for desert tortoise, where each recovery unit is represented by 1–7 Tortoise Conservation Areas (TCA's) that have been monitored since 2004 by line-distance sampling. A recent analysis of this survey data indicates an overall large and ongoing population decline in four of five recovery units, with an estimate of 125,000 fewer adult desert tortoises in 2014 as present in 2004 (Allison & McLuckie, 2018). Furthermore, the proportion of juveniles has been declining in all recovery units since 2007.

The Project occurs in the Eastern Mojave Recovery Unit, adjacent to the Northeastern Recovery Unit, and outside of designated critical habitat. The Eastern Mojave Recovery Unit showed an estimated 11.2% decline with a density estimate of 1.5 tortoises/km2 and the Northeastern Recovery Unit showed an estimated 13.1% increase, with a density estimate of 4.4 tortoises / km2, although recovery unit size and initial densities affect these totals.

On a more local scale, the Project area primarily supports habitat that has a predicted occupancy model (Nussear, Inman, & Tracy, 2009) value of 0.8 – 0.9 (**Appendix D, Figure 4**). Lower model values (0.3) occur northeast of the Project within the higher elevations of the Spring Mountains. While tortoises may make movements directly southwest from the recipient area toward SR160, fencing, development, and lack of suitable habitat could restrict such movement. Higher model values (up to 0.9) are associated with the bajada of the Spring Mountains, and the location of the proposed recipient site for tortoise

translocations. Tortoises located within and adjacent to the Project site are likely demographically connected with populations to the north and east due to contiguity of occupied habitat.

3.1.3 Occurrence of the Desert Tortoise in the Project Area

3.1.3.1 Desert Tortoise Surveys of the Project Area

Desert tortoise surveys were conducted in 2018 to support the Environmental Assessment of the proposed transfer of 692 acres to SMR. The survey included the 227 acres of land north of the existing racetrack referred to as the Northern Expansion area, which is the subject of this HCP. The survey also included land to the east of the existing facility, which SMR may decide to develop in the future, at which time an HCP would be developed and application for an ITP submitted. The information below summarizes the survey effort related to the northern 227-acre expansion area addressed within this HCP. Full results of the Desert Tortoise Survey can be found in **Appendix C.**

Because the proposed project is a non-linear project, a 100% coverage survey was conducted. Surveys were performed May 8, 9 and 10, 2018 using USFWS Mojave Desert Tortoise Survey Protocol (USFWS, 2017) when air temperatures were below 35 degrees Celsius (95 degrees Fahrenheit) measured approximately 5 cm from the soil surface in areas of full sun but in the shade of the tortoise surveyor.

All live desert tortoises observed during the field surveys were documented. Observations of live tortoises > 180 mm midline carapace length (MCL) were used in the calculation of potential incidental take. Live tortoises in burrows (size estimated) and all potential tortoise burrows were also catalogued. Observations of carcasses and other signs were documented.

In accordance with USFWS guidance (USFWS, 2017), a Global Positioning System (GPS) grid of the project area was set up with 10-meter-wide or closer belt transects, depending on density of vegetation. Darling Geomatics, along with five trained desert tortoise survey assistants, walked straight paths on the centerline of each transect by navigating point to point with hand-held GPS. The location of all desert tortoises and all burrows were recorded and documented with a handheld GPS. Each burrow was examined to determine if a desert tortoise was present at or near the entrance with the use of hand-held mirrors. All evidence of desert tortoises including scat, burrows, carcasses, courtship rings, drinking depressions etc. in addition to live tortoises, was recorded.

Figure 5 (Appendix A) shows the survey area, the project boundary and the GPS locations of observed desert tortoises, burrows, and sign. One adult desert tortoise (roughly 230 mm MCL) was observed above ground in the eastern portion of the project area, near the southeastern project boundary. Near this tortoise, another tortoise estimated to be over 180 mm MCL was observed inside a burrow in an adjacent, subsequent transect. An additional tortoise estimated to be over 180 mm MCL was observed inside a burrow near the western project boundary. **Table 3** below summarizes the observations of live tortoises within the project area.

In addition to the desert tortoises, 43 burrows in varying stages of use and disrepair were observed in the northern expansion area and documented during the surveys. There were no indications at the observed burrows of recent use by burrowing owls. No tortoise carcasses were observed in the surveyed area. Scat was documented near one burrow.

Table 3. Live tortoises observed in the Project Area.

Tortoise #	Date	Size	Cover	Location (UTM 11S NAD 83)		Notes
				Easting	Northing	
1	8 May 2018	>180 mm	Burrow	597435	4004378	Suitable habitat, 84 meters east of Wheeler Pass Road, no photograph.
2	8 May 2018	>180 mm	Burrow	598398	4004129	Suitable habitat, location alongside a cluster of alluvial veins, less than 100 meters east of an unmarked dirt road, Photograph 2.
3	8 May 2018	230 mm	Open	598418	4004106	Suitable habitat, location alongside a cluster of alluvial veins, walking in the open less than 100 meters east of an unmarked dirt road, Photograph 3.

3.1.3.2 Population Estimate

Surveys rarely detect all desert tortoises in a given area, mostly due to the fact they spend so much of their lives underground. For this reason, the USFWS developed an equation and supporting spreadsheet through its range wide monitoring program sampling program to produce point estimates and 95% confidence intervals for survey data (USFWS, 2019a). This equation uses the results of surveys and an estimation of the percentage of desert tortoises that were likely to be above ground at the time of the survey. This spreadsheet and formula were used to estimate the number of desert tortoises within the surveyed area (**Table 4)**. Data resulting from the survey of the entire survey area (692 acres) were used in developing population estimates.

Given the amount of rainfall in an area during the previous winter period influences the likelihood that desert tortoises will be active and available during surveys, this variable is used in the USFWS formula. The preceding winter period, October 1, 2017 to March 31, 2018, Pahrump received 1.93 inches of rainfall, yielding a (P_a) value of 0.84 (U.S. Climate Data, 2018).

The USFWS formula for estimating tortoise abundance in an area only uses data from tortoises at least 180 mm MCL, therefore an estimate of the number of smaller tortoises must be generated using other means. USFWS recommends making this estimate based on work conducted by Turner et al. (1987) who found that tortoises less than 180 mm MCL compose 87% of the total population. Additionally, the same study found that when they emerge, hatchlings make up 17.7% of the total population (Turner, Berry, Randall, & White, 1987). Using these values, the estimate of the number of tortoises on the project area are summarized in **Table 4** below.

3.1.4 Tortoise Occurrence in the Tortoise Release Area

Surveys of the Tortoise Release Area were conducted in early November 2019 to conduct a qualitative evaluation of the habitat suitability for desert tortoises, to determine if tortoise may occupy the area currently, and assess if potential shelter sites for the released tortoises were present. Experienced desert tortoise biologist walked broadly spaced transects across the area, allowing for the entire area to be preliminarily evaluated (**Appendix D, Figure 2**). Surveys were focused on the northeast portion of the area, in the foothills of the Spring Mountain range, although the entire area was preliminarily evaluated for suitability for translocation.

Biologists identified two adult and one juvenile tortoise during the survey, providing insight into the occurrence of tortoises in the area. Caliche is present in portions of the Tortoise Release Area and there is

an abundance of caves in a large, incised wash that roughly bisects the site, providing numerous potential shelter sites for tortoises released into this area. Additionally, numerous soil burrows exist in the area, and many burrows had active tortoise sign associated with them. Live tortoises, burrows, carcasses, scat, eggshells, and tracks were all found during surveys of the recipient site in fall 2019 (**Appendix D, Tables 2, 3**).

Table 4. Estimated Desert Tortoise Population Composition of the Project Footprint and Surveyed Action Area.

USFWS 2019 Equation Results	Area used (acres)	>180mm MCL		<180 mm MCL (excluding hatchlings)	Hatchlings
		Point Estimate	Upper 95% CI	Point Estimate	Point Estimate
Action Area	692	17.2	33.46	89.4	22.4
Project Footprint	227 (of action area)	5.6	10.98	29.3	7.3

3.2 Other Listed Species in the Area

No other federally listed species are known to be present in the area that would require coverage under this HCP or associated Incidental Take Permit.

Two additional species listed as threatened or endangered under the provisions of the ESA were identified as potentially occurring in the region based on a USFWS IPAC Report run on May 14, 2020. The southwest willow flycatcher (*Empidonax traillii extimus*) (Threatened) and the Yuma clapper rail (*Rallus longirostris yumanensis*) (Endangered) were identified as having potential to inhabit the area if appropriate habitat was present. However, both species require wetland and/or riparian habitat which do not occur within or near the project area.

4 ENVIRONMENTAL SETTING/BIOLOGICAL RESOURCES

4.1 Environmental Setting

4.1.1 Climate

The climate in the Pahrump Valley is typical for the Mojave Desert, with very hot summers, cool winters, and arid conditions. Based on data collected from 1948 to 2006 (WRCC, 2006), average monthly high temperatures during the summer (June through August) ranged from 95.0°F to 101.2 °F with extreme high temperatures reaching 112 to 115°F during that period. Average monthly low temperatures during the summer ranged from 60.2 to 67.2°F with extremes low temperatures reaching 38 to 42°F. The average monthly high temperature during winter (December through February) ranged from 57.6 to 62.4 with daily extremes of 77 to 85°F. The average monthly low temperature during winter was 26.5 to 32.2°F with extreme lows of -2°F to 6 °F.

During 1948 to 2006 (WRCC, 2006), the Pahrump Valley received an average annual precipitation of 4.83 inches. 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.

4.1.2 Topography/Soils/Geology

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 Valley. Topography within the Pahrump area varies from dry lake beds and historic lakebed deposits in the bottom of the valley, to alluvial fans deposited from the adjacent mountain range. The Plan Area is located on an inset alluvial fan above the lakebed deposits, with slopes ranging from 2 to 8 percent.

The soils in the area are mapped as the Commski-Lastchance association and are derived from the limestone and dolomite ranges to the east. Soils are classified as very gravelly, fine sandy loam to extremely gravelly, sandy loam. The soils are well drained and show no signs of ponding or hydric soil characteristics.

4.1.3 Hydrology/Streams, Rivers, Drainages

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 **(Appendix A, Figure 1)**. No perennial surface water and no springs are present within or near the Plan Area. The area is bisected by numerous dry washes, which only flow as a response to rain events in the up-gradient watershed.

4.1.4 Existing Land Use

The lands subject to this permit were acquired by SMR from the BLM and are now entirely privately held. The lands are not currently in use for any activities. While the lands were under the management of BLM, the public used these lands for off-road recreation resulting in several unauthorized trails and minor adjacent disturbance. Otherwise the area is free of unauthorized dumping or other debris and litter, and only minor human disturbance. 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.

The area south of the project area is owned by SMR 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 **(Appendix A, Figure 1).**

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 aggregate pit but is not consistent with current USFWS guidelines for tortoise exclusionary fencing **(Appendix A, Figure 1)**.

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 subject parcel, 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 dedicated corridor for future development of power transmission and distribution infrastructure **(Appendix A, Figure 2)**.

4.2 Biological Resources

4.2.1 Vegetation

The project is within an area characterized by large areas of desert pavement and stands of native desert shrubs. The vegetation within the area is dominated by creosote bush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*). Other plants observed throughout the project area included four-wing saltbush (Afripiex canescens), shadscale (*Atriplex confertifolia*), spiny menodora (*Menodora spinescens*), Nevada ephedra (*Ephedra nevadensis*), little leaf ratany (*Krameria parvifolia*), common matchweed (*Gutierreza sarothrae*), cottontop cactus (*Echinocactus polycephalus*), and Mojave yucca (*Yucca schidigera*). Joshua tree (*Yucca brevifolia*) were not observed in the Plan Area.

Non-native invasive species, including red brome (*Bromus madritensis ssp. rubens*) red stem filaree (*Erodium cicutarium*), Mediterranean grass (*Schismus barbatus*) were observed scattered throughout the Project Area and the Tortoise Release Area.

4.2.2 Wildlife

The typical wildlife community in this vegetation association includes a variety of small mammals, reptiles, and birds which may use the area for nesting and foraging. In addition, predators such as coyotes and kit fox may use the area for foraging on these species, but no sign of predators were noted during field surveys or site visits. Sign of use by wild burros (*Equus asinus*) was observed.

4.2.2.1 Migratory Birds

The Migratory Bird Treaty Act (MBTA) (16 USC 703 et. seq.) protects migratory birds and their nests. The list of birds protected under this regulation is extensive and includes numerous birds found within the Mojave Desert of Nevada. Typically, the breeding season is when these species are most sensitive to disturbance, which generally occurs from February 15th through August 31st depending on the species,

during which time measures to minimize impacts on these species would be required. As discussed later in this document, measures will include surveys prior to ground disturbing activities, establishment of buffers around active nests, and monitoring.

4.2.2.2 Western Burrowing Owl

One migratory bird of special interest in this region is the western burrowing owl (*Athene cunicularia hypugaea*), primarily due to its declining abundance throughout its range. The western burrowing owl is a diurnal bird of prey specialized for shrub-steppe habitats. Burrowing owls are one of the smallest owls in North America, measuring between 7.5 to 10 inches tall with a wingspan of 21 to 24 inches. They have a broad range across western North America, Central America, and South America. Burrowing owls are typically present in southern Nevada from mid-March through August. Burrowing owl habitat in the Mojave Desert typically consists of open, dry, treeless areas on the desert floor. Burrowing owls most frequently use burrows created by other animals such as ground squirrels (*Spermophilus* spp.), coyotes (*Canis latrans*), or desert tortoises, as well as pipes and culverts or man-made structures. The burrows are used for nesting, roosting, cover, and caching prey. In recent decades, the range and abundance of the have been declining primarily due to agricultural, industrial, and urban development that reduce habitat and burrow availability. During surveys for desert tortoises no burrowing owls nor sign of their presence were observed within or adjacent to the Project Area or the Tortoise Release Area, however, the species could move into the area prior to construction. Therefore surveys prior to construction would be necessary to ensure protection of the species if it is present, as discussed for other migratory birds.

4.2.2.3 Gila Monster

The Gila monster (*Heloderma suspectum*) is a Nevada state protected species (Nevada Administrative Code [NAC] 503.080, 503.090, and 503.093) and was noted by NDOW as a species of interest for the Project Area. The Gila monster is the largest native species of lizard in the US and is the only venomous lizard endemic to the United States. Adults typically have a body length of 12 to 14 inches with the tail adding an additional 6 to 7 inches. They are slow-moving lizards dependent almost solely on vertebrate eggs and young in nests for food. The Gila monster is found in portions of the Mohave Desert in southwestern Utah, southeastern Nevada, southeastern California, and northwestern Arizona; in the Sonoran Desert in southwestern Arizona and Sonora, Mexico; and in small portions of the Chihuahuan Desert in southeastern Arizona and southwestern New Mexico. The Gila monster favors rocky slopes, washes, and sandy valleys, with sites available for protection from weather extremes and predators. It typically spends more than 95 percent of its time in underground shelters. Limited information exists about the relative abundance in Nevada. NDOW has ongoing management investigations addressing the Gila monster's status and distribution. No Gila monsters were observed during field surveys for desert tortoises.

5 POTENTIAL BIOLOGICAL IMPACTS/TAKE ASSESSMENT

5.1 Direct Effects on Desert Tortoises

Direct effects are those caused by the Covered Activities and occur at the same time and place. The direct effects of the covered Activities are the removal or disturbance of approximately 227 acres of desert tortoise habitat with the fencing and construction of the Project, and translocation of desert tortoises. Potential direct effects to desert tortoises of all size classes include the following.

5.1.1 Habitat Loss

Construction of this project will result in the fencing and partial paving of 227 acres of occupied desert tortoise habitat for construction of a track facility, making the area inaccessible to desert tortoises. The project area is bounded on three sides by development, to the south by the existing Spring Mountain Raceway and Motor Resort facility and further south by SR 160; to the west by Wheeler Pass Road, partially disturbed native vegetation, and active gravel pit enclosed by tortoise fencing, and further west by the Town of Pahrump; and to the north by a gravel pit enclosed by tortoise fencing (which includes areas that are currently developed, and undisturbed). The area to the east is contiguous suitable desert tortoise habitat managed by BLM for multiple use **(Appendix A, Figure 1).** The area immediately east of the project is a dedicated energy utility corridor, for construction of energy transmission infrastructure. The habitat within the project area is bisected with unauthorized trails and other indications of human activities, though the area remains in a relatively natural condition.

The 227 acres of removed habitat represents 0.006 percent of the total 3,968,759 acres available suitable habitat within the Eastern Mojave Recovery Unit, and approximately 0.0013 percent of the 16,926,966 acres of available suitable habitat range-wide (Allison & McLuckie, 2018). Additionally, the area is not within an area designated by the BLM or other agencies as requiring unique conservation or management prescriptions for this species or others, such as Critical Habitat or other designations.

Fragmentation of habitat affects local tortoise movement, connectivity, and gene flow by eliminating opportunities for dispersal within boundary of the Project. However, the size, location, and configuration of the project would have little additional effect of fragmentation through exacerbation of the existing pinch point. The project is bounded to the south by the existing raceway facility, which is fully-contained and inaccessible to desert tortoises; to the west by established gravel pits; and to the north by an established gravel pit and additional lands granted for expansion of the existing facility which is surrounded by a tortoise exclusion fence **(Appendix A, Figure 1 and 2)**. Given this configuration and location in relation to the adjacent bounding facilities, the development of this project area does not contribute to further fragmentation. Therefore, the project is not expected to affect tortoises' ability to move freely between large blocks of undisturbed desert tortoise habitat east of the developed area of Pahrump and the similar habitat north and northwest of Pahrump.

Removal of habitat within a tortoise's home range or segregating individuals from their home range with a fence may result in displacement stress that could result in loss of health, exposure, increased risk of predation, increased intraspecific competition, and death, though this is expected to be minimal for the reasons discussed in this section.

No habitat will be altered within the Tortoise Release Area.

5.1.2 Translocation of Desert Tortoises

Translocation and relocation may pose several risks to populations, with unknown long-term effects for this long-lived species. The estimated mortality of translocated tortoises may be as high as 30% (USFWS, 2010), although Dickson et al. (2019) indicated no difference in survivorship between translocated,

resident, and control groups during a recent 5-year translocation study in the Mojave Desert, which they suggested was a result of releasing tortoises within or near their original home range. The same study also indicated that factors associated with increased density in the recipient site following translocation appeared to have no influence on survivorship due to the high survivorship of both translocated and resident tortoises (Dickson, et al., 2019). There is also indication that some translocated male individuals may not fully integrate into the recipient populations into which they are placed (Mulder, et al., 2017). Translocation has the potential to increase the prevalence of diseases in a resident population (Aiello, et al., 2014), although multiple pre-translocation health assessments may minimize this risk (USFWS, 2019b).

Tortoises subjected to translocation may experience exacerbated clinical signs of disease due to the stress associated with handling and movement. Demographic and density-related effects may also undermine the health of the resident and translocated tortoise population if resource limitations exist. In addition, resident tortoises within the recipient site may be subjected to harassment during monitoring (USFWS, 2011). However, conservatively estimating with a potential dispersal area of ~5 sq km (1.5 km dispersal radius * ~3/4 accessible habitat: (3.14*1.5^2) * 0.75 = 5.3 sq km), the maximum expected increase in density would be 1.2 adult tortoises per sq km, a negligible increase in whatever the precise density is in the recipient site, representing negligible increases to density-related or demographic issues.

The effects of such translocations on the individual desert tortoises will include the immediate disruption of their behaviors from the handling, processing, fitting with transmitters, and health assessments. Additional effects will include some degree of stress on these tortoises as they become established in the recipient site. However, given the short distance the tortoises will be moved, the likelihood is high these tortoises are familiar with the habitat as well as the tortoises resident in the area, and vice-versa, potentially reducing the stress on the released tortoises, and possibly on the resident animals. Regarding the potential external stressors of moving tortoises into a new area, the short distance of the translocation, and the general habitat and threat factors in the area are the same as for the tortoises at their current location, there is no meaningful difference in what the tortoises would encounter whether translocated or not, suggesting negligible impacts to the release area habitat.

Additionally, given the difficulty in accurately detecting and therefore predicting the abundance of juvenile tortoises, the number of such individuals to be translocated to the adjacent recipient site is unknown. Likewise, the number of tortoise eggs to be encountered and translocated cannot be determined at this time.

5.1.3 Other Direct Impacts on Desert Tortoises

Other direct effects on desert tortoises in the Project Area may include:

- Potential harm during site preparation;
- Potential entrapment within open trenches and pipes or other project features;
- Potential displacement (e.g., by noise and vibration), injury, or mortality by vehicles or heavy equipment;
- Potential crushing or entombment in their burrows during construction;
- Potential for collection or harassment by Project personnel;
- During tortoise exclusion fence construction, tortoises could take shelter under parked vehicles and be killed, injured, or harassed when the vehicle is moved;
- Scientific-related activities such as capture, handling, fitting transmitters, disease testing, and translocation could cause mortality, harm, or harassment to desert tortoise even when proper methods are being implemented;
- Desert tortoise mortality associated with interacting with (e.g., pacing) the fence;

- Over time, breaches in the desert tortoise exclusionary fencing could occur, thus allowing tortoises to pass through the barrier and access the Project.

No other direct effects on desert tortoises in the Tortoise Release Area are anticipated.

5.2 Indirect Impacts on Desert Tortoises

Indirect effects are those effects that are caused by or will result from the Covered Activities and are later in time but are still reasonably certain to occur. Indirect effects can be both spatial and/or temporal in nature. Indirect effects are of concern for long-lived species such as the desert tortoise because project-related effects may not become evident in individuals or populations until years later. Potential indirect effects to the desert tortoise may include:

- An increase in weed species, especially non-native grasses, within the Project could lead to increased risk of fire in desert habitat within the Project area, which may extend into adjacent, occupied tortoise areas leading to a degradation of habitat and desert tortoise mortality;
- An increase in weed species, especially non-native grasses, within the Project could result in a spread of such weeds beyond the boundary into adjacent, occupied tortoise areas, resulting in reduced availability and quality of desert tortoise forage;
- Raven activity in the Project area could increase due to the creation of raven subsidies of water and food sources with human presence thereby leading to increased desert tortoise predation;
- Increase in canid (e.g., coyote) predation on desert tortoises could occur due to human presence, and the presence of subsidies resulting from the Project;
- Injury, mortality, or increased disease incidence could occur from desert tortoise monitoring efforts;
- Temporary increase in noise and dust during construction could affect areas adjacent to the Project Area;
- The project will result in the closure of an approximately 40-acre island of moderately disturbed tortoise habitat bisected by Wheeler Pass Road; if tortoises are present, they would be isolated from other habitat and resources.

5.3 Cumulative Impacts

Impacts in the area of the proposed project include continued development within and along the edges of the existing developed areas of the Town of Pahrump. The loss of habitat from this project will be cumulative with these other developments. However, the relatively small size of the project in relation to the amount of desert tortoise habitat within the Pahrump Valley, the isolated/surrounded nature of this particular parcel, and the anticipated lack of substantial impacts of the project on adjacent habitat, the cumulative impacts of this project are not anticipated to be significant.

Direct, indirect, and cumulative impacts are likely to be local in their effect and are anticipated to be offset by the Minimization Measures and Mitigation **(Section 6).**

5.4 Anticipated Take of Desert Tortoises

SMR is requesting an ITP for the activities described in this HCP. SMR anticipates the most Take will be in the form of capture and translocation of adult tortoise (>180 mm MCL) to an area adjacent to the proposed project. In addition, smaller tortoises (<180 mm MCL) and tortoise eggs are more difficult to detect than larger desert tortoises and are therefore more likely to be missed during clearance surveys and killed.

Based on the best available information regarding the numbers of desert tortoises present in the Project area, the types of activities, and the proposed minimization measures, SMR anticipates potential incidental take during the permit term for the desert tortoise as described below.

Construction:

- Five (5) desert tortoises larger than 180 mm in length in the form of capture through translocation;
- One (1) desert tortoise larger than 180 mm in the form of injury or kill;
- Ten (10) desert tortoises smaller than 180 mm in length in the form of capture through translocation;
- Ten (10) desert tortoises smaller than 180 mm in length in the form of injury or kill.
- Twelve (12) undetected desert tortoises smaller than 180 mm in length in the form of injury or kill;
- An unknown number of eggs in the form of injury or kill.

Operation & Maintenance:

- Four (4) desert tortoises smaller than 180 mm in length in the form of capture through translocation from within the area;
- Three (3) desert tortoises smaller than 180 mm in length in the form of injury or kill.

SMR will transport any wounded desert tortoises to a qualified veterinarian for treatment. If the desert tortoise can be rehabilitated to the degree that it is released to the wild, we propose that the individual be considered to have been taken in the form of capture. If the animal cannot be released to the wild because of wounds it experienced as a result of project activities, we propose that the individual be considered to have been taken in the form of kill.

5.5 Anticipated Impact of Take of Critical Habitat

The proposed Project is not in an area of Designated Critical Habitat and will have no effect on Designated Critical Habitat.

5.6 Anticipated Impact of the Taking of Desert Tortoises

Take on this project may include harassment during construction and operations, a small possibility of injury or mortality during construction and operations, and the permanent disturbance or separation from access of 227 acres of suitable desert tortoise habitat. The translocation of these tortoises and potential tortoise eggs into an adjacent, suitable area would disrupt the behavior of these few animals and may have some degree of effect on the behavior of the resident tortoises in the recipient site. These impacts are not expected to be substantial on the recovery of the species given the small number of tortoises expected to be moved, the fact the area is immediately adjacent to the habitat the tortoises currently occupy, and the number of tortoises in the recipient area appear to be within the expected relative abundance for tortoises in the region based on intuitive searches conducted in the area in November 2019. The small number of adult desert tortoises expected to be taken by the Project relative to the regional population and the Eastern Mojave Recovery Unit is unlikely to appreciably diminish the ability of the desert tortoise to reach stable or increasing population trends in the future.

Further, up to six (6) adult tortoises, thirty (30) smaller tortoises, and eight (8) hatchlings from the project area are expected to be released in the adjacent release area with a resident population of tortoises. Handling of these tortoises will have some degree of impact to these individuals in the form of stress of handling and moving them, however, given they likely are moving into an area they are familiar with, and through the strict adherence to handling guidelines, this impact is anticipated to be minimal. Likewise, the resident tortoises in the release area may respond to and be impacted by the release of tortoises in this area, however, given the proximity of the two areas, the tortoises to be released likely have interacted

with the resident tortoises, further tempering the level of impact to the released and the resident individuals.

Given the potential impacts on the local tortoises are expected to be minimal, the anticipated impacts on the tortoise population in the Recovery Unit and rangewide are expected to be minimal to negligible. The 2014 abundance estimate for the Eastern Mojave Recovery Unit was 24,664 adult desert tortoises (Allison & McLuckie, 2018). Consequently, even the loss of all 6 adult desert tortoises estimated to be translocated or moved from the project would comprise a very small portion (approximately 0.02 percent) of the overall adult population within the Eastern Mojave Recovery Unit and an even smaller portion (0.003 percent) of adult desert tortoises range-wide (212,343 tortoises).

Similarly, the project will permanently remove approximately 227 acres of habitat, which is 0.006 percent of the total 3,968,759 acres of available, suitable habitat within the Eastern Mojave Recovery Unit, and would result in a loss of approximately 0.0013 percent loss of the 16,926,966 acres of available habitat range-wide (Allison & McLuckie, 2018). No take of Critical Habitat will occur as none has been designated in the area

The impacts of this “take” are minor/minimal locally, negligible regionally, and not present within the range of the species. Mitigation that is commensurate with anticipated impacts would implemented. Mitigation measures to address the removal of habitat and the movement of tortoises from the project area will be implemented. No additional measures will be implemented to address the minimal impacts anticipated for the resident tortoises where project tortoises will be released.

6 CONSERVATION PROGRAM/MEASURES TO MINIMIZE AND MITIGATE FOR IMPACTS

6.1 Biological Goals

As part of the "Five Point" Policy adopted by the FWS in 2000, HCPs must establish biological goals and objectives (65 FR 35242, June 1, 2000). The purpose of the biological goals is to ensure that the operating conservation program in the HCP is consistent with the conservation and recovery goals established for the species. The goals are also intended to provide to the applicant an understanding of why these actions are necessary. These goals are developed based upon the species' biology, threats to the species, the potential effects of the covered activities, and the scope of the HCP.

The Biological Goals of this HCP are to:

- Avoid take of the desert tortoise in the form of mortality or injury resulting from the development of the facility track expansion project, and
- Off-set the loss of desert tortoise habitat.

6.2 Biological Objectives

The Biological Objectives of this HCP are:

- Avoid impacts to tortoises in the form of death or injury by moving them to adjacent suitable habitat prior to commencement of construction activities;
- Ensure tortoises do not enter the project area during operations and maintenance of the facility;
- Implement or provide sufficient funds to allow implementation of conservation measures to off-set the loss of desert tortoise habitat associated with this project. Specific conservation projects will be determined by USFWS and will be included as part of the final findings documents.

6.3 General Environmental Measures

In addition to measures to minimize impacts to desert tortoises, SMR will implement a series of best management practices and other measures to minimize general environmental impacts and comply with other laws and regulations as required. Each measure is assigned a unique identifier for reference later in this document.

6.3.1 Worker Environmental Awareness Program Training

GM-01 A Worker Environmental Awareness Program (WEAP) will be developed, and each worker involved in the construction of the project will receive WEAP Training before beginning work on 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.

6.3.2 Dust Control and Air Quality

GM-02 SMR will use water to control dust during the construction within the project area in accordance with the county-required dust control plan and the Nevada Department of Environmental Protection (NDEP)-required surface area disturbance permit. Water will be

applied to the work areas prior to ground disturbance and during the construction activities. Given the attraction of puddled water by ravens and other predators, SMR will minimize areas of puddled water to avoid attracting ravens to the project area.

6.3.3 Litter Control

GM-03 SMR will implement a litter control program during construction activities. 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.

6.3.4 Weed Management

GM-04 SMR will avoid the introduction of non-native weed plant species, 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 are removed and disposed of through the solid waste hauling service. When weed invasions become too large for manual removal, SMR uses commercially approved herbicides in accordance with their labeling.

Weed management within the Project Area will reduce the potential for increased density of non-native species, or establishment of noxious weeds. No activities other than the release and monitoring of tortoises in the adjacent area will be implemented by the project, therefore weed management will not be implemented on the release area.

6.4 Migratory Bird Mitigation Measures

GM-05 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.

6.5 Gila Monster Mitigation Measures

GM-06 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 Gila monster, place it in a secure container in a safe location, and notify NDOW in accordance with their NDOW permits.

6.6 Measures to Avoid and Minimize Take

SMR will implement the following series of measures to minimize and mitigate the potential impacts of the project on desert tortoises.

6.6.1 Desert Tortoise Minimization Measures Implementation

6.6.1.1 Authorization of Desert Tortoise Biologists

DT-01 SMR will submit the name, statement of qualifications, and other information as required of one or more qualified biologists to be evaluated and approved by the USFWS and the NDOW for authorization to implement the specific activities within this plan at least 30 days prior to initiation of project initiation. The authorized biologists will have primary responsibility for overseeing compliance with and implementation of the measures included in this HCP and ITP related to desert tortoise protection and conservation during the construction phase, in accordance with the activities they are authorized to implement. Biologists authorized to do so will lead or directly supervise the handling and translocation of desert tortoises, clearance surveys, clearing and collapsing of tortoise burrows, excavation and relocation of tortoise nests, and construction monitoring. Authorized biologists may be assisted by other biologists for these efforts while under the supervision of the authorized biologist. Biologists may be replaced throughout the project, but the new biologists must be approved prior to fulfilling that role.

All biologists will be responsible for reporting non-compliance with mitigation measures and any incidental take of desert tortoises to the USFWS and NDOW.

6.6.1.2 Flagging and Staking for Ground Clearing

DT-02 Prior to initiation of ground-clearing activities, the boundary of the areas to be cleared will be staked and flagged. These areas will be surveyed for desert tortoise and other resources prior to ground-disturbing activities. All cross-country driving and ground-disturbing activities will remain in these staked and flagged areas until all desert tortoises have been removed from the project area.

6.6.1.3 Construction Monitoring and On-Call Biologists

DT-03 Biologists will oversee compliance with the minimization measures described in this plan, including the monitoring of construction activities to prevent impacts to desert tortoises during the initial construction phases, as described below. During construction monitoring, all workers will report observations of tortoises to the biologists. During construction monitoring, the biologists will have the authority to halt any activities in violation of the measures included in this HCP and the ITP. Work will proceed only after hazards to the desert tortoise are removed and the species is no longer at risk, or the tortoise has been removed in accordance with the approved project Translocation Plan (**Appendix D**).

As described below, during later phases of construction, after clearance surveys and translocation of tortoises from the area, a biologist authorized to handle tortoises may be on-call to respond to observations of desert tortoises within the project area, pacing the tortoise exclusion fence, or otherwise at risk.

The biologists on the site or on-call will be responsible for documenting all non-compliance occurrences and take of desert tortoises and reporting these incidents to the USFWS and NDOW within 24 hours.

6.6.2 Desert Tortoise Exclusion Fence Installation

6.6.2.1 Fence Design and Construction

DT-04 Prior to construction activities, SMR will install and maintain a permanent tortoise exclusion fence around Project Area, utilizing USFWS guidelines (**Appendix E: U.S. Fish and Wildlife Service Guidelines)** to ensure tortoises do not gain access to the project site and

wander into harm's way during construction or operation. Shade structures will be installed on both sides of the tortoise exclusion fence to provide cover for tortoises that may attempt to cross the fence. Shade structures on the project side of the fence may be removed after clearance surveys have been conducted, tortoises have been translocated, blading activities have been completed, and one desert tortoise activity season has passed. Shade structures outside the fence will remain in place and maintained for the duration of operation and management of the facility.

6.6.2.2 Clearance Surveys Prior to DT Fence

DT-05 Biologists authorized to do so will survey for desert tortoises within the proposed alignment of the new fence. Burrows observed within the alignment which cannot be avoided will be searched for tortoises and tortoise nests using hands and hand tools. Any nests observed within these burrows and tortoises observed in the alignment will be processed in accordance with the **Translocation Plan provided in Appendix D** of this HCP.

6.6.2.3 Construction Monitoring – Fence Installation

DT-06 Construction of the fence will be monitored by biologists authorized for that activity to ensure the fence meets proper specifications and to ensure tortoises are not impacted during the installation. If desert tortoises are observed in harm's way during fence construction, the tortoises will be processed in accordance with the **Translocation Plan provided in Appendix D** of this HCP.

Construction monitoring for this task will be similar whether it occurs during the active or less-active season for desert tortoises.

6.6.2.4 Fence Inspection

DT-07 Following installation of the desert tortoise exclusion fence, desert tortoise monitors or SMR employees will inspect the fence and make necessary repairs as described below. If tortoises are encountered experiencing stress, an authorized biologist who is present on-site or on-call, will move the tortoise to a burrow and provide water and other care as necessary if the tortoise is outside the fence. If the tortoise is within the fence, it will be processed in accordance with the **Translocation Plan provided in Appendix D** of this HCP.

- The fence will be inspected once daily during the active season while blading and grading activities are underway to ensure the fence is not damaged and to identify any tortoises potentially located along the fence. Inspections will occur weekly if construction occurs during the less-active season.
- Upon completion of construction activities, the fence will be inspected weekly by an authorized biologist or SMR employee throughout the first active season (March through May or September through October) following construction to locate any tortoises attempting to enter the project area and identify damage to the fence. The fence will be inspected once monthly after the first active season for the remainder of the life of the project or until adjacent development precludes tortoise access to the area.
- The fence will be inspected within 24 hours following a rain-fall event that may damage the fence during the active season or within 7 days following the event in the less-active season. Necessary repairs to the fence will be implemented within 48 hours after the inspections during the active season and within 7 days in the less-active season.

6.6.3 Clearance Surveys and Desert Tortoise Translocation

DT-08 Upon completion of construction of the desert tortoise exclusion fencing, biologists authorized to do so will conduct a series of clearance surveys of the fenced project area to locate desert tortoises for subsequent translocation outside of the project area to prevent the injury or death of these tortoises. The Translocation Plan provided in **Appendix D** of this HCP provides the details of the clearance survey and translocation procedures. The clearance survey and translocation effort will entail the following steps:

- Clearance survey of the 227-acre project area using two perpendicular passes, to locate all desert tortoises within the project area. During the survey, tortoises (approx. >180mm MCL) will be fitted with transmitters and documented. Burrows will be searched for tortoises and tortoise nests, documented, and collapsed.
- Health Assessments will be conducted for all tortoises found within the area.
- A Translocation Review Package will be submitted to USFWS for review and final concurrence
- Transmittered tortoises will be monitored while the Translocation Review Package is reviewed for 14 to 30 days to ensure their safety.
- Upon concurrence of the Translocation Review Package, and after at least 14 days, biologists authorized to perform Health Assessments will conduct a second assessment, and if the tortoise is healthy, the tortoise will be translocated in accordance with the Translocation Review Package.
- Translocated tortoises will be monitored regularly for one year to document their movements and evaluate their general condition and health status. The transmitters on the tortoises will be maintained as delineated in the Translocation Plan in **Appendix D**. Tortoises fitted with VHF transmitters and monitored weekly during the active season will provide information on whether problems arise due to homing, or returning to the Project Area, and interactions with the project fence. While the fence will have shade structures to provide protection for these individuals, regular monitoring provides additional information for use in identifying potential protection measures for the individual if warranted. Additionally, information on the maximum dispersal distance after one year post-translocation is obtained, which further informs future mitigation measures.
- The activities conducted in support of the translocation effort will be summarized in the project annual report as described in this HCP.

6.6.4 Construction Monitoring – Survey and Staking

DT-09 Staking will occur before burrows have been located and flagged or collapsed, and before tortoises have been removed from the project area. A biologist authorized to conduct monitoring will observe survey and staking personnel to ensure desert tortoises are not impacted and that burrows are not destroyed.

Construction monitoring for this task will be similar whether it occurs during the active or less-active season for desert tortoises.

6.6.5 Construction Monitoring – Initial Blading of Track, Stormwater Detention Basin, and Classroom/Paddock Areas

DT-10 Desert tortoise nests and juvenile tortoises are difficult to locate and may be missed during the clearance surveys. To locate desert tortoises and desert tortoise nests not found during the clearance surveys, biologists authorized to do so will monitor initial blading, vegetation and debris removal, and construction of a drivable road surface for subsequent

grading of the track and other features. A biologist authorized to handle tortoises will be on-call in the event a tortoise is observed during the water infusion on the road alignment.

Construction monitoring for this task will be similar whether it occurs during the active or less-active season for desert tortoises.

If additional desert tortoises or tortoise nests are located during these activities, the desert tortoise biologist will halt activities that may affect the tortoise until the tortoise can be collected and translocated by a biologist authorized to handle tortoises in accordance with the **Translocation Plan provided in Appendix D.**

6.6.6 On-Site Biologist – Grading of Roadway and Placement of Roadbed

DT-11 During this phase of the project, all activities will remain within the footprint of the bladed roadway where observation of tortoises by construction workers will be feasible. During the desert tortoise active season (April-May, September-October), one biologist authorized to handle tortoises will be on-site to monitor the prepared roadway while grading activities are occurring and to respond to observations of tortoises within the area.

If additional desert tortoises or tortoise nests are located during these activities, the biologist will halt activities that may affect the tortoise until the tortoise can be collected and translocated in accordance with the **Translocation Plan provided in Appendix D.**

If this activity occurs during the less active seasons (November-March and June-August), monitoring may be reduced to providing **an on-call biologist**.

6.6.7 On-Call Biologist – Paving of Track; Shoulder and "Runoff" Area Grooming; Classroom and Paddock Construction

DT-12 During this phase of the project, all construction activities will occur within the contoured, prepared roadbed and construction areas, making observation of desert tortoises relatively easy for the construction workers and others present on the site if they are present. Given the reduced risk of desert tortoises going unobserved by construction crews, a biologist authorized to handle tortoises will be on-call to respond in the event a desert tortoise is observed on the site.

If additional desert tortoises or tortoise nests are located during these activities, the desert tortoise monitoring the ongoing tasks will halt activities that may affect the tortoise until the tortoise can be collected and translocated by a biologist authorized to handle tortoises in accordance with the **Translocation Plan** provided in **Appendix D.**

6.7 Measures to Off-Set Loss of Mojave Desert Tortoise Habitat

DT-13 In addition to the measures proposed and to be implemented by the proponent to avoid and minimize potential impacts from a project, developers must offset the loss of suitable habitat of threatened or endangered species. The development of the Northern Expansion Area will result in the loss of 227 acres of suitable, occupied desert tortoise habitat through the construction of the desert tortoise exclusion fence and development of the proposed project. While portions of the area will remain as native desert vegetation under the current development plans, desert tortoises will not have access to those areas, therefore it is considered lost to the species.

FUNDING OF CONSERVATION/MANAGEMENT PROJECTS: To fulfill the obligation to off-set the loss of habitat, SMR has agreed to deposit funds in an account administered by the National Fish and Wildlife Foundation or other organizations as directed by the USFWS. SMR agreed to a remuneration fee of $209,521. The funding amount for mitigation for the project was based on the Remuneration Fee that the Service recommends that Federal agencies propose and assess for desert tortoise habitat disturbance for those projects covered under section 7 of the Act, as well as the requirement that the conservation program for the HCP include both minimization and mitigation measures in a manner that fully offsets the impacts of the taking.

ALLOCATION OF FUNDS TO CONSERVATION/MANAGEMENT PROJECTS: SMR and the USFWS agree the USFWS will use these funds to implement conservation or management measures and/or projects deemed to benefit the recovery of the Mojave desert tortoise. The specific conservation or management project to which the funds are directed is at the discretion of the USFWS and the project location in relation to SMR is included in **Appendix A, Figure 3**. The project the USFWS chose is described below:

Habitat Restoration Project for the Stump Springs and Trout Canyon Translocation Areas: 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. 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 US 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 the desert tortoise, but also by serving to refine restoration 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 the USFWS 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.

SMR will have neither influence on USFWS decisions regarding the allocation of these funds, nor further obligation related to those decisions upon submission of the remuneration payment. Mitigation funding will be transferred to the third-party organization as directed by USFWS soon after permit issuance and before groundbreaking activities.

7 MONITORING

As stated in the HCP handbook, the monitoring program of an HCP should provide information to determinate if:

- SMR is in compliance with the incidental take permit and the HCP;
- progress is being made toward biological goals and objectives;
- the HCP's conservation program is effective at minimizing and/or mitigating impacts, and
- adjustments to the measures are needed to improve the HCP's conservation strategy.

The HCP handbook divides monitoring and reporting into three categories for HCPs:

- monitoring for baseline information (effects monitoring),
- effectiveness monitoring to support ongoing conservation decisions, and
- monitoring to evaluate compliance with permit terms and conditions.

SMR will be responsible to ensure monitoring data are collected, compiled, and reported to the USFWS for the duration of the permit period as described below and in **Section 7.5 (Reporting).**

7.1 Monitoring for Baseline Information (Effects Monitoring)

Baseline information is used to determine the potential effects of the proposed project on the covered species and habitat, and additional information collected and reported during implementation of the project provides SMR and USFWS an opportunity to monitor the level of effects of the project in comparison to the levels predicted in the HCP and authorized in the ITP.

Baseline information on the number of tortoises observed during the biological resource surveys of the project area, and the number of tortoises predicted to be present are provided in **Section 3.1.2** of this HCP. The following reports and submittals will be provided to the USFWS throughout the project, providing additional baseline information and opportunities to monitor effects:

- Detailed Translocation Plan for USFWS Review prior to translocation
- Translocation Summary Report – Submitted upon completion of the
- Incidental Take Reports – Submitted by an authorized biologist to the USFWS documenting any incidental take occurring on the project (e.g., capture for translocation, injury, or mortality)
- Annual Reports summarizing progress of construction, documentation of compliance with all mitigation measures, incidental take, compliance issues, and other items occurring throughout the previous year.

7.2 Effectiveness Monitoring of Minimization Measures

Monitoring and the review of minimization measure effectiveness at reducing the risk and severity of impacts is intended to inform the Adaptive Management Strategy of this HCP.

SMR will compile information on the effectiveness of minimization measures using information collected during implementation of the measures by the authorized biologists during the construction phases. SMR, with assistance from the biologists, will review clearance survey and compliance monitoring results of to identify potential modifications, if any, necessary to further reduce the risk and severity of effects to desert tortoise. SMR will coordinate with USFWS should effectiveness monitoring of minimization measures determine revisions to existing measures or development of additional measures are necessary.

Additionally, SMR and USFWS will evaluate each incidence of take as it is reported to assess if all mitigation measures were being implemented as stated in the ITP, if adjustments to the take measures would have substantially reduced the likelihood of the take, and if those adjustments are reasonable and prudent.

7.3 Compliance Monitoring

7.3.1 Implementation of Minimization Measures

SMR will coordinate with USFWS to designate a primary or lead biologist to oversee implementation of the Minimization and Mitigation Measures included in this HCP. The lead biologist is authorized to oversee implementation of these measures, document completion of and compliance with the measures, evaluate the effectiveness of the measures, and report to both SMR and the USFWS. The lead biologist is responsible for reporting all incidental take of desert tortoises as well as non-compliance with the ITP requirements to both SMR and the USFWS.

7.3.2 Allocation of Off-Setting Mitigation Funds by USFWS

SMR will monitor and document the allocation and disbursement of remuneration funds deposited with the National Fish and Wildlife Foundation in accordance with agreements established between USFWS and SMR, and other agencies or stakeholders. SMR will include updates on the status of the funds in the annual monitoring report submitted to the USFWS for the period of the permit.

7.4 Adaptive Management Strategy

An adaptive management strategy is an integral aspect of an effective mitigation program due to the uncertainties inherent in the natural environment and the conservation of the desert tortoise, as well as the construction processes. The purpose of an adaptive management strategy is to provide a framework by which SMR and the USFWS can evaluate information obtained during implementation of the project, and determine if changes in conditions warrant adjustments to further reduce risks of impacts to tortoises, or possibly alleviate requirements on SMR if risks have passed or are less than anticipated.

Implementation of the Monitoring described in **Section 7.1**, and the Reporting described in **Section 7.3** will provide SMR and the USFWS multiple opportunities to evaluate the status of the project, the minimization and mitigation measures being implemented, and the effects on the species being observed. If either SMR or the USFWS observe issues or conditions warranting an evaluation of this HCP and the included measures, either party will request a discussion.

Additionally, due to the short-term nature of the project, we do not expect there to be a need for long-term adaptive management. We have included telemetry of the desert tortoises translocated to assess their health in the first year of translocation. Because of the small number of tortoises to be translocated over time, and the discrete temporal nature of the project (the project will be built and permanently remove desert tortoise habitat in 5 years) there is no need for long-term adaptive management.

7.5 Reporting

SMR will be responsible for compiling and providing the USFWS information needed to document the implementation of and compliance with this HCP and the associated ITP. The reporting of this information will come in the form of the following documents:

- Detailed Translocation Plan (included in **Appendix D)**
- Incidental Take and Non-Compliance Reports
- Translocation Summary Reports
- Annual Reports

7.5.1 Detailed Translocation Plan

Upon completion of the clearance surveys, the lead biologist will develop a detailed Translocation Plan providing information on the number, age, sex, and health/condition of the tortoises found during the clearance surveys; the proposed general location and date for the release of each tortoise; and other information considered relevant to the safe release of that tortoise. The USFWS will review this plan and provide comments or concurrence prior to the movement and release of the tortoises.

7.5.2 Incidental Take and Non-Compliance Reports

The lead biologist is responsible for reporting all incidental take in the form of injury or death of any desert tortoise to the USFWS, including an assessment of whether the project was in compliance with the ITP terms and conditions and other factors which may have contributed to the take of the animal. The lead biologist also is responsible for reporting all occurrences of non-compliance with the ITP terms and conditions observed during the implementation of the project.

7.5.3 Translocation Summary Reports

Translocation Summary Reports will be developed and included in the Annual Report to be submitted by SMR each year. The initial summary report will document the translocation actions completed that year, providing information on the number and condition of the tortoises translocated, the location where they were released, relevant observations documented during the process, post-translocation monitoring reports, and recommendations for improving the process if appropriate. A final report will be developed after the monitoring period has completed, documenting the movement patterns, relevant behavior or health conditions of the tortoises, and other information as warranted.

7.5.4 Annual Reports

An annual report documenting implementation of covered activities and results of monitoring efforts (i.e., baseline, compliance, and effectiveness) will be prepared and submitted to USFWS throughout the term of the permit. To allow time for data collection and synthesis, the annuals will be submitted to USFWS by March 1 following the year to which the report applies. Copies of the original field notes, raw data, and photographs will be included in the report as appropriate.

At a minimum, the annual report will include the following information:

- Summary of the status of biological goals and objectives of this HCP
- Description of covered activities and associated minimization measures implemented during the reporting period
- Assessment of effectiveness of minimization implementation, including effectiveness at reducing effects to desert tortoise, and a discussion and explanation of any minimization measures that may need to be modified
- Summary of desert tortoise observations

- Year-to-date and cumulative summary (i.e., from start of permit term) of effects (in acres) to desert tortoise habitat and any documented incidental take of the species (e.g., captured [and moved from harm's way], injured, killed)
- Year-to-date and cumulative summary of mitigation actions and summary of effectiveness monitoring of desert tortoise mitigation
- Description of circumstances that made adaptive management necessary; documentation of discussions with USFWS; and description of how adaptive management was implemented
- Description of any changed or unforeseen circumstances that occurred and how they were addressed
- Description of any minor or major amendments
- Tortoise Translocation Summary Reports described above
- Updates on the allocation and disbursement of the remuneration funds by the USFWS.

8 FUNDING

8.1 Costs Associated with HCP Implementation

Table 5 summaries the projected costs associated with implementing the terms included in this HCP. The basis and assumptions used to generate the costs address the current understanding of the planned activities, the estimated density of desert tortoises on the project area, and estimated costs of mitigation efforts.

Table 5: Summary of Costs Associated with Impacts to Desert Tortoises by Covered Activities.

Mitigation, Minimization, or other Measure	Associated Measure ID's	Total Estimated Costs	Basis and Assumptions
General Environmental Measures	GM-01 – GM-06	$15,700	Worker environmental awareness program; ongoing dust and litter control; annual weed management; migratory bird surveys (during blading)
Exclusion Fencing– Construction and Inspection	DT-01 – DT-07	$241,250	Construction of tortoise fencing (10,000 ft); clearance survey prior to fence construction; construction monitoring for fence installation; exclusion fence inspection during construction, post-construction; after rain events; ongoing fence maintenance
Clearance Survey and Desert Tortoise Translocation	DT-08	$145,500	Clearance surveys; recipient site investigation; translocation review package; in-situ monitoring visual health assessments per tortoise for up to 5 tortoises; translocation and subsequent monitoring of up to 5 tortoises
Initial Construction Monitoring	DT-09 and DT-10	$49,000	Survey and staking; blading of component areas
On-Site/On-Call Monitoring	DT-11 and DT-12	$45,000	On-site biologist; On-call biologist
Off-Setting Mitigation	DT-13	$209,521	SMR will provide remuneration to the USFWS for conservation measures discussed in Section 6.7.
Monitoring and Reporting	NA	$12,000	Annual Reports; Compliance Reports
Total		**$717,971**	**$508,450 excluding mitigation fees (remuneration)**

8.2 Funding Source for Minimization and Mitigation Measures

SMR has sufficient financial assets to implement the terms of this HCP and will provide financial assurances to guarantee that an adequate level of funding is available to implement all aspects of the HCP.

8.3 Funding Mechanism

8.3.1 Avoidance and Minimization Measures

SMR will establish contracts with the construction contractor to construct the necessary minimization measures, such as the desert tortoise exclusion fencing. SMR will contract an environmental consulting firm with the appropriate experience and capacity to implement each of the minimization measures delineated within this HCP.

8.3.2 Off-Setting Mitigation Measures

SMR will establish the necessary agreements and financial commitments or transfers to support the off-setting mitigation measures deemed appropriate by SMR and the USFWS.

In the event funds are to be made available to other entities for them to implement such measures, SMR will transfer the appropriate funds to a repository fund established by the USFWS Southern Nevada Field Office with the non-profit organization National Fish and Wildlife Federation (NFWF). The USFWS would then direct the funds as agreed to within this HCP and associated documents.

9 CHANGED AND UNFORESEEN CIRCUMSTANCES

Implementing regulations for HCPs and ITPs provide for regulatory and economic assurances to permit holders concerning future obligations under the HCP and ITP that no additional commitment of land, water, or financial resources will be required with respect to covered species, and no restrictions on the use of land water or other natural resources will be imposed beyond those specified in the HCP without consent of SMR so long as SMR is properly implementing the HCP and the ITP, referred to as the "No Surprises Rule" (50 CFR 17.22[b][1]-[8], and 50 CFR 17.32[b][1]-[8];). Per the No Surprises Rule, an HCP must address two considerations: "Changed Circumstances" and "Unforeseen Circumstances."

9.1 Changed Circumstances

Changed circumstances are defined in the No Surprises Rule as "changes in circumstances affecting a species or geographic area covered by a conservation plan or agreement that can reasonably be anticipated by plan or agreement developers and the Service [USFWS] and that can be planned for (e.g., the listing of new species, or a fire or other natural catastrophic event in areas prone to such events)" (50 CFR 17.3).

The HCP has included reasonably foreseeable circumstances that may arise during the period of the permit and within the permit area. For each circumstance, the HCP has identified actions to be taken by SMR and the USFWS in response to the changed circumstance. If SMR becomes aware of a changed circumstance, SMR will promptly notify USFWS in writing. At that time, SMR will modify implementation of the plan in the manner described below, to the degree necessary to address the effects of the changed circumstance.

9.1.1 Listing of a New Species or Designation of New Critical Habitat

If a species not covered by this HCP but which may be affected by covered activities, were to become a candidate for listing, proposed for listing, or is listed under the ESA during the permit period, SMR will be notified by the USFWS. SMR and USFWS will (1) avoid the newly listed species and evaluate (2) the degree to which the uncovered species has potential to be taken by the covered activities; (3) the degree to which the HCP, as it is being implemented, is providing conservation benefits to the species; and (4) what additional measures, if any, SMR could implement through the HCP to provide conservation benefits for the species. Depending on this evaluation, SMR will work with USFWS and determine whether to seek coverage of the species through an amendment to ITP, or by applying for a new ITP.

9.1.2 Change in Desert Tortoise Listing Status

If the desert tortoise is delisted, SMR may elect to relinquish the ITP in accordance with applicable regulations or choose to continue the minimization and mitigation measures to further reduce threats to the species. In the event the species listing status is changed from Threatened to Endangered status, no changes to the HCP or the ITP would be imposed if the HCP is being implemented properly.

9.1.3 Wildfire

The eastern Mojave Desert ecosystem has experienced an increasing frequency, intensity, and size of wildfires as a result of the establishment and proliferation of the non-native and invasive annual grass species. These desert ecosystems did not include a fire regime in their evolution, and they do not recover rapidly, resulting in an extended loss of habitat for many species, including desert tortoises.

If wildfire from adjacent lands were to affect the Project Area, native vegetation not removed during the development of the track and other infrastructure would be affected. However, given the area will be surrounded by a tortoise exclusion fence, and tortoises will have been removed, no additional impacts to

desert tortoises would occur and no changes to the minimization and mitigation measures described in the HCP and ITP would be warranted.

If a fire starts within the Project Area, SMR will notify Pahrump Valley Fire and Rescue. If the fire has the potential to extend beyond the property boundary onto public lands, Pahrump Valley Fire and Rescue would notify the BLM Fire Aviation responders. SMR would cooperate with BLM in subsequent investigations, if any, to determine the cause of the wildfire on adjacent public lands. Also, SMR would support post-fire response efforts by BLM for any revegetation efforts.

9.1.4 Tortoise Release Area

The Tortoise Release Area is adjacent to the project area and is susceptible to each factor discussed in this section as with any other portion of the desert. However, these events would not warrant a response or additional action by SMR. Similarly, the areas where the selected mitigation projects would be implemented are managed by the BLM, where these potential changed circumstances are being addressed and minimized to the extent possible. Therefore, no additional response or action by the applicant would be warranted in the event these or other circumstances were to change.

9.2 Unforeseen Circumstances

Unforeseen circumstances are defined as "changes in circumstances affecting a species or geographic area covered by a conservation plan or agreement that could not reasonably have been anticipated by plan or agreement developers and the Service [USFWS] at the time of the conservation plan's or agreement's negotiation and development, and that result in a substantial and adverse change in the status of the covered species (50 CFR 17.3).

In the event a potential unforeseen circumstance is identified by SMR or the USFWS, the USFWS will determine if the unforeseen circumstances exists using a number of factors such as the range of the species, the proportion of the range within and ecological significance of the covered area, and whether failure to implement additional conservation measures would appreciably reduce the likelihood of survival and recovery on the species (50 CFR 17.22(b)(5)(iii)(C) and 17.32(b)(5)(iii)(C). If the USFWS demonstrates additional conservation measures are warranted where the HCP is being properly implemented, SMR may consider implementing some or all additional measures identified by USFWS but is not required to provide additional resources or funds to resolve unforeseen circumstances.

10 PERMIT RENEWAL AND AMENDMENTS

10.1 Permit Renewal

This HCP and ITP is eligible for renewal pursuant to federal regulation. If the SMR files such a request at least 30 days prior to the permit expiration date, the permit will remain valid while the request is being processed (50 CFR 13.22). If SMR fails to file a request at least 30 days prior to permit expiration, the permit will become invalid on the original expiration date. The USFWS will honor the "No Surprises" assurances as much as practicable to the extent the assurances comply with the statutory and regulatory requirements in place at the time of the renewal request.

10.2 Permit Amendments

This HCP and ITP may be amended at the discretion of the USFWS in accordance with the agency regulations in place at the time of the amendment (50 CFR § 13.22 and 50 CFR 13.32). SMR may request clarifications or administrative amendments from the USFWS to address small errors, omissions, or language that may be too general or too specific for practical application found in the HCP or ITP. SMR and USFWS will address minor changes to the conservation measures via formal correspondence or addenda to the HCP and such changes will not re-open the HCP or ITP to the NEPA or further ESA processes.

SMR and the USFWS may initiate an amendment to the HCP and ITP. If proposed changes to the HCP and ITP increase the incidental take authorization, or modify the Covered Activities in ways not analyzed previously in the NEPA or ESA Section 7 documents, a permit amendment is required and the amendment may be subject to additional NEPA or Section 7 review (USFWS, 2016). The USFWS ultimately retains discretion over the level of review needed to address an amendment.

10.3 Suspension/Revocation

USFWS may suspend or revoke its permit should SMR fail to implement the measures identified in the HCP in accordance with the terms and conditions of the ITP, or should suspension or revocation be otherwise required by law. USFWS may suspend or revoke the ITP for cause in accordance with the laws and regulations in force at the time of such suspension or revocation (see Title 5, Part 558 of the U.S. Code [5 USC 558]; 50 CFR 13.27 through 13.29; 15 CFR 904). The exception is that USFWS may revoke the ITP based on a determination that continuing covered activities will be likely to jeopardize the continued existence of the desert tortoise only if USFWS has not been successful in remedying the situation in a timely fashion through other means as provided in the No Surprises Rule (50 CFR 17.22[b][5] and 50 CFR 17.32[b][5]).

Such suspension or revocation may apply to the entire ITP, or only to specified areas within the Permit Boundary or certain covered activities. In the event of suspension or revocation, SMR's obligations under the HCP will continue until USFWS determines that all take of desert tortoise that occurred under the ITP has been mitigated to the maximum extent practicable in accordance with the HCP.

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APPENDIX A

Figures

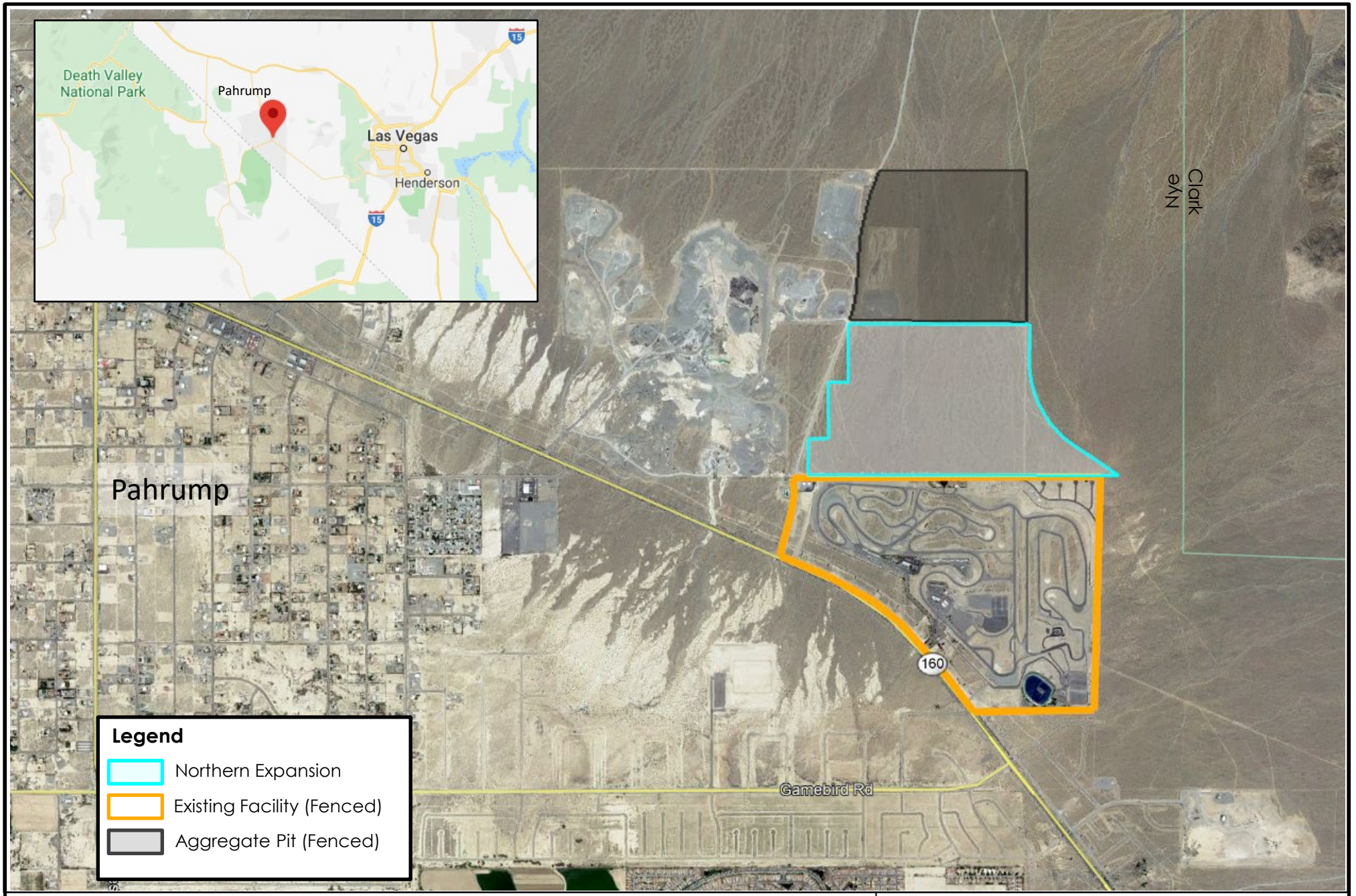

Figure 1 – Location of Existing Facility and Expansion Area

Spring Mountain Raceway and Motor Resort
Pahrump, Nevada

"Not to scale"

bec environmental, inc.
Environmental Services

N

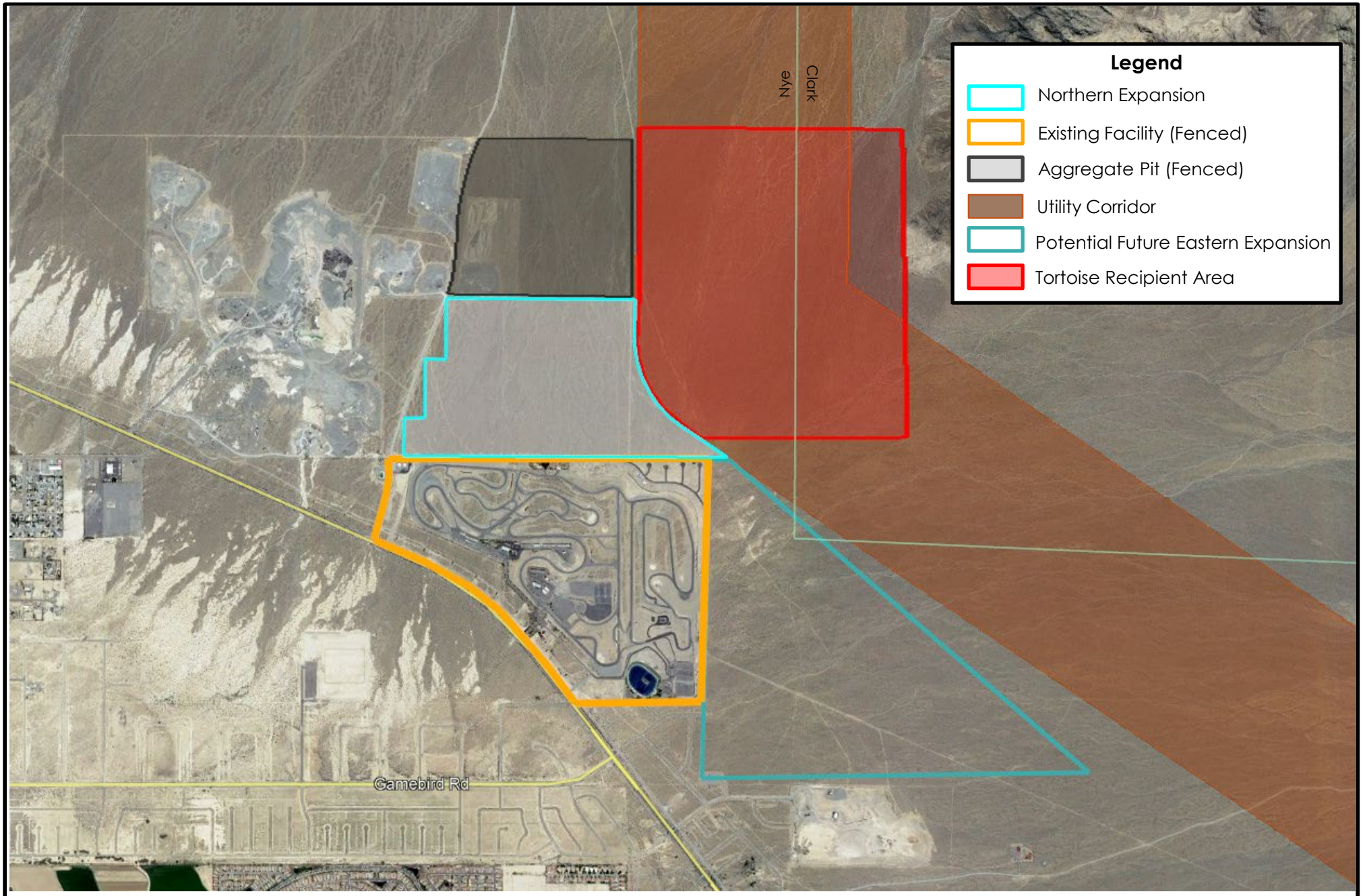

Figure 2 – Location of Northern Expansion Area and Other Features

Spring Mountain Raceway and Motor Resort
Pahrump, Nevada

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Environmental Services

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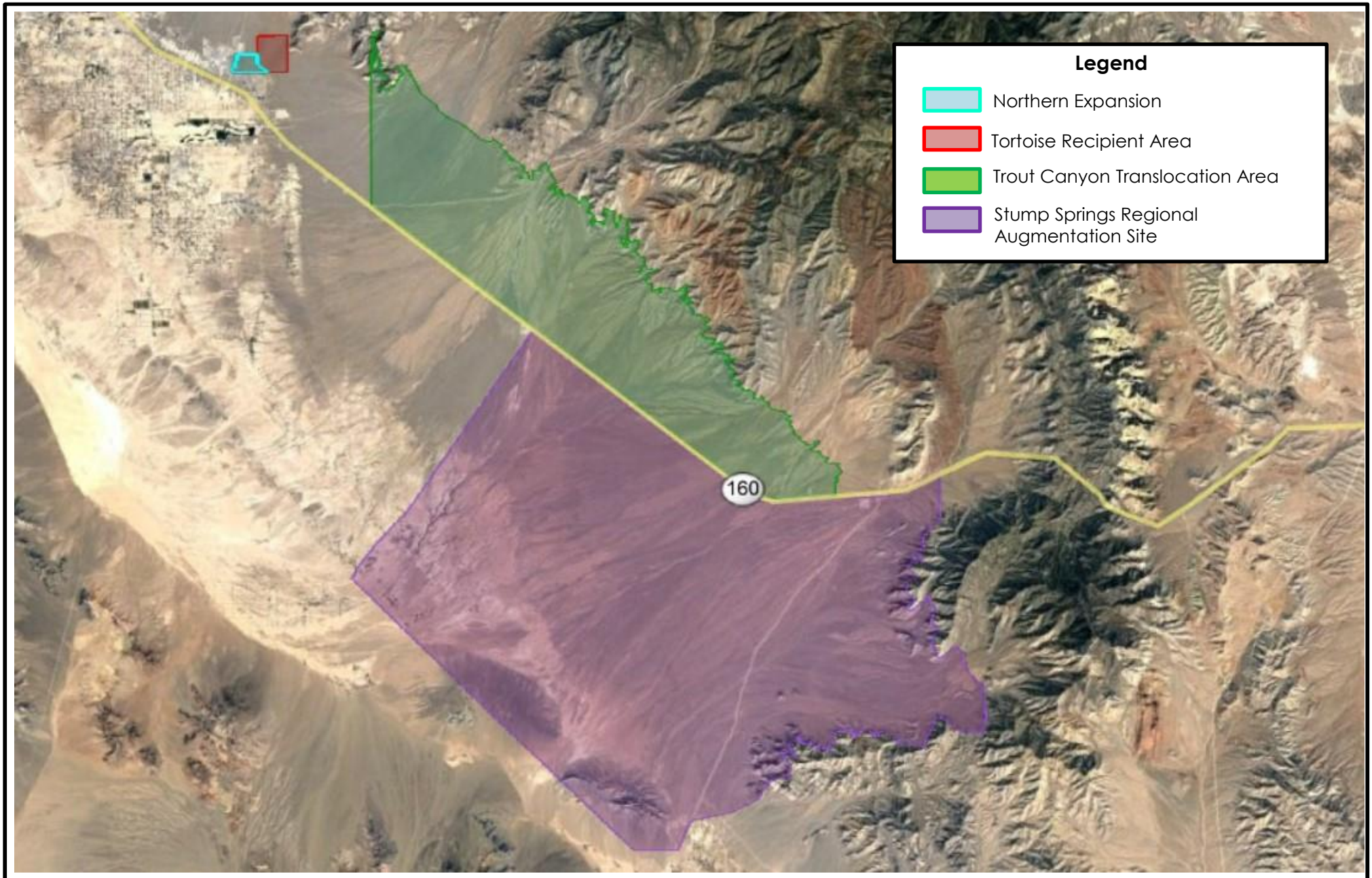

Figure 3 – Plan Area including Off-Site Mitigation

Spring Mountain Raceway and Motor Resort
Pahrump, Nevada

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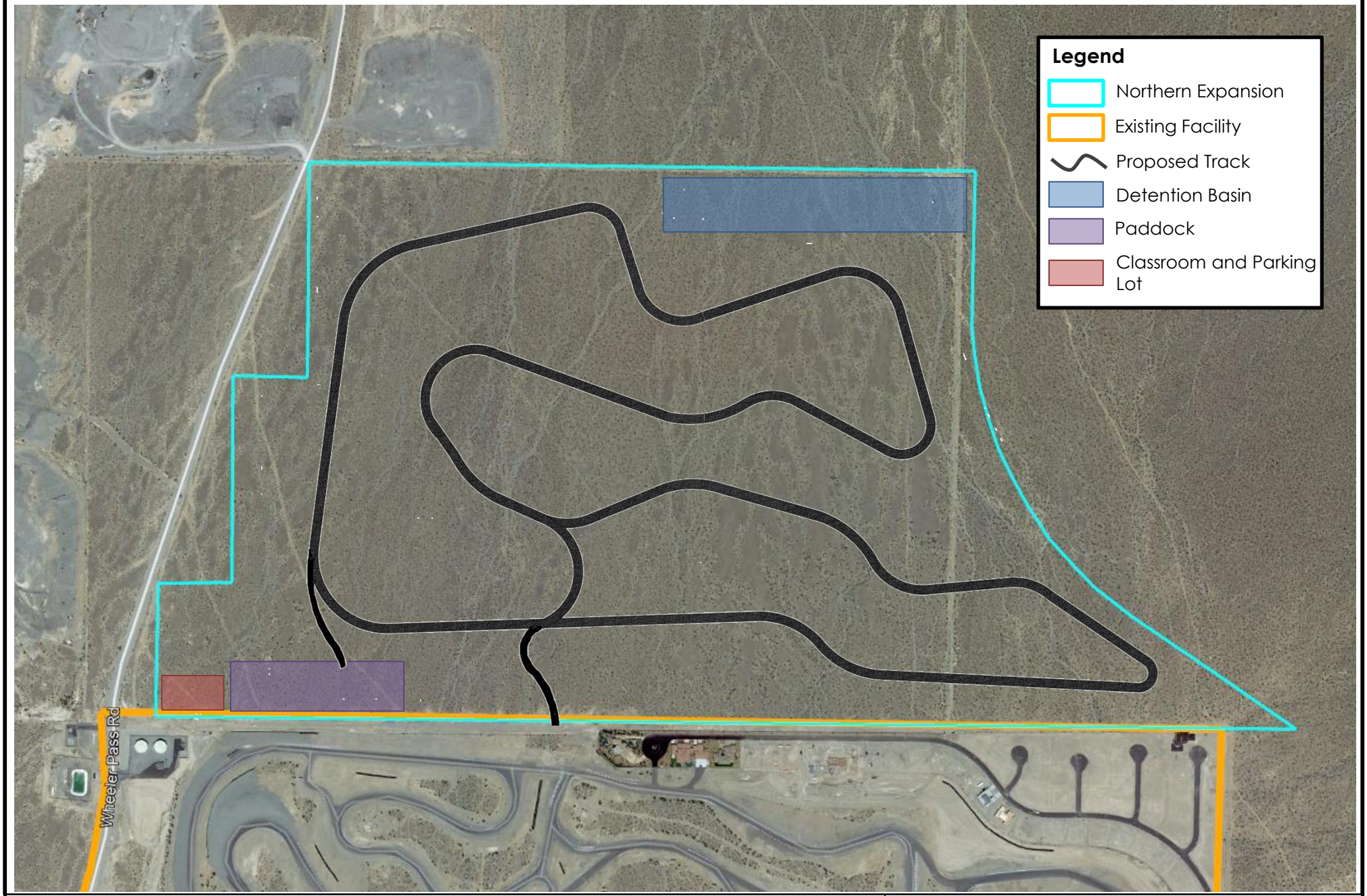

Figure 4 – Northern Expansion and Proposed Construction

Spring Mountain Raceway and Motor Resort
Pahrump, Nevada

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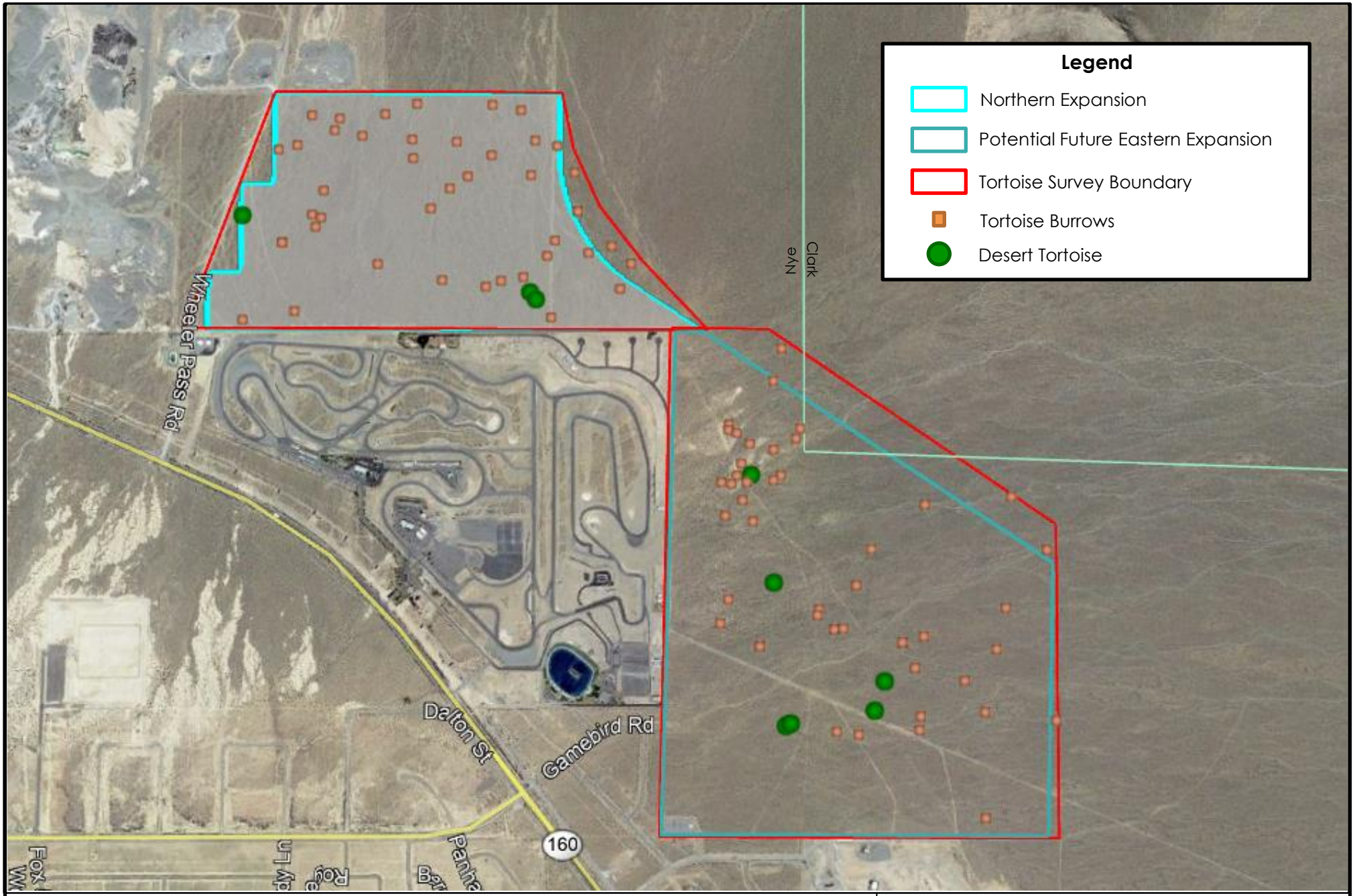

Figure 5 – Survey Area Boundary and Tortoise Locations

Spring Mountain Raceway and Motor Resort

Pahrump, Nevada

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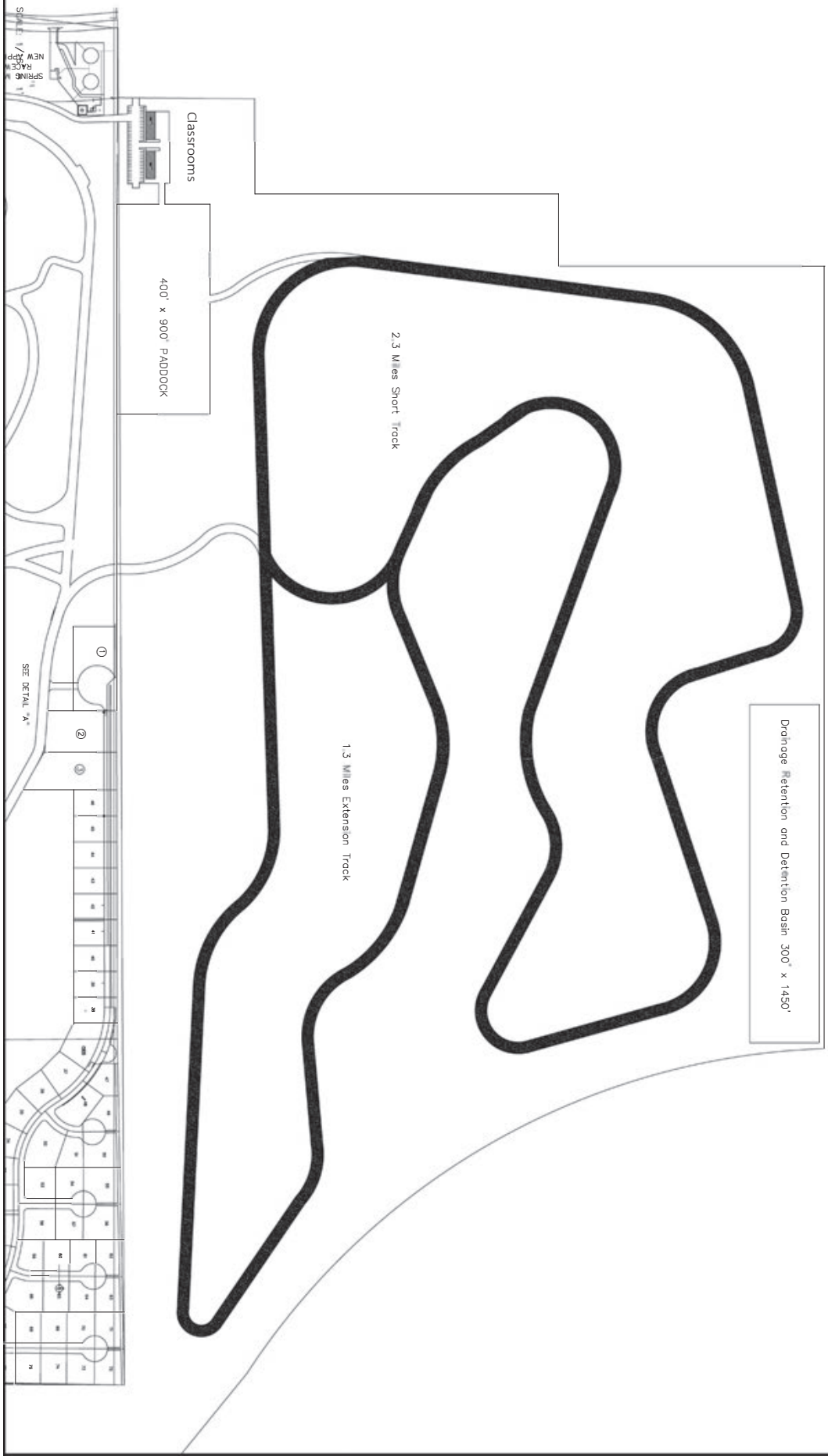
APPENDIX B

Site Drawings



SHEET NUMBER A-2	227 AC North Extention Plans SPRING MOUNTAIN MOTORSPORTS	10/22/14 REVISIONS:		Double M Construction License #: 48608-A P.O. BOX 6498, PAHRUMP, NV 89041 PHONE: (775) 537-6767 FAX: (775) 537-6778	CONTRACTOR THESE PLANS ARE PREPARED AND SUBMITTED BY THE CONTRACTOR AS AN EXEMPTION TO NRS 623.330 FOR WORK UNDER THE CONTRACTORS LICENSE CATAGORY AUTHORIZED UNDER NRS 624 PREPARED BY:

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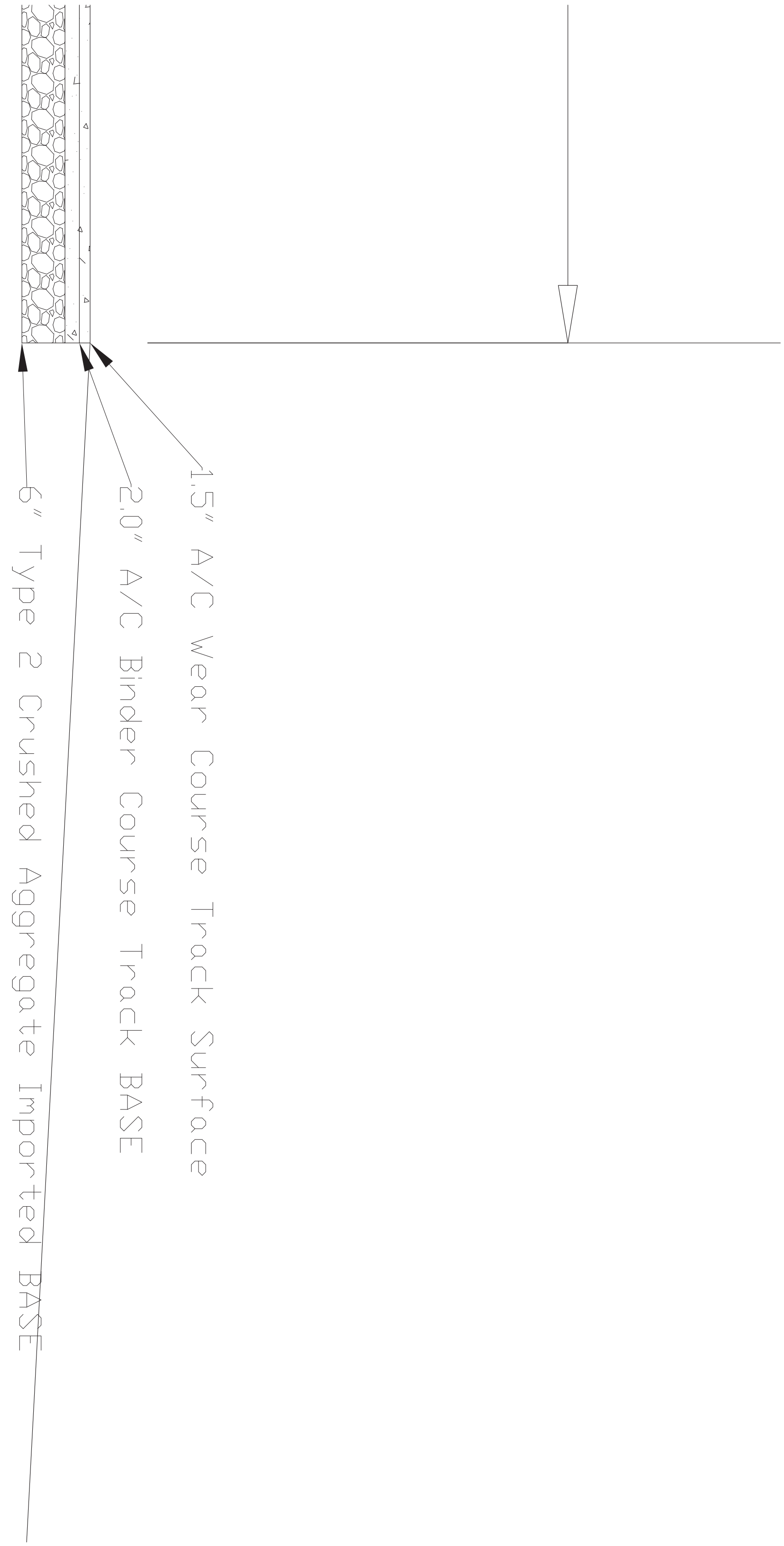

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Typ Cross Section Track Paving

SPRING MOUNTAIN MOTORSPORTS

10/22/14

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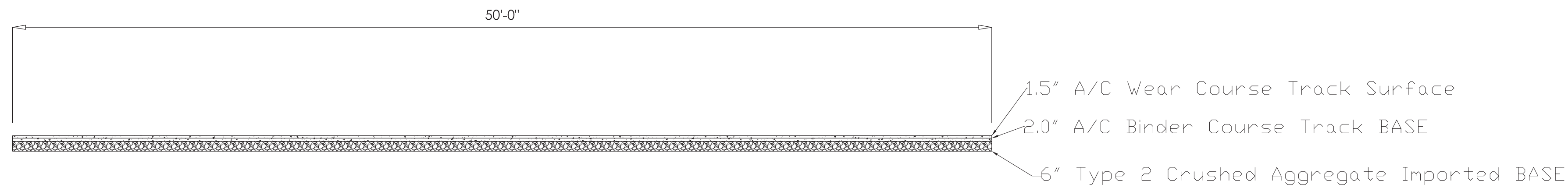
PREPARED BY:

TYP. Track Cross Section



SCALE: 1/16" = 1'

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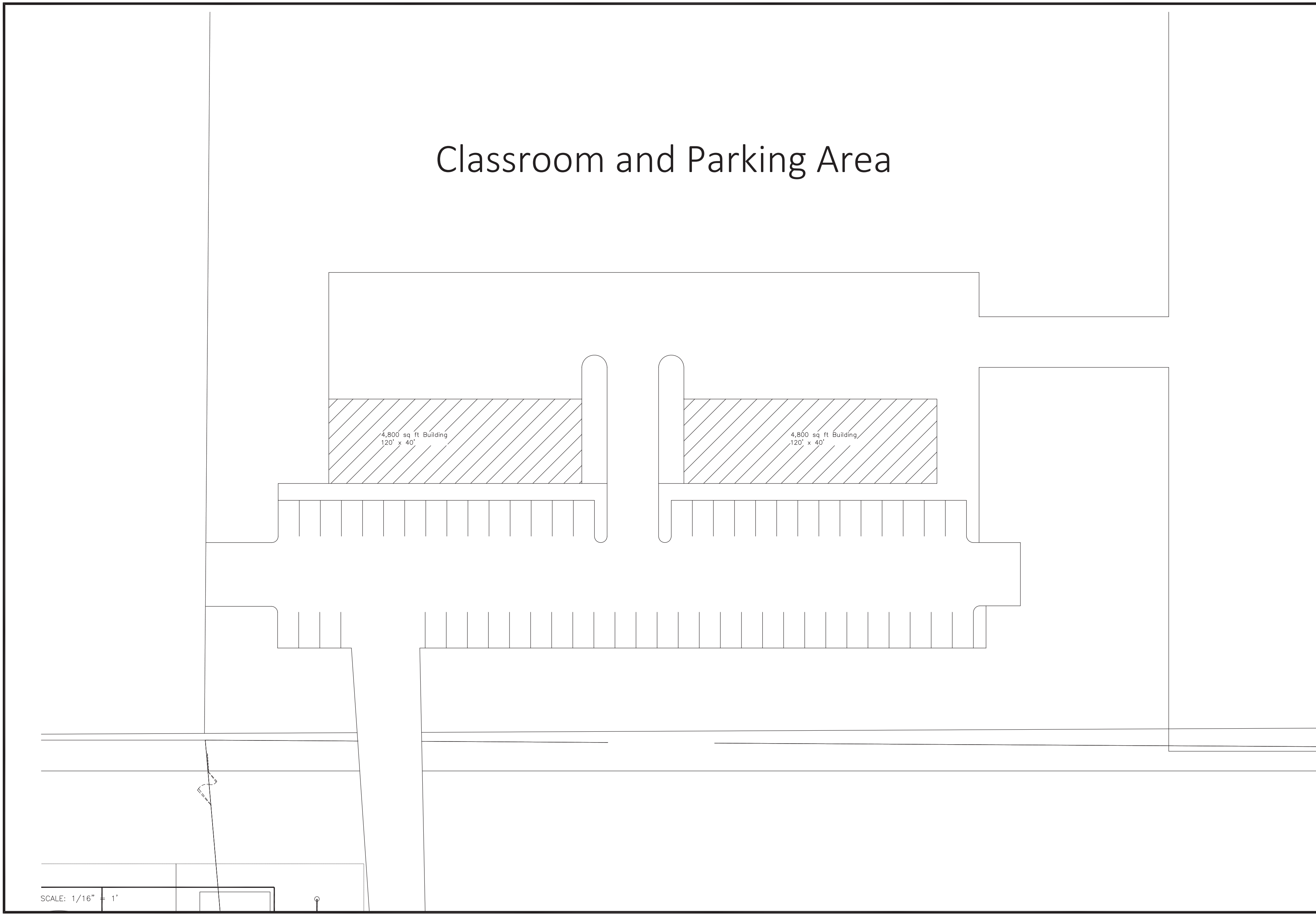

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10/22/14

REVISIONS:

227 AC North Extension Plans

SPRING MOUNTAIN MOTORSPORTS

SHEET NUMBER

A-2

APPENDIX C

Desert Tortoise Survey Report

SPRING MOUNTAIN RACEWAY EXPANSION PROJECT
DESERT TORTOISE SURVEY
PAHRUMP, NEVADA

Prepared for:

MaryEllen C. Giampaoli,
Environmental Compliance Specialist

Prepared by:

Darling Geomatics, Inc.
9040 S. Rita Rd
Tuscon, Arizona 85747
(520)298-2725

Date: May 2020, Revised June 2020

Table of Contents

1.0 INTRODUCTION

In May 2018, Darling Geomatics Inc. contracted with MaryEllen C. Giampaoli, Environmental Compliance Specialist to conduct a Mojave desert tortoise (*Gopherus agassizii*) survey of public lands proposed to be conveyed by modified competitive sale to Spring Mountain Raceway, LLC, the Project Proponent. The Bureau of Land Management (BLM) was preparing an Environmental Assessment (EA) to assess the effects of the transfer of 620-acres to the Project Proponent for development and expansion of a track adjacent to current raceway facilities (**Figure 1**). The survey was conducted on May 8, 9, and 10, 2018 during the Active Survey Period for desert tortoise.

Construction of the racetrack expansion would result in the phased development and associated disturbance of 620-acres of desert tortoise habitat (Project Area) within the unincorporated town limits of Pahrump, Nye County, Nevada. Initial expansion is proposed to the north, with potential future expansion to the east. The existing and proposed expansion of the track are within the town limits of Pahrump, in an area zoned as "Heavy Industrial with Special Overlay" by Nye County.

Established in 2004, Spring Mountain Motor Resort & Country Club (herein referred to as Spring Mountain Raceway) currently encompasses 866-acres of state-of-the-art track facilities and a motorsports country club. The facility is located approximately 55 miles west of downtown Las Vegas, Nevada within the Town of Pahrump. The existing facility includes six miles of racetrack and an array of resort-style amenities including club house, luxury condominiums, Spring Mountain Estates (residential) and a freshwater lake. Spring Mountain Raceway currently has the longest road course in North America and offers motorsports opportunities for driving enthusiasts of all levels.

Spring Mountain Raceway also hosts three well-known performance driving schools specializing in Corvettes, Cadillacs, and Wolf race cars. In addition to performance driving instruction, the resort offers a variety of services, including, track rentals, team building activities, and performance vehicle sales. Spring Mountain Raceway is an independently owned and operated Nevada LLC privately funded and headquartered in Pahrump, Nevada.

The Mojave desert tortoise is listed as Threatened under the Endangered Species Act and the Project Area is located in the Eastern Mojave Recovery Unit for the species (USFWS 2011). Desert tortoises occur in the Pahrump Valley at relatively low densities (Nye County 2009) and exist within the Project Area.

1.1 LOCATION

The existing racetrack and proposed expansion area occur adjacent to State Highway 160, which has resulted in loss and fragmentation of habitat in the region. However, the habitat in the proposed Project Area is relatively undisturbed, and individual tortoises may use the site periodically throughout the year.

The proposed Spring Mountain Raceway 620-Acre Expansion Project would be constructed on undeveloped land within Township 20, South Range 54 East:

- Section 27, SW1/4, that part lying outside of the utility corridor;
- Section 28, E1/2NE1/4NE1/4SW1/4, NE1/4SE1/4NE1/4SW1/4, S1/2SE1/4NE1/4SW1/4, NE1/4SE1/4SW1/4, E1/2SW1/4SE1/4SW1/4, SE1/4SE1/4SW1/4, and SE1/4; and
- Section 34, lots 2, 3, and 4, those parts lying outside of the utility corridor, lots 5 through 8, NE1/4NW1/4, that part lying outside the utility corridor, SE1/4NW1/4, and E1/2SW1/4.

The Project Area is bounded by the existing racetrack, State Route 160, and Federal land administered by the BLM. The covered area is currently undeveloped and contains a gradual northeast to southwest slope with no unusual land features. The covered area is in Flood Zone X (areas determined to be outside the 500-year flood plain (Pahrump Regional Master Plan Update Commission, 2014). The surrounding land is undeveloped except for dirt roads and powerlines. There is an active gravel pit located north of the Project Area.

The Project Area occurs in areas considered suitable habitat for desert tortoises within the Mojave Desert. **Photograph 1** (**Appendix A**) is a photograph looking north to south across the Project Area that illustrates the typical vegetation. The Project Area is located on the alluvial fan on the east side of Pahrump Valley in an area characterized as desert pavement interspersed with somewhat silty loam soils.

Vegetation in the Project Area is dominated by a creosote bush (*Larrea tridentata*) community type. Other plants include four-wing saltbush (*Atriplex canescens*), shadscale (*Atriplex confertifolia*), white bursage (*Ambrosia dumosa*), spiny menodora (*Menodora spinescens*), Nevada ephedra (*Ephedra nevadensis*), little leaf ratany (*Krameria parvifolia*), common matchweed (*Gutierreza sarothrae*), Mojave yucca (*Yucca schidigera*) and cottontop cactus (*Echinocactus polycephalus*). Joshua tree (*Yucca brevifolia*) were not present within the survey area. Non-native invasive species were rare, with only occasional red brome (*Bromus rubens*) being noted. Designated critical habitat is not present within or near the Project Area. A list of federally protected species in Nye County is available on the US Fish and Wildlife Service (USFWS) website and is included in **Appendix B**.

1.2 FIELD CONDITIONS

During the survey, the winds were light to moderate and the days were mostly sunny with temperatures ranging from lows of 10 degrees Celsius (50 degrees Fahrenheit) to highs of approximately 37 degrees Celsius (99 degrees Fahrenheit) at the hottest part of the day, after surveys were terminated when temperatures reached 35 degrees Celsius (95 degrees Fahrenheit).

2.0 METHODOLOGY

Because the proposed project is a non-linear project, a 100% coverage survey was conducted. Surveys were performed May 8, 9 and 10, 2018 using USFWS Mojave Desert Tortoise Survey Protocol (USFWS, 2017b) when air temperatures were below 35 degrees Celsius (95 degrees Fahrenheit) measured approximately 5 cm from the soil surface in areas of full sun but in the shade of the tortoise surveyor.

In accordance with USFWS (USFWS, 2017b), a Global Positioning System (GPS) grid of the project area was set up with 10-meter-wide or closer belt transects, depending on density of vegetation. Experienced desert tortoise biologist, Mary Darling of Darling Geomatics, along with five trained desert tortoise survey assistants walked straight paths on the centerline of each transect by navigating point to point with hand-held GPS. The location and characteristics of all desert tortoises and all burrows were recorded and documented with a handheld GPS. Each burrow was examined to determine if a desert tortoise was present at or near the entrance with the use of hand-held mirrors. Burrows were not probed or further examined if a tortoise was not visible upon initial observation of the burrow.

All live desert tortoises, burrows, carcasses, scat, and other evidence of desert tortoise presence observed during the field surveys were documented. Live tortoises found aboveground were observed from a distance, but size was estimated to determine if the tortoise was greater than or less than 180 mm midline

carapace length (MCL). Live tortoises in burrows were evaluated to determine if the tortoise may have been greater than or less than 180 mm MCL based on the observations of the animal and the size of the burrow. All burrows were also catalogued.

3.0 DESERT TORTOISE SURVEY RESULTS AND DENSITY ESTIMATE

3.1 DESERT TORTOISE SURVEY RESULTS

Approximately 252 acres were surveyed in the Northern Expansion Project area, and 440 acres were surveyed in the Eastern Expansion Project area. A summary of the survey results is discussed in the sections below. **Table 1** summarizes the observations of tortoises observed during the survey. **Appendix A** includes photographs of the Project area showing the typical vegetation (**Photograph 1**), as well as photos of some of the tortoises observed in the Project area (**Photographs 2-5**).

Two (2) tortoises greater than 180 mm MCL were observed above ground within the Project Area. Seven (7) additional tortoises estimated to be larger than 180 mm MCL were detected in burrows within the Survey Area for a total of nine (9) live tortoises within the approximately 692-acre Survey Area. A total of 92 burrows constructed and/or potentially used by desert tortoises were observed throughout the Survey Area. **Figure 2** shows the location of the desert tortoises and burrows observed during the survey.

In the Northern Expansion Project Area, three adult desert tortoises were observed. One tortoise (Tortoise #1; No photo) was observed in a burrow on the eastern edge of the Project Area near Wheeler Pass Road. Within approximately 250 feet of the eastern Project Area boundary, Tortoise #2, an adult tortoise estimated to be over 180 mm MCL, was observed inside of a burrow (**Photograph 2**). In an adjacent, subsequent transect, Tortoise #3, estimated to be 230 mm MCL, was seen walking above ground approximately 100 feet from the location of Tortoise #2 (**Photograph 3**). Biologists speculated but could not be certain these tortoises were the same individual, therefore both tortoise observations were recorded and treated as different tortoises. A total of 43 burrows (including one with one piece of tortoise scat) that were constructed and/or potentially utilized by desert tortoises were identified in the Northern Expansion Area.

No carcasses, courtship rings, or drinking depressions were observed in the Northern Expansion Project area.

In the Eastern Expansion Project area, a total of six desert tortoises were observed, all estimated to be larger than 180 mm MCL. Five of these desert tortoises were observed inside burrows throughout the Survey Area (Tortoises #4, 5, 6, 7, and 8). See **Photograph 4** of Tortoise #7 as an example. One tortoise larger than 180 mm MCL, (Tortoise #9) was observed walking outside of a burrow and is documented in **Photograph 5**.

A total of 49 burrows constructed and/or potentially utilized by desert tortoises were observed within the Eastern Expansion Area during the survey **(Figure 2).**

No tortoise carcasses courtship rings, or drinking depressions were observed during the survey in the Eastern Expansion Area.

Table 1. Tortoises Observed During the Surveys of the Project Area

Tortoise #	Date	Size	Cover	Location (UTM 11S NAD 83)		Notes
				Easting	Northing	
Northern Expansion Area						
1	8 May 2018	>180 mm	Burrow	597435	4004378	Suitable habitat, 84 meters east of Wheeler Pass Road, no photograph.
2	8 May 2018	>180 mm	Burrow	598398	4004129	Suitable habitat, location alongside a cluster of alluvial veins, less than 100 meters east of an unmarked dirt road, **Photograph 2.**
3	8 May 2018	230 mm	Open	598418	4004106	Suitable habitat, location alongside a cluster of alluvial veins, walking in the open less than 100 meters east of an unmarked dirt road, **Photograph 3.**
Eastern Expansion Area						
4	9 May 2018	>180 mm	Burrow	599261	4002722	Suitable habitat, location southwest of unmarked transecting trails in proximity of Tortoise #5, approximately 400 meters east of southeastern border of existing facility, no photo.
5	9 May 2018	>180 mm	Burrow	599269	4002729	Suitable habitat, location southwest of unmarked transecting trails, approximately 410 meters east of southeastern border of existing facility, no photo.
6	9 May 2018	>180 mm	Burrow	599539	4002772	Suitable habitat, location northeast of unmarked transecting trails, approximately 690 meters east of southeastern border of existing facility, no photo.
7	9 May 2018	>180 mm	Burrow	599571	4002881	Suitable habitat, location south of alluvial vein transecting northeast to southwest in the survey area, approximately 730 meters east of southeastern border of existing facility, **Photograph 4**.
8	10 May 2018	>180 mm	Burrow	599212	4003181	Suitable habitat, location south of unmarked trail and approximately 380 meters east of existing eastern facility border, no photo.
9	10 May 2018	>180 mm	Open	599136	4003532	Suitable habitat, location just north of unmarked trail and approximately 345 meters east of currently existing facility border, **Photograph 5**.

3.2 DENSITY ESTIMATE

Density estimates were calculated using the imbedded formula in "Table 2" of the revised protocol, *Preparing for Any Action That May Occur within the Range of The Mojave Desert Tortoise* (USFWS 2017a) and are presented in **Table 2** below. There are an estimated 6 desert tortoises (> 180 mm MCL) within the Project area, with a lower 95% confidence value of 3 tortoises and an upper 95% confidence value of 11 tortoises. This provides a density estimate of 6 tortoises/km2 in the surveyed area. The predicted desert tortoise occupancy model (Nussear, 2009) indicates values above 0.8 in the immediate region surrounding the Project.

Table 2. Desert tortoise density estimates based on "Table 2" of *Preparing for Any Action That May Occur within the Range of The Mojave Desert Tortoise* (USFWS 2017a)

Description	**Surveyed area**	**Northern Expansion Project Area**
Acres	692	227
Point estimate (95% CI)	17.2 (8.84 – 33.46)	5.6 (2.90 – 10.98)
Number of hatchlings (young-of-year)	22.4	7.3
Number of tortoises < 180 mm MCL, not young-of-year	89.4	29.3

3.3 OTHER WILDLIFE OBSERVATIONS

The USFWS (USFWS, 2017c) indicates that the species listed in **Appendix B** may be present in the Project Area. No Gila monsters were observed during the tortoise survey. Neither western burrowing owls (*Athene cunicularia*) nor sign of their presence were observed within the Project Area during the survey. No other potentially sensitive wildlife species were observed during the survey.

4.0 SUMMARY

Darling Geomatics completed the protocol (USFWS 2017b) desert tortoise survey on May 8-10, 2018. The survey area contained 92 burrows, zero (0) tortoise carcasses, and one (1) scat sighting. Two live tortoises were observed walking outside of burrows, while seven live tortoises were found inside burrows. Cactus and yucca are uniformly spread across the Project Area, but Joshua tree yuccas were not present. Red brome was the only "invasive" species encountered and was rare.

5.0 REFERENCES

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Figures

FIGURE 1. Proposed Northern Expansion Project Area.

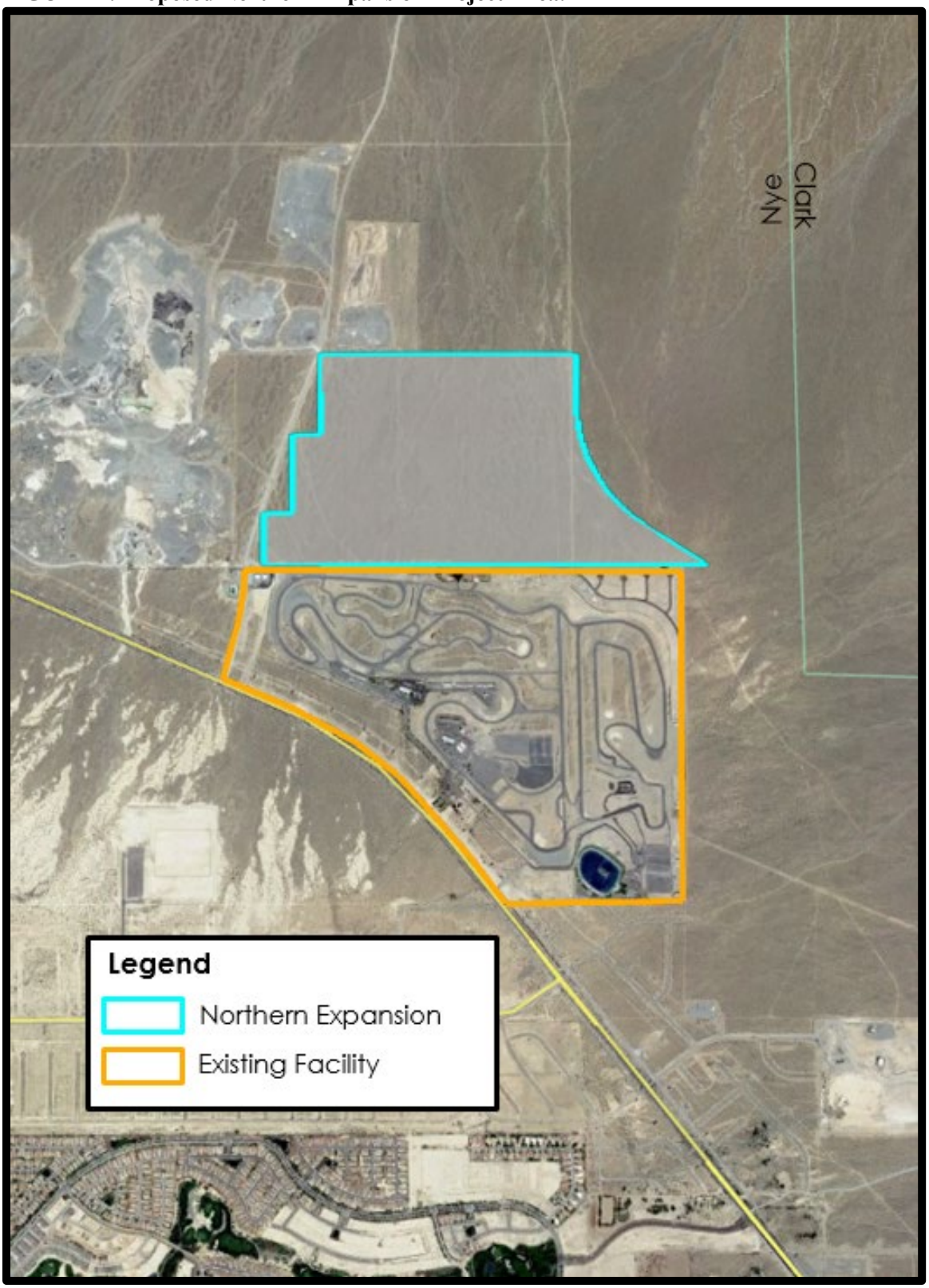
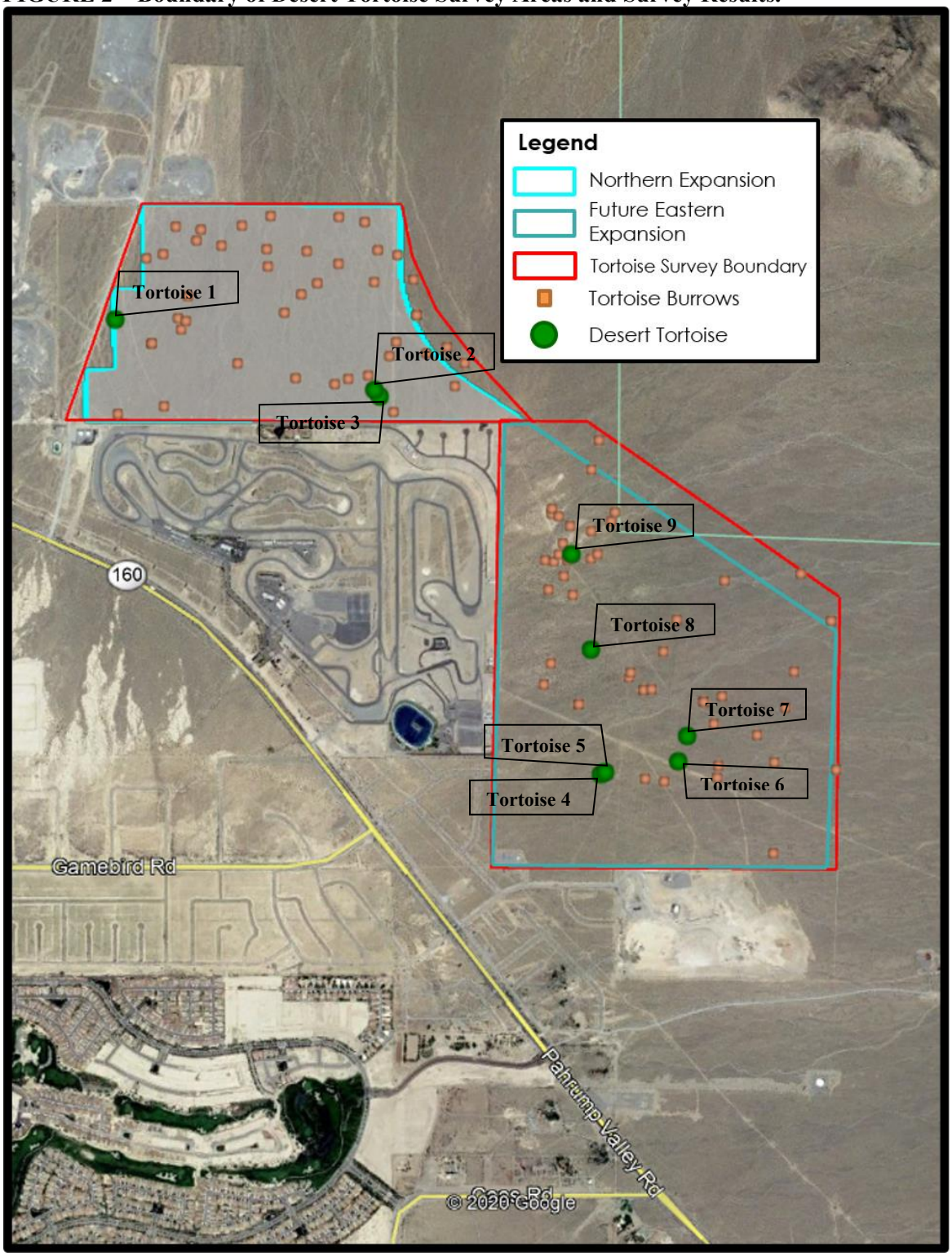


FIGURE 2 – Boundary of Desert Tortoise Survey Areas and Survey Results.



Appendix A – Photographs

Photograph 1. View of Project Area and typical vegetation/habitat

Photograph 2. Tortoise #2

Photograph 3. Tortoise #3

Photograph 4. Tortoise #7

Photograph 5. Tortoise #9

Appendix B – US Fish and Wildlife Service List of Protected Species in Nye County

NYE COUNTY

Amphibian		
C	Columbia spotted frog (Great Basin Distinct Population Segment)	*Rana luteiventris*
Birds		
C	Greater sage-grouse	*Centrocercus urophasianus*
PT	Yellow-billed cuckoo (Western U.S. Distinct Population Segment)	*Coccyzus americanus*
E	Southwestern willow flycatcher	*Empidonax traillii extimus*
Fishes		
E	Ash Meadows Amargosa pupfish •	*Cyprinodon nevadensis mionectes*
E	Ash Meadows speckled dace •	*Rhinichthys osculus nevadensis*
E	Devil's Hole pupfish	*Cyprinodon diabolis*
T	Lahontan cutthroat trout	*Oncorhynchus clarkii henshawi*
T	Railroad Valley springfish •	*Crenichthys nevadae*
E	Warm Springs pupfish	*Cyprinodon nevadensis pectoralis*
E	White River spinedace •	*Lepidomeda albivallis*
Invertebrate		
T	Ash Meadows naucorid •	*Ambrysus amargosus*
Plants		
E	Amargosa niterwort	*Nitrophila mohavensis*
T	Ash Meadows blazing star •	*Mentzelia leucophylla*
T	Ash Meadows gumplant •	*Grindelia fraxinopratensis*
T	Ash Meadows ivesia (mousetail) •	*Ivesia eremica* (= I. kingii var. eremica)
T	Ash Meadows milkvetch •	*Astragalus phoenix*
T	Ash Meadows sunray •	*Enceliopsis nudicaulis var. corrugata*
T	Spring-loving centaury •	*Centaurium namophilum*
Reptile		
T	Desert tortoise (Mojave population) •	*Gopherus agassizii*

E = Endangered T = Threatened C = Candidate
Δ = Proposed for delisting • = Designated Critical Habitat in County * = Believed extirpated from Nevada
P=Proposed listing
+ = Endangered only in the Virgin River, Muddy River population is a sensitive species.

US Fish and Wildlife Service accessed 5/12/2020 https://www.fws.gov/nevada/protected_species/species_by_county.html

APPENDIX D

Desert Tortoise Translocation Plan

DESERT TORTOISE TRANSLOCATION PLAN
SPRING MOUNTAIN RACEWAY NORTHERN EXPANSION

NYE and CLARK COUNTY, NEVADA

Prepared for:
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Pahrump, NV 89048

Prepared by:
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370 Alabama Street, Suite A
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November 2020

Table of Contents

List of Tables

List of Figures

List of Acronyms

BLM	Bureau of Land Management
MCL	Midline Carapace Length
NDOW	Nevada Department of Wildlife
TRP	Translocation Review Package
URTD	Upper Respiratory Tract Disease
USFWS	United States Fish and Wildlife Service

1 INTRODUCTION

Spring Mountain Raceway LLC (Proponent) proposes to expand the existing Spring Mountain Raceway, into the Northern Expansion Area (Project). The expansion area is located in Nye County, within the town limits of Pahrump, NV in the foothills of the Spring Mountain range (Figure 1). The 227-acre Project site is located entirely on privately held lands in the Eastern Mojave Recovery Unit, outside of designated critical habitat.

This plan summarizes the current guidelines from the U.S. Fish and Wildlife Service (USFWS) for the translocation of desert tortoise (USFWS, 2009; 2020). It will be submitted with the Habitat Conservation Plan (HCP) to the USFWS for consideration in their issuance of an Incidental Take Permit under Section 10(a)(1)(b) of the Endangered Species Act, and to the Nevada Department of Wildlife (NDOW) for consideration in their issuance of a Special Purpose Permit (SPP).

1.1 Goals and Objectives

The goals and objectives of this plan include:

- Establish procedures to successfully translocate at-risk tortoises to suitable habitat located adjacent to the Project;
- Implement measures to minimize effects of translocation on all affected desert tortoises within the Project; and
- Collect data and monitor tortoises to promote post-translocation survivorship.

1.2 Project Site Density Estimates

Protocol desert tortoise surveys were performed May 8, 9 and 10, 2018 in a 692-acre area around the 227-acre Project site. The surveys utilized 100 percent coverage of all suitable habitat using 10-meter (30-foot) wide belt transects; the survey identified 9 tortoises > 180 mm MCL and observed sign including scat and burrows (Darling Geomatics 2019, Figure 2). Density estimates were calculated using the imbedded formula in Table 2 of the revised protocol, *Preparing for Any Action That May Occur within the Range of The Mojave Desert Tortoise* (USFWS, 2017) and are presented in Table 1. There are an estimated 6 desert tortoises (> 180 mm MCL) within the Project area, with a lower 95% confidence value of 3 tortoises and an upper 95% confidence value of 11 tortoises. This provides a density estimate of 6 tortoises/km^2 in the surveyed area (Table 1, Figure 2, 3). The predicted desert tortoise occupancy model (Nussear, 2009) indicates values above 0.8 in the immediate region surrounding the Project.

Table 1. Desert tortoise density estimates

Description	Surveyed area	Project footprint
Acres	692	227
Point estimate (95% CI)	17.2 (8.84 – 33.46)	5.6 (2.90 – 10.98)
Number of hatchlings (young-of-year)	22.4	7.3
Number of tortoises < 180 mm MCL, not young-of-year	89.4	29.3

Figure 1. Spring Mountain Raceway Expansion Area (Project) and Recipient Area

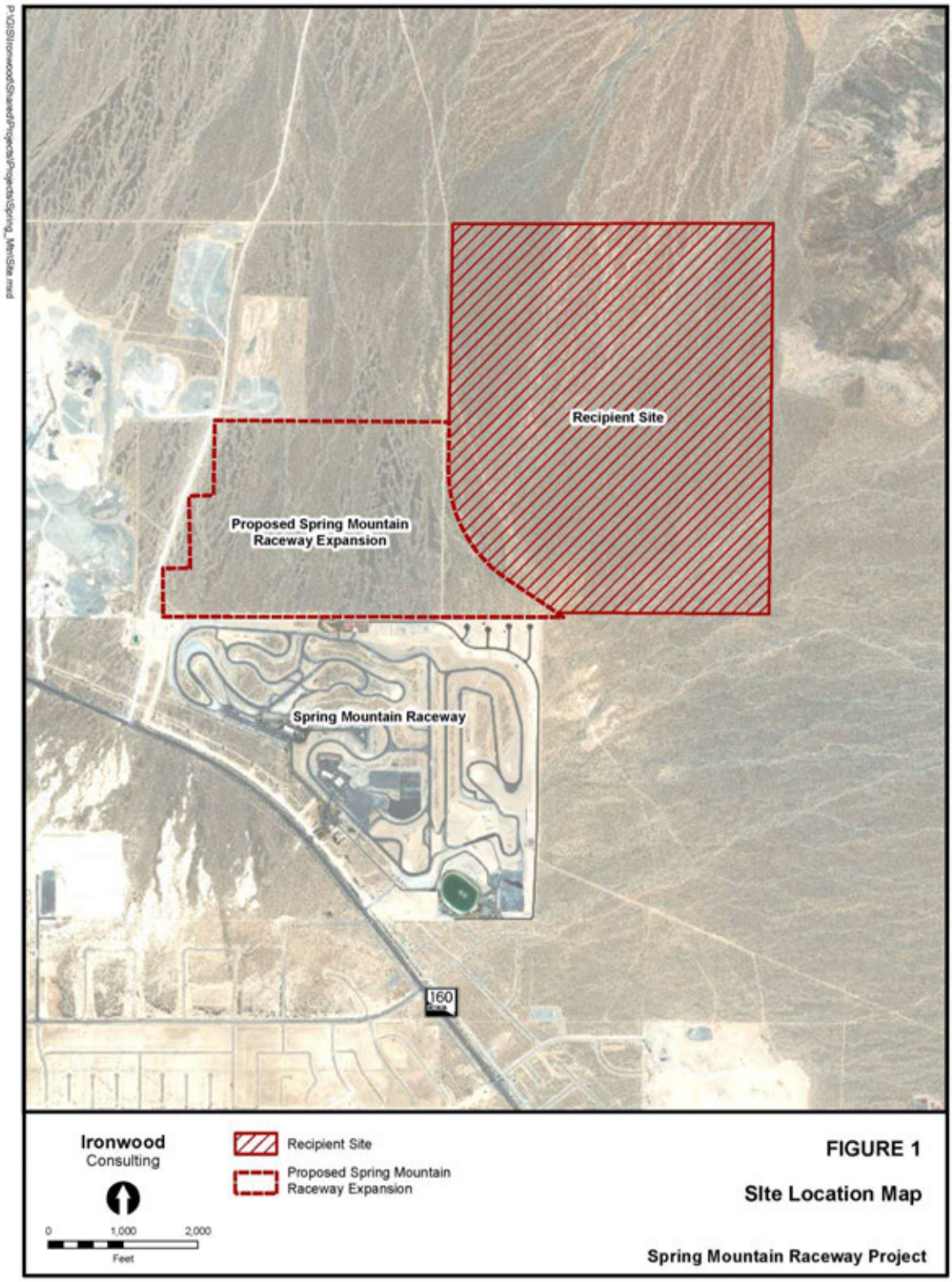


Figure 2. Spring Mountain Raceway Survey Results

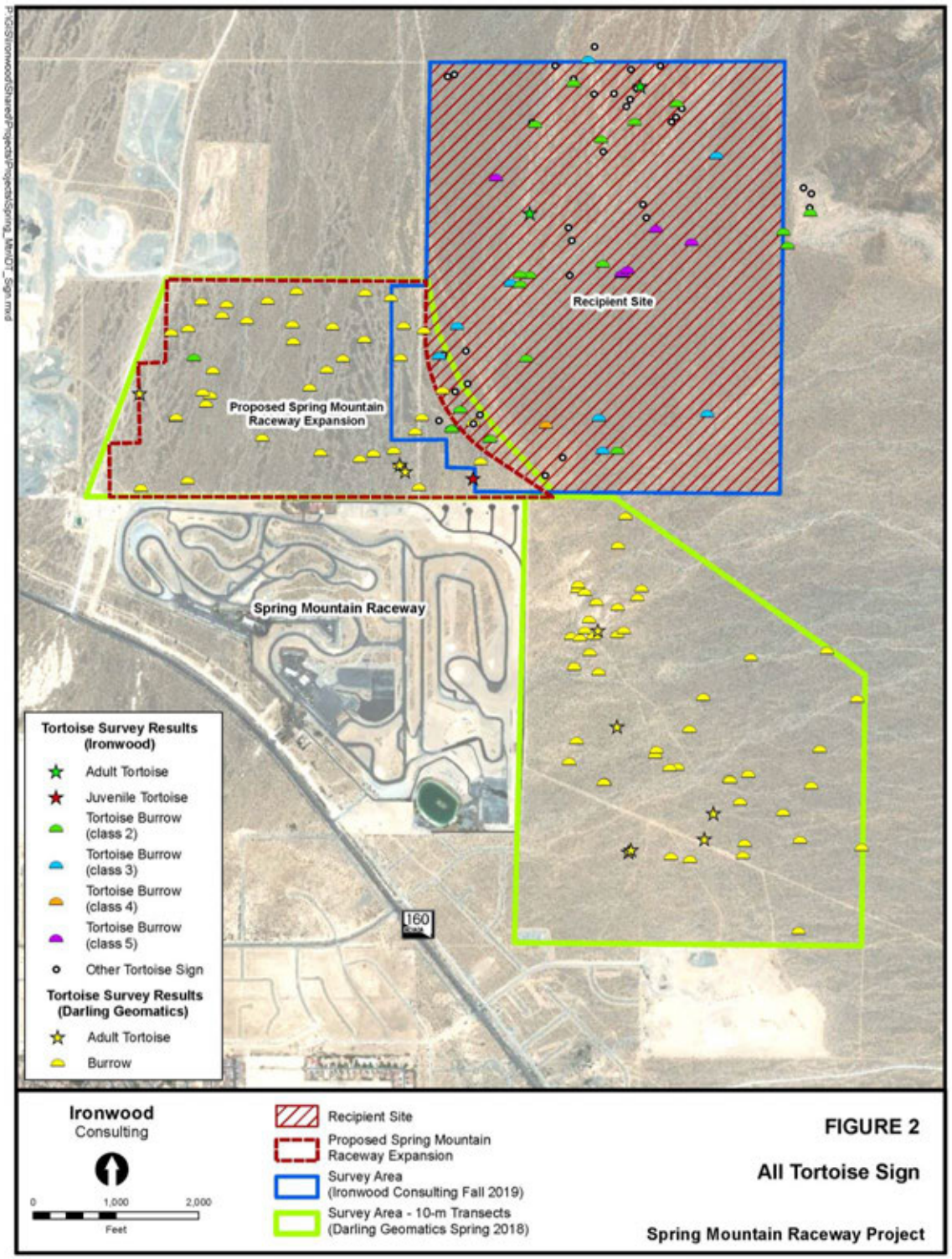
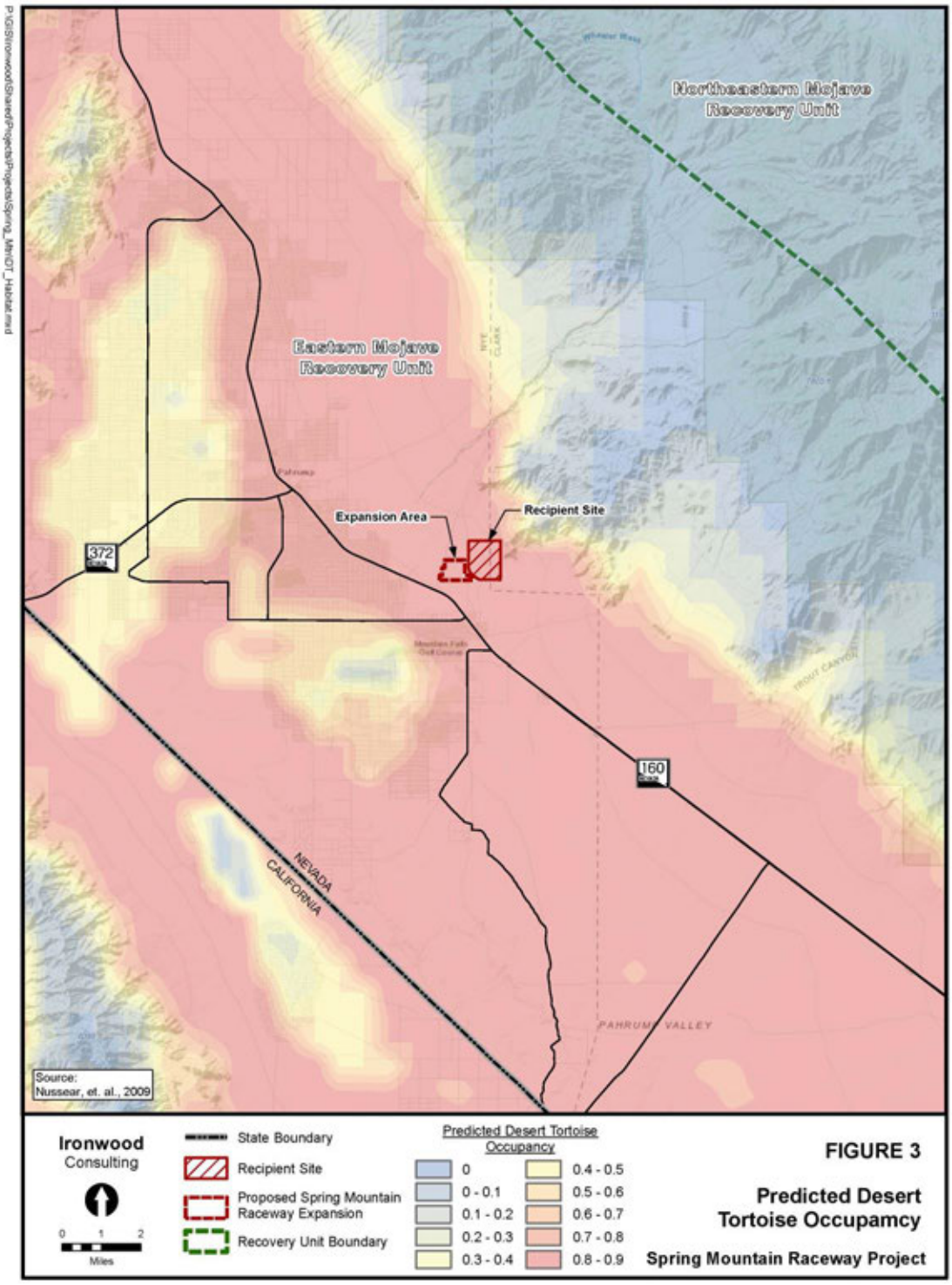


Figure 3. Desert tortoise predicted occupancy model



2 TORTOISE HANDLING

2.1 General Handling Guidelines

Only persons permitted by the USFWS and NDOW under the HCP and SPP would handle tortoises. All tortoise handling would be conducted by, or under the direct supervision of a biologist authorized to handle tortoises, in accordance with the Desert Tortoise Field Manual (USFWS, 2009). Health assessments will be conducted by those with additional training and authorization to do so (USFWS, 2019). All activities will be recorded on standardized data sheets and/or on digital data recorders. A record of all tortoises encountered, moved from harm's way, or translocated during Project activities would be maintained. This information would include location, date of observations, burrow data, sex, midline carapace length, mass (if handled), health observations, any apparent injuries and state of healing, and diagnostic markings (i.e., identification numbers). All tortoises handled would be photographed and closely examined for clinical signs of disease at the time of capture.

Handling of tortoises for processing, moving out of harm's way, or translocation would occur when ambient temperatures are below 35°C (95°F) and not anticipated to rise above 35°C (95°F) before handling and processing desert tortoises are completed (USFWS, 2009). The USFWS translocation guidance recommends releases will occur when temperatures range from 18-30°C (65-85°F) and are not forecasted to exceed 32°C (90°F) within 3 hours of release or 35°C (95°F) within 1 week of release. Additionally, forecasted daily low temperatures will not be cooler than 10°C (50°F) for one-week post-release (USFWS, 2020).

Temperatures will be measured in the shade and protected from the wind at a height of 2 inches (5 centimeters) above the ground.

As necessary, a temporary pen may be erected around a tortoise and shrub it is taking cover under per the USFWS (2009) guidelines. Pens could potentially be used if an animal is located during clearance activities. The pen would be removed once the tortoise is translocated. All penned or avoided tortoises must be monitored to ensure their safety.

2.2 Inactive Tortoises

Clearance surveys will be conducted during the typical spring (April - May) or fall (September - October) desert tortoise active seasons (USFWS, 2009); any tortoises found during these surveys would likely be active, however, it is possible that inactive tortoises would also be found even in the more-active seasonal windows. It is also possible that tortoises may be deep within burrows or caliche caves that requires several days to excavate. Tortoises may also be found during the less-active season during construction of linear project components (e.g. fence construction). If these situations occur, the tortoise may be left in place and temporarily contained or blocked in its natural burrow (USFWS, 2009). Tortoises blocked in burrows will be monitored for activity and safety daily. If a tortoise within a burrow must be moved, every effort will be made to cause it to leave the burrow on its own (e.g., pounding the ground, "tapping," or repeated visits to the

burrow at warmer or cooler times of day) prior to using the less-preferred method of carefully excavating the burrow by hand (USFWS, 2009).

2.3 Transport

Tortoises will be transported using methods consistent with the most recent USFWS guidance and best management practices. The following general guidelines are excerpted from USFWS (2009). For translocation, each tortoise will be transported via an individual, sterilized tub with a taped, sterilized lid or cardboard box, and tortoises will remain shaded during transport. Every effort will be made while handling tortoises to release each animal within 30 minutes of its capture.

When live desert tortoises are transported by vehicle, a means of cushioning the desert tortoise will be used to minimize jarring, bumping, and sliding. Tortoises will not be placed in automobile trunks, on floorboards in an unconfined manner, in the bed of a truck over the exhaust system or left unattended in vehicles. Transport by vehicle will involve only designated open routes, with speeds limited to 15 miles per hour on unpaved roads. The vehicle transporting the tortoise will be in good working order with working air conditioning and the driver will keep the container with the animal inside the vehicle at all times with temperatures remaining under 27 °C or (80 °F) until it is removed. Tortoises that void their bladders will be rehydrated as per USFWS guidelines.

2.4 Health Assessments

Health assessments are a critical part of the translocation process. Several diseases have been documented in wild desert tortoise populations. These include an upper respiratory tract disease (URTD) commonly associated with *Mycoplasma agassizii* (Rostal and Lance, 2003) and *M. testudineum* (Jacobson and Berry, 2004), shell disease (e.g. cutaneous dyskeratosis; Berry and Christopher, 2001), and oral herpes. All tortoise handling and health assessments will follow guidelines in USFWS (2019) or more recent guidance. No sample collection (e.g. plasma, blood, oral swabs) will be required. Health assessments will only be performed by ABs who have completed all segments of the USFWS Desert Tortoise Health Assessment Training, and data collection will use the standard health assessment data sheet (USFWS, 2019).

Individual tortoises will be determined eligible or ineligible for translocation based on its physical condition per the algorithm in Appendix G of USFWS guidelines (2019). Individual tortoises eligible for translocation are those that exhibit appropriate attitude and activity; acceptable body condition (Body Condition Score of 4–7); no mucoid and not more than mild, serous nasal discharge; no oral lesions; and no other condition that may impact its survival (Appendix G of the USFWS Health Assessment Procedures: USFWS 2019).

Following USFWS (2020) guidelines, visual examination of clinical signs of disease may occur at any time after tortoises in the population generally have emerged from hibernation. Prior to translocation, a minimum of two health assessments will be completed 14–30 days apart. Additional assessments (outside of 30 days) may be conducted, but a narrow window is necessary to discover animals with intermittent clinical signs. The final assessment will occur immediately

prior to the translocation date, and the final assessment will serve as the baseline condition with which to compare post-translocation assessments and as a final check against the algorithm (USFWS, 2019) that the tortoises are suitable for translocation. Any tortoises that were previously approved for translocation, but on the final assessment do not pass the health algorithm would not be translocated and would remain in quarantine for a maximum of 12 months, until a final disposition is determined in coordination with USFWS and NDOW.

2.5 Quarantine Guidelines

If any tortoises do not meet the translocation criteria (e.g. do not pass the health assessment algorithm) quarantine pens will be constructed according to husbandry procedures in accordance with the most recent USFWS guidance (See Attachment 2 in USFWS 2020). The pens will be at least 6m × 6m (19ft × 19ft) for adult tortoises and 2m x 2m (6ft x 6ft) for juvenile tortoises. Additional health examinations would be performed as necessary to determine their final disposition. Temporary quarantine facilities may be created onsite. Alternatively, tortoises may be quarantined at the BLM research facility (former Desert Tortoise Conservation Center). Final disposition of quarantined tortoises will be coordinated with USFWS and NDOW as needed.

2.6 Transmitters

Radio transmitters would be attached only to tortoises that are to be translocated, and in some cases moved out of harm's way, and monitored regularly (as discussed in Section 5), to obtain information on whether problems arise due to tortoises returning to the Project Area and interacting with the project fence. Additionally, information on the maximum dispersal distance one year post-translocation will be obtained, which further informs future mitigation measures.

Transmitters will be attached similar to the manner described in Boarman et al. (1998) and other acceptable best management practices. Holohil R1-2B transmitters in the 10-gram and 15-gram versions, as well as the Telonics receivers (TR-4 and TR-5 models) with RA-2AK with very high frequency antennas, or other suitable equipment may be considered for use.

Every effort would be made to ensure that the well-being of the desert tortoise is not compromised by either the process of attaching radio transmitters or operation of these devices. Care will be taken to place the transmitters so that they do not impede normal behavior.

The total mass of the instrumentation that is attached to each tortoise including antenna, epoxy, etc., will not exceed 10 percent of the animal's body mass. Radio transmitters that contain weak batteries will be removed or replaced before the batteries are likely to fail. Attachments of transmitters will be performed only by biologists authorized to do so. Additional radio transmitter use direction pertinent to this plan is detailed below:

- Radio transmitters may temporarily (up to 48 hours) be attached to tortoises with duct tape, in situations in which full processing cannot be completed to comply with temperature guidelines, or when light levels do not allow for final transmitter attachment.

- Any shell damage resulting from attachment or removal of radio transmitters will be reported in writing within three working days to the USFWS and recorded on data sheets/handheld data recording devices.
- Where transmitters are affixed to tortoises and translocated, these animals will be monitored for one calendar year post-translocation (see Section 5).
- If it is determined that a desert tortoise has a malfunctioning transmitter it will be replaced before the animal becomes active.
- Transmitters and other equipment will be removed from all tortoises that can be located prior to end of monitoring timeframes. Every effort will be made to locate and remove non-functioning transmitters and other equipment from tortoises that are handled under this Project's monitoring program.

3 CLEARANCE AND TRANSLOCATION

3.1 Exclusion Fencing

Tortoise exclusion fencing will be installed or upgraded around the perimeter of the Project prior to undertaking clearance surveys and translocation. Specifications for desert tortoise exclusion fence are provided in the Desert Tortoise Field Manual (USFWS, 2009). Tortoise exclusion fencing will involve the installation of 3-foot high, approximately 1-by-2-inch mesh hardware cloth, installed to a height of at least 24 inches above ground. Permanent fencing requires 12 inches of the fence material to be buried, while temporary fencing may be buried or folded at the ground surface and secured with soil, rocks, and/or rebar stakes spaced 4 to 5 feet apart. All fencing will be constructed with durable materials (i.e., 16-gauge or heavier) suitable to resist desert environments, alkaline and acidic soils, wind, and erosion.

No more than ten days prior to the initiation of fence construction, a pre-activity desert tortoise survey will be conducted using techniques providing 100-percent coverage of the disturbance area, including a buffer equaling approximately 30-feet wide centered on the fence alignment. Transects will be no greater than 15 feet (5 m) apart. All desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, will be examined to determine occupancy. Burrows within the fence line disturbance area will be excavated after confirmation that they are not occupied by a desert tortoise. If an occupied burrow or tortoise in harm's way is located within the path of fence installation along the eastern boundary of the Project site, an AB will move the tortoise up to 300 m away into adjacent, suitable habitat and monitor it. Tortoises located along the north, south, or western fence alignment will be transmittered, translocated, and monitored per this plan, as there is limited suitable habitat on the outside of the fence in these areas. All fence construction will be monitored to verify that no tortoises are harmed.

The exclusion fence alignment may cross an existing home range of a desert tortoise, preventing tortoises from accessing part of their normal range and subsequently resulting in a desert tortoise pacing the fence. The exclusion fence will be monitored daily during fence construction and for seven days following completion of its construction to locate any tortoise that may be pacing the

fence. Daily fence inspections will also be performed during active season while blading and grading activities are underway. Any damage to the fence that could allow a tortoise to enter the site will be repaired upon detection, as feasible.

The fence will also be inspected within 24 hours following any significant rainfall event or high wind event during the active season, or within 7 days following the event in the less-active season, to ensure that storms have not damaged the fence, potentially allowing access by desert tortoises. Any damage to the fence shall be temporarily repaired immediately using hand tools as feasible, and permanently repaired within 48 hours during the active season and within 7 days in the less-active season.

Shade structures will be installed along the interior and exterior of the exclusion fence where tortoises are likely to encounter newly installed fence. Shade structures will be set at regular intervals on the interior and exterior of the fence at a minimum of every 300 meters and maintained to provide refuge to tortoises that may be fence-walking, and at risk of hyperthermia (USFWS, 2018). Shade structures will remain in place along the exterior of the fence for the duration of operation and management of the facility. Shade structures in the interior of the exclusion fence may be removed following the first active season after clearance surveys and construction are completed and the risk of tortoises remaining on-site is low. Best management practices on similar projects have shown that setting them slightly below the surface and covering or partially burying the shade structures helps maintain an environment suitable to provide emergency shelter.

3.2 Clearance Surveys

Clearance surveys will be conducted after tortoise exclusion fencing is fully installed around the perimeter of the Project area. Surveys will be conducted in accordance with this plan and recent guidance from USFWS including the *Desert Tortoise Field Manual* (USFWS, 2009). The following conditions will apply:

a) Clearance survey timing will coincide with the more-active tortoise season (late March through May and from September through October). This will maximize the probability of finding all desert tortoises and ensure handling of tortoises occurs within the USFWS's recommended temperature ranges.
b) Temperature restrictions described in Section 2 will apply to handling of all tortoises. Surveys may be performed in temperatures up to 40 degrees C (104 degrees F), where air temperature is measured ~5-cm from the soil surface in an area of full sun, but in the shade of the observer (USFWS, 2009).
c) Clearance surveys would be conducted by biologists authorized by agencies to support such surveys and directly supervised by biologists authorized to lead such surveys.
d) Clearance surveys will be conducted using belt transects at a maximum of 5 meter (15 foot) spacing, using tighter spacing if vegetation becomes denser (USFWS, 2009).
e) During the first survey pass, all sign (scat, carcasses, tracks, etc.) will be removed from the clearance area. All burrows will be inspected and carefully excavated, including canid complexes that have been determined to be unoccupied. Burrows will be excavated in a

manner to detect tortoise nests (USFWS, 2009). If a viable nest is located, procedures will follow those in the Desert Tortoise Field Manual (USFWS, 2009).

f) Larger burrows, caliche caves, and den complexes that take longer/require equipment to excavate (and are not completely excavated on the first pass) are recommended to be fenced with temporary exclusion fencing in the event it is occupied by a tortoise. Temporary in-situ pens will be sized based on size of penned tortoise and installed with shade cloth. Daily monitoring of pens will be performed to detect tortoise activity and, if present, ensure tortoise well-being.

g) Clearance surveys at the project site must consist of at least 2 consecutive, perpendicular surveys of the site. If an adult desert tortoise is found during the second pass, the USFWS may require a third survey (USFWS, 2009).

h) When an unmarked tortoise that is large enough to have a transmitter affixed to it (approx. >180 mm MCL) is found during clearance surveys, a biologist authorized to do so will:
    a. Assign and apply a unique number to the tortoise using prefix SM and sequential a number from 305 -314, or other numbers provided by USFWS, and attached to the right 4th costal scute, and notched on the marginal scutes as per USFWS standard practice;
    b. Perform a health assessment (without biological sample collection) and enter results into the algorithm for evaluating if desert tortoises are suitable for translocation (USFWS, 2019); and
    c. Place a transmitter on the carapace using approved methods.
    d. Tortoise will be left *in situ* where they were found until translocation occurs.
    e. Tortoises will only be included in the monitoring program if the affixed transmitter is large enough to last through the winter (approx. >180 mm MCL); otherwise, the transmitter will be removed prior to winter hibernation.

i) When a tortoise too small to transmitter is found during clearance surveys, a biologist authorized to handle, assess, and mark tortoises will:
    a. Assign and apply a unique number to the tortoise if the tortoise is large enough, where the number uses the prefix SM, and the sequential numbers 305 – 314, or other numbers provided by the USFWS, is attached to the right 4th costal scute, and notched on the marginal scutes as per USFWS standard practice;
    b. Perform a health assessment (without biological sample collection) and enter results into the algorithm for evaluating if desert tortoises are suitable for translocation (USFWS, 2019);
    c. Translocate as soon as possible after detection to maximize their chance of survival and preclude holding them *in situ* (via temporary transmitter or temporary pen) for an extended period of time.

j) Any tortoise showing clinical signs of disease that does not pass the health algorithm (USFWS, 2019) will be transported to an agency-approved quarantine facility as described in Section 2.5. The USFWS will be contacted within 24 hours by phone and in writing if any individual tortoise is determined to be *recommended against translocation* per the algorithm for evaluating if desert tortoises are suitable for translocation (USFWS, 2019).

k) Tortoise nests identified during clearance survey burrow excavation would be moved to a microsite (e.g., shrub cover, soil type, substrate cover, etc.) as similar to the locality found as possible (e.g., same degree of vegetative cover, plant species, soil substrate, aspect) in the recipient site, using standard techniques (USFWS, 2009).
l) If any areas of suitable habitat become isolated during the construction of the fence, those areas will be walked at 5-m spacing; tortoises in those areas will be translocated as per this plan, after coordination with USFWS and NDOW (e.g., a 40-acre area may remain between Wheeler Pass road and project fencing; or corridors of habitat between existing fencing and new project-related fencing).

3.3 Post-Clearance Procedures

After clearance and translocation are completed, there remains a possibility of finding tortoises within the Project site, especially juvenile tortoises. A biologist authorized to do so will conduct pre-construction sweeps or surveys prior to vegetation removal in an effort to find any tortoises that could have been missed during the clearance survey. Tortoises that are found after clearance will be translocated upon detection if they pass the health assessment (without biological sample collection) and handling will occur within the temperature limits (USFWS, 2009).

Any tortoise found after construction and during operations would have likely entered the site through an opening in the exclusion fence or would have hatched from an undetected nest and would be translocated upon detection, after a health assessment (without biological sample collection).

3.4 Translocation Review Package

A Translocation Review Package (TRP) addressing each tortoise proposed for translocation will be submitted to USFWS, generally at least two weeks in advance of planned translocation (USFWS, 2020). Tortoises discovered during clearance will be transmittered and monitored *in situ* or held in pens until the TRP is approved by the agencies, with husbandry practices for captive desert tortoise (USFWS, 2020); therefore, it will be necessary for swift coordination to occur between the Project Owner and the agencies to minimize holding time and expedite translocation and acclimation. The TRP will include the following:

- A disposition plan for the project-site tortoises;
- Photographs of individual tortoises as specified on the health assessment data sheet;
- Health assessment data sheets for project-site tortoises;
- Maps of the recipient site showing proposed release points of project-site tortoises; and
- Any other project-specific information that supports or clarifies translocation decisions.

After reviewing the TRP, the agencies will make the final determination on what the final disposition is for each tortoise shall be.

3.5 Tortoise Translocation

Upon receipt of concurrence from the agencies on the TRP, the team of biologists authorized to conduct translocations will implement the translocation of tortoises in accordance with the TRP and the handling guidelines described in section 2 as modified based on details within and comments on the TRP.

4 SPRING MOUNTAIN RECIPIENT SITE

During preliminary discussions with the USFWS, the proponent identified the potential for moving the relatively small number of tortoises to an adjacent recipient site rather than a distant location. The recipient site supports the following elements:

- Contiguous public lands to the north and east;
- High likelihood of being within the existing home range of translocated tortoises;
- Habitat suitable for all life stages of the desert tortoise;
- Similar habitat type/quality as Project site;
- Documented occurrence of resident tortoises; and
- Have no foreseeable development or other impacts precluding tortoise occupancy.

Surveys of the Spring Mountain Recipient Site were conducted November 6, 7, 8, 2019. The survey crew walked pedestrian transects spaced approximately 10 - 100 meters apart, allowing for the entire area to be preliminarily evaluated (Figure 2). Surveys were focused on the northeast portion of the recipient site, in the foothills of the Spring Mountain range, although the entire area was preliminarily evaluated for suitability for translocation. Transect spacing was determined by landforms, intuition, and loosely, UTMs. Biologists identified 2 adult, and 1 juvenile tortoise during the survey (Figure 2).

The Spring Mountain Recipient Site provides habitat which is similar to the project site. It has moderate shrub diversity dominated by creosote (*Larrea tridentata*) over the entire site, with Spanish bayonet (*Yucca shidigera*) increasing in the northern portion. Cactus species identified include beavertail (*Opuntia basilaris*), cholla (*Cylindropuntia spp*.), cottontop (*Echinocactus cylindraceous*), barrel cactus, (*Ferocactus cylindraceus*) and fishhook cactus (*Mammillaria tetrancistra*). Several non-native, invasive annual species were present but not abundant, including red brome (*Bromus madritensis* ssp. *rubens*), red stem filaree (*Erodium cicutarium*), and Mediterranean grass (*Schismus barbatus*). Biological soil crusts are patchy but present over whole area, except in wash areas. Soils were silty loam holding fine to coarse gravel and cobble. Caliche is present in center north of the recipient site, and there is an abundance of caves in a large, incised wash that roughly bisects the site. Some caliche caves are present on the west-facing slopes of Spring Mountains proximate to the survey area.

Many soil burrows exist in the area, and many burrows had active tortoise sign associated with them. Live tortoises, burrows, carcasses, scat, eggshells, and tracks were all found during surveys of the recipient site in fall 2019 (Tables 2, 3).

There was no significant human disturbance noted during the survey. Small amounts of trash were present (metal, plastic), and a few vehicle tracks were visible. No roads or routes pass through this area. Based on these observations, including the observation of definitive sign of desert tortoise occupancy of the area, the experienced desert tortoise biologists made a qualitative assessment that the area was suitable habitat for desert tortoises.

Table 2. Live desert tortoise found during 2019 surveys in the Spring Mountain Recipient Site

Count	Date	Sign Type	Easting	Northing	Size Class	Estimated MCL (millimeters)	Sex
1	2019-11-06	Live Individual	598863	4005062	Adult	240	Unknown
2	2019-11-07	Live Individual	599263	4005535	Adult	> 180mm	Unknown
3	2019-11-07	Live Individual	598669	4004084	Juvenile	160	Unknown

Table 3. Tortoise sign found during 2019 surveys Spring Mountain Recipient Site

Sign Type	Count
Class 1: Active desert tortoise burrow	11
Class 2: Good condition tortoise burrow	30
Class 3: Poor condition tortoise burrow	8
Class 4: Good condition, not definitely tortoise burrow	2
Class 5: Poor condition, not definitely tortoise burrow	6
Desert tortoise carcass	9
Desert tortoise scat	25
Tortoise tracks	10
Pallet	2
Eggshells	1

The point estimate for the Project area suggests 6 adult tortoises would be moved off site (Section 1.2; Table 1), and within 3 km of their current location, resulting in an incremental increase in density in the recipient site, potentially within areas they have previously visited. Conservatively estimating a potential dispersal area of ~5 sq km (1.5 km dispersal radius * ~3/4 accessible habitat: (3.14*1.5^2) * 0.75 = 5.3 sq km), the maximum expected increase in density would be 1.2 adult tortoises per sq km, a relatively negligible increase.

Specific release locations for individual tortoises will be selected based on the identification of like-for-like shelter resources and will be included in the TRP. Every attempt will be made to find similar cover sites and habitat to the capture location on the Project site, otherwise all translocatees will be released at the most appropriate and available unoccupied shelter sites (e.g., soil burrows, caliche caves, rock caves, and shade of shrubs). Potential release locations within the recipient site will be investigated to ensure presence of vegetation for shelter and appropriate soils that provide for existing burrows or creation of new burrows by tortoises.

All available predator sign data, including scat, tracks, nests, and dens from ravens, coyote and badger will be reviewed for the proposed recipient site prior to selecting release locations for translocated tortoises. While some predator sign is expected across any desert landscape, areas where sign is concentrated may indicate a poor choice for a tortoise release location. Fresh sign will be noted during ground-truthing for shelter sites, and release locations will be preferentially located away from known areas of concentrated predator sign, if any.

5 MONITORING AND REPORTING

All translocated tortoises will be transmittered and monitored (via radio telemetry) for a specified duration and frequency to (1) allow time for health assessment results and decision-making, and (2) ensure animal well-being immediately following release.

Adult (> 180 mm MCL) translocated tortoises will be monitored at the following frequency:

- Once within 24 hours of release;
- Twice weekly for the first two weeks after release;
- Weekly during the more-active season (April, May, September, October);
- Twice monthly during the less-active season (November – March, June – August); and
- For the duration of one-year post-translocation.

A health assessment (with no biological sampling) will be conducted for each translocated individual at the end of the monitoring period.

If unmarked resident desert tortoises are detected within the recipient site during the monitoring period, they will be numbered (using prefix SM-, on the right 4th costal scute). Recorded data will include tortoise sex, MCL, general health condition, and detection UTMs where these data will be included in the year-end monitoring report.

Any health problems or mortalities observed will be reported to USFWS in writing within 48 hours of discovery, and will include unique identifier, location, suspected health issue and/or cause of death (if known). Animals showing severe clinical signs of disease at any time will be addressed following the guidelines provided in this plan.

Documentation of all tortoise activities will be compiled throughout the duration of the monitoring period. Reports will be submitted directly to the USFWS at the conclusion of the monitoring effort. Minimum data requirements will conform to the current translocation and health assessment guidance (USFWS, 2020 and 2019). All activities will be recorded on standardized data sheets and/or on digital data recorders. Annual reports will summarize tortoise harm's way movement, translocation, and effectiveness monitoring activities conducted during the previous calendar year. The final report will include a table that lists for each translocated tortoise (1) the distance between the capture and release locations, and (2) the maximum dispersal distance (e.g.; the straight-line distance between its release location and its most distant location).

6 ADAPTIVE MANAGEMENT

Adaptive management measures will be implemented during the translocation and monitoring processes as needed. Generally, adaptive management measures would be implemented if there is evidence of project-related disturbance or increased risk to desert tortoises, where initial protection methods have been deemed ineffective.

If there are valid concerns *in the field regarding immediate threat to one or more tortoises*, field staff will make adaptive management decisions in the best interest of the tortoise through 1) coordination in the field, 2) phone calls to agency personnel and the proponent designated representative made within 24 hours to describe the actions taken and results of the actions, and finally 3) a brief email report from field staff that describes the adaptive management actions taken and reasons for and results of these actions.

If there are valid concerns in the field *that do not pose an immediate threat to one or more tortoises*, a designated representative will notify the agencies of proposed adaptive management decisions via email and field personnel will wait up to one week for concurrence or additional direction and response from agency personnel before actions are taken.

Triggers for adaptive management may include behaviors putting a tortoises' well-being at risk (e.g. pacing a fence, a tortoise repeatedly observed within a construction area not surrounded by a fence).

Adaptive management measures may include the following:

- Additional fencing/temporary fencing
- Temporarily penning or blocking a tortoise in its burrow
- Additional worker education
- Vehicle escorts (pedestrian or vehicle)
- Temporarily decreased project speed limits
- Increased monitoring of individual tortoises perceived to be in harm's way

7 REFERENCES

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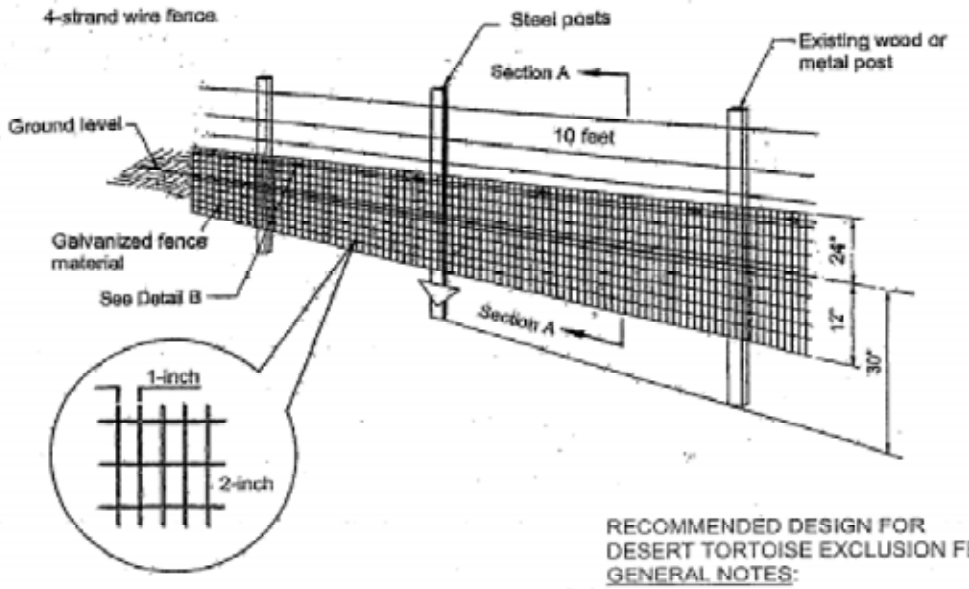
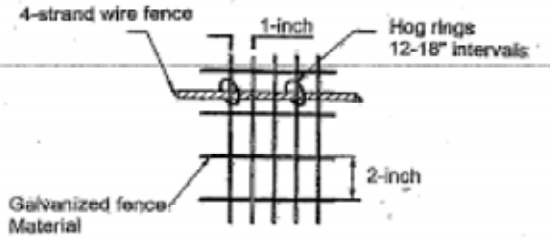
*APPENDIX **E***

USFWS Guidelines For Desert Tortoise Exclusion Fence

DESERT TORTOISE EXCLUSION FENCE (2005)



DETAIL A



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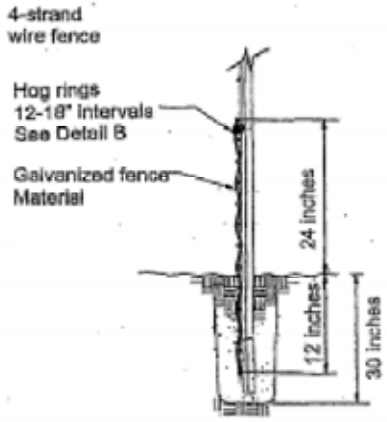


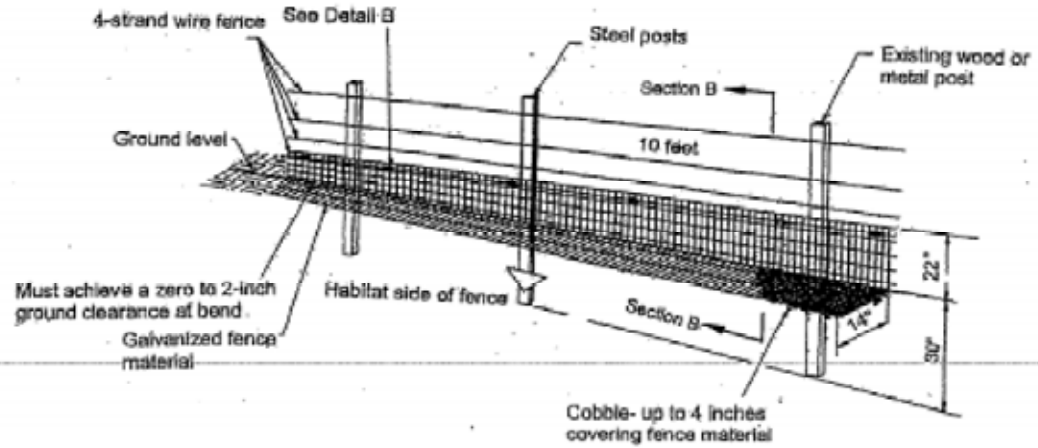
SECTION A

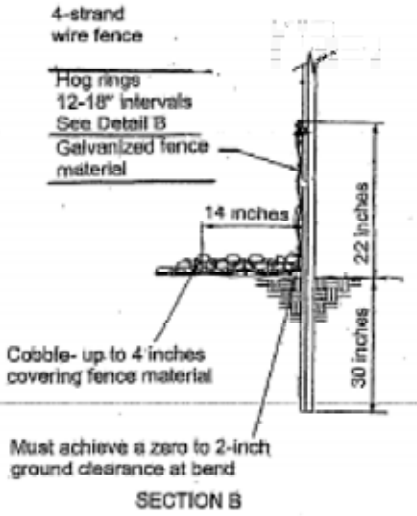
RECOMMENDED DESIGN FOR
DESERT TORTOISE EXCLUSION FENCE
GENERAL NOTES:

1. Ensure that fence posts and materials conform to the standards approved by the U.S. Fish and Wildlife Service.
2. Ensure that the height above ground level is no less than 18 inches and no higher than 24 inches.
3. Ensure that the depth of fence material below ground level is about 12 inches but no less than 6 inches. (See SECTION A above)
4. Install additional steel posts when span between existing fence posts exceed 10 feet.
5. Attach fence material to existing fence or wire using hog rings at 12-inch intervals.
6. Fasten fence material to posts with 3 tie wires with a wire near the top, bottom, and center of the fence material.
7. Backfill trenches with excavated material and compact the material.
8. Attach fence material to all gates. Ensure that clearance at base of gate achieves zero ground clearance.
9. Substitute smooth wire for barbed wire if additional support wires are necessary.
10. The number and placement of support wires may be modified to allow sheep and deer to pass safely.
11. Erosion at the edge of the fence material where the fence crosses washes may occur and requires appropriate and timely monitoring and repair.
12. Tie the fence into existing culverts and cattleguards when determined necessary to allow desert tortoise passage underneath roadways.

FOR BEDROCK OR CALICHE SUBSTRATE

1. Use this fence design (see below) only for that portion of the fence where fence material cannot be placed 6 inches below existing ground level due to presence of bedrock, large rocks or caliche substrate.
2. Ensure that the fence height above ground level is no less than 22 inches.
3. Ensure that there is a zero to 2-inch ground clearance at the bend.
4. Ensure that the bent portion of the fence is lying on the ground and pointed in the direction of desert tortoise habitat.
5. Cover the portion of the fence that is flush with the ground with cobble (rocks placed on top of the fence material to a vertical thickness up to 4 inches).
6. When substrate no longer is composed of bedrock or caliche, install fence using design shown above.





SECTION B