



DESERT TORTOISE COUNCIL

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Via email only

September 28, 2026

Administrator

Bureau of Water Quality Planning

901 South Stewart Street, Suite 4001

Carson City, Nevada 89701-5249

ndep401@ndep.nv.gov

RE: Ivanpah Underground Water Line and 69 kV Overhead Power Line, Clark County Section
401 Water Quality Certification (NV-401-26-019)

Dear Administrator,

The Desert Tortoise Council (Council) is a non-profit organization comprising hundreds of professionals and laypersons who share a common concern for wild desert tortoises and a commitment to advancing the public's understanding of desert tortoise species. Established in 1975 to promote conservation of tortoises in the deserts of the southwestern United States and northern Mexico, the Council routinely provides information and other forms of assistance to individuals, organizations, and regulatory agencies on matters potentially affecting desert tortoises within their geographic ranges.

Both our physical and email addresses are provided above in our letterhead for your use when providing future correspondence to us. When given a choice, we prefer to receive emails for future correspondence, as mail delivered via the U.S. Postal Service may take several days to be delivered. Email is an "environmentally friendlier way" of receiving correspondence and documents rather than "snail mail."

We appreciate this opportunity to provide comments on the above-referenced project. Given the location of the proposed project in habitats potentially occupied by the Mojave desert tortoise (*Gopherus agassizii*) (synonymous with Agassiz's desert tortoise), our comments include recommendations intended to enhance protection of this species and its habitat during activities that may be authorized by the Nevada Bureau of Water Quality Planning, which we recommend

be added to project terms and conditions in the authorizing documents [e.g., issuance of permits or certifications, decision document, etc.] as appropriate. Please accept, carefully review, and include in the relevant project file the Council's following comments for the proposed action.

The Mojave desert tortoise is among the top 50 species on the list of the world's most endangered tortoises and freshwater turtles. The International Union for Conservation of Nature's (IUCN) Species Survival Commission, Tortoise and Freshwater Turtle Specialist Group, now considers the Mojave desert tortoise to be Critically Endangered (Berry et al. 2021), "... based on population reduction (decreasing density), habitat loss of over 80% over three generations (90 years), including past reductions and predicted future declines, as well as the effects of disease (upper respiratory tract disease/mycoplasmosis). *Gopherus agassizii* (sensu stricto) comprises tortoises in the most well-studied 30% of the larger range; this portion of the original range has seen the most human impacts and is where the largest past population losses have been documented. A recent rigorous rangewide population reassessment of *G. agassizii* (sensu stricto) has demonstrated continued adult population and density declines of about 90% over three generations (two in the past and one ongoing) in four of the five *G. agassizii* recovery units and inadequate recruitment with decreasing percentages of juveniles in all five recovery units."

This status, in part, prompted the Council to join Defenders of Wildlife and the Desert Tortoise Preserve Committee (DTPC) to petition the California Fish and Game Commission (Commission) in March 2020 to elevate the listing of the Mojave desert tortoise from Threatened to Endangered under the California Endangered Species Act (CESA) (Defenders of Wildlife et al. 2020). Importantly, following California Department of Fish and Wildlife's (CDFW) (2024a) status review, in their April 2024 meeting the California Fish and Game Commission voted unanimously to accept the CDFW's petition evaluation and recommendation to uplist the tortoise from threatened to endangered under the CESA based on the scientific data provided on the species' status, declining trend, numerous threats, and lack of effective recovery implementation and land management (CDFW 2024b). On July 15, 2025, the tortoise was officially uplisted to endangered status under the CESA (Commission 2025).

Description of the Proposed Action

The information provided below was obtained from "Request for Section 401 Water Quality Certification for the Approximately 31.5-Mile Ivanpah Underground Waterline and 69KV Overhead Powerline Rights-of-Way Project, Located Partially in Clark County, Nevada July 30, 2026, Attachment B – Section C Additional Information Page and Exhibits" (Request – Attachment B) and submitted by Glenn Lukos Associates. Inc.

Castle Mountain Venture (Applicant) is seeking water quality certification from the State of Nevada as required under section 401 of the Federal Pollution Control Act, as amended, (aka Clean Water Act). This certification is required before the U.S. Army Corps of Engineers may issue a permit under section 404 of the Clean Water Act. The certification, if granted, would be valid for the term of the section 404 permit. The Applicant has requested certification for the use of Nationwide Permit 58 (Utility Line Activities for Water and Other Substances) under section 404 of the Clean Water Act.

The proposed action is to construct the Ivanpah Underground Waterline and 69-kV Overhead Powerline Rights-of-Way Project for Castle Mountain Mine (Project). The Project is a 31.5-mile underground water pipeline and 16.5-mile long overhead powerline line (collectively, Utilities Right-of-Way [ROW]). The purpose of the Project is to provide ground water and power resources necessary to support the Castle Mountain Mine Phase II Expansion Project in Clark County. In Nevada, the Project includes approximately 10.23 miles of underground waterline and 7.45 miles of overhead powerline within Clark County, Nevada. The Project would result in temporary impacts to 3.78 acres (9,523 linear feet) of potential non-wetland interstate waters of the U.S. Approximately, 14,761 cubic yards of clean fill material would be temporarily displaced during construction. The Project will result in approximately 182 acres of direct land disturbance in Nevada. Several drainage features crossed by the proposed utility alignments are considered potential interstate waters of the U.S.

The proposed Project extends from private land near Nipton, San Bernardino County, California (the location of the groundwater wells) east along Highway 164 into Nevada, then extends south along Walking Box Ranch Road to the limits of the Castle Mountain Mine property (Figure 1). Most of the Project occurs on land managed by BLM. In Nevada, the Project is located in the Eastern Mojave Recovery Unit of the tortoise and in designated critical habitat near the intersection of Highway 164 and Walking Box Ranch Road and south along Walking Box Ranch Road (Figure 2).

**Comments on Request for Section 401 Water Quality Certification for
the Approximately 31.5-Mile Ivanpah Underground Waterline and
69KV Overhead Powerline Rights-of-Way Project,
Located Partially in Clark County, Nevada**

Unresolved Information on Deposition of Fill Material and Impacts to Water Quality

On page 11, Underground Waterline, the Applicant said the Project includes the “installation of a 10-inch-diameter steel and high-density polyethylene (HDPE) pipeline.” On page 15 under Proposed Avoidance and Minimization Measures is the statement, “Pipeline crossings of desert washes and drainage features would consist solely of trench excavation, pipe installation, and trench backfilling, with no permanent placement of fill, channel modifications, flow diversions, grade-control structures, bank armoring, or other permanent encroachments within jurisdictional waters.” On page 12, the Applicant says, “the pipeline would be buried and all affected drainage features and access areas would be restored to pre-project contours and hydrologic conditions.” On page 17 the Applicant says, “Drainage channels crossed by the project will be restored to their original profiles and hydrologic function following installation activities.” We interpret this to mean that the locations and elevations of the drainage channels or washes will not be altered from pre-Project condition.

We have a question regarding the results of this construction method. Would trench backfilling in washes that are waters of the U.S. be considered fill? Our understanding is that when you remove material from waters of the U.S. and return it, that latter action is considered fill.

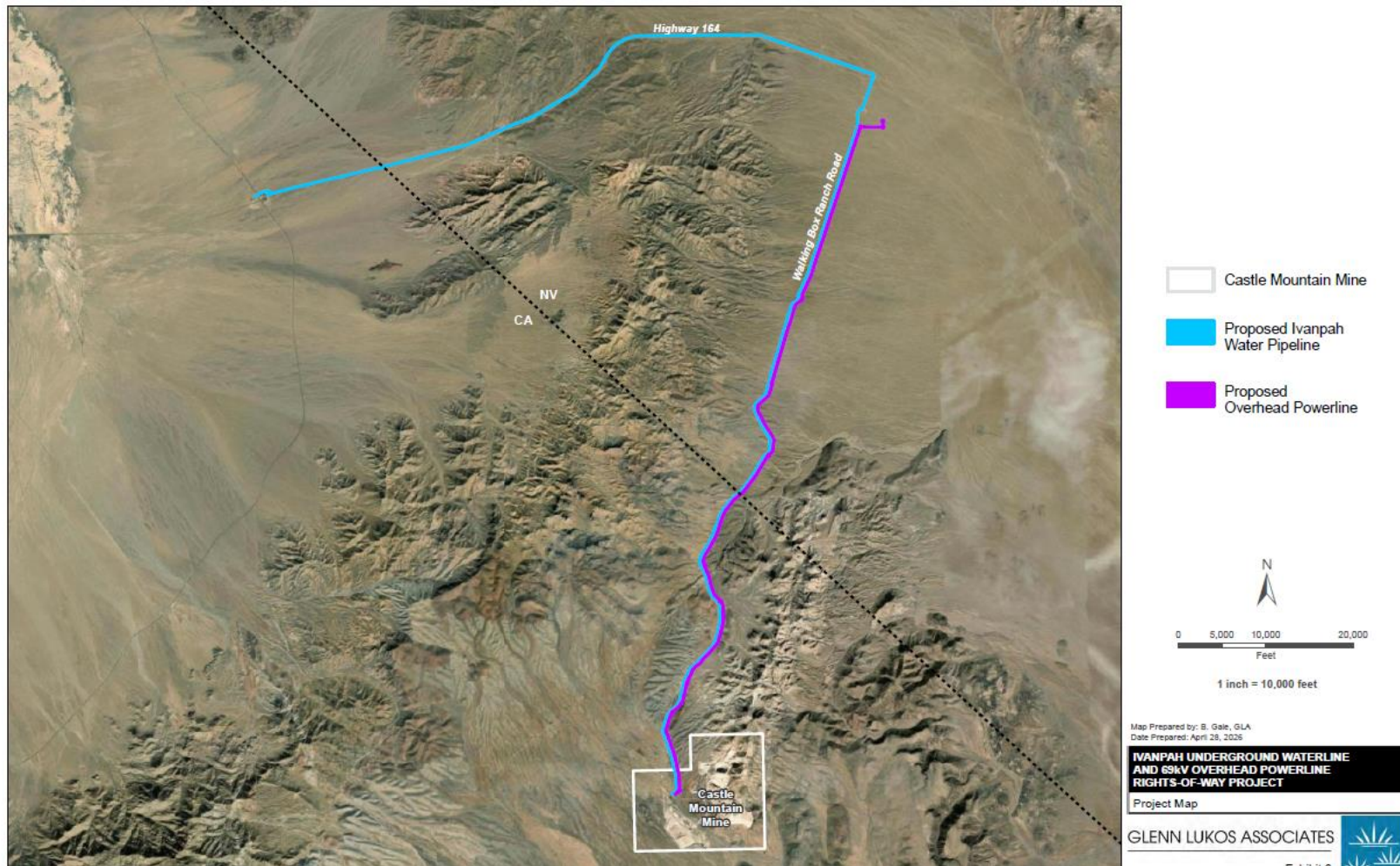


Figure 1. Location of the Castle Mountain Mine and proposed water pipeline and powerline. San Bernardino County, CA and Clark County, NV.

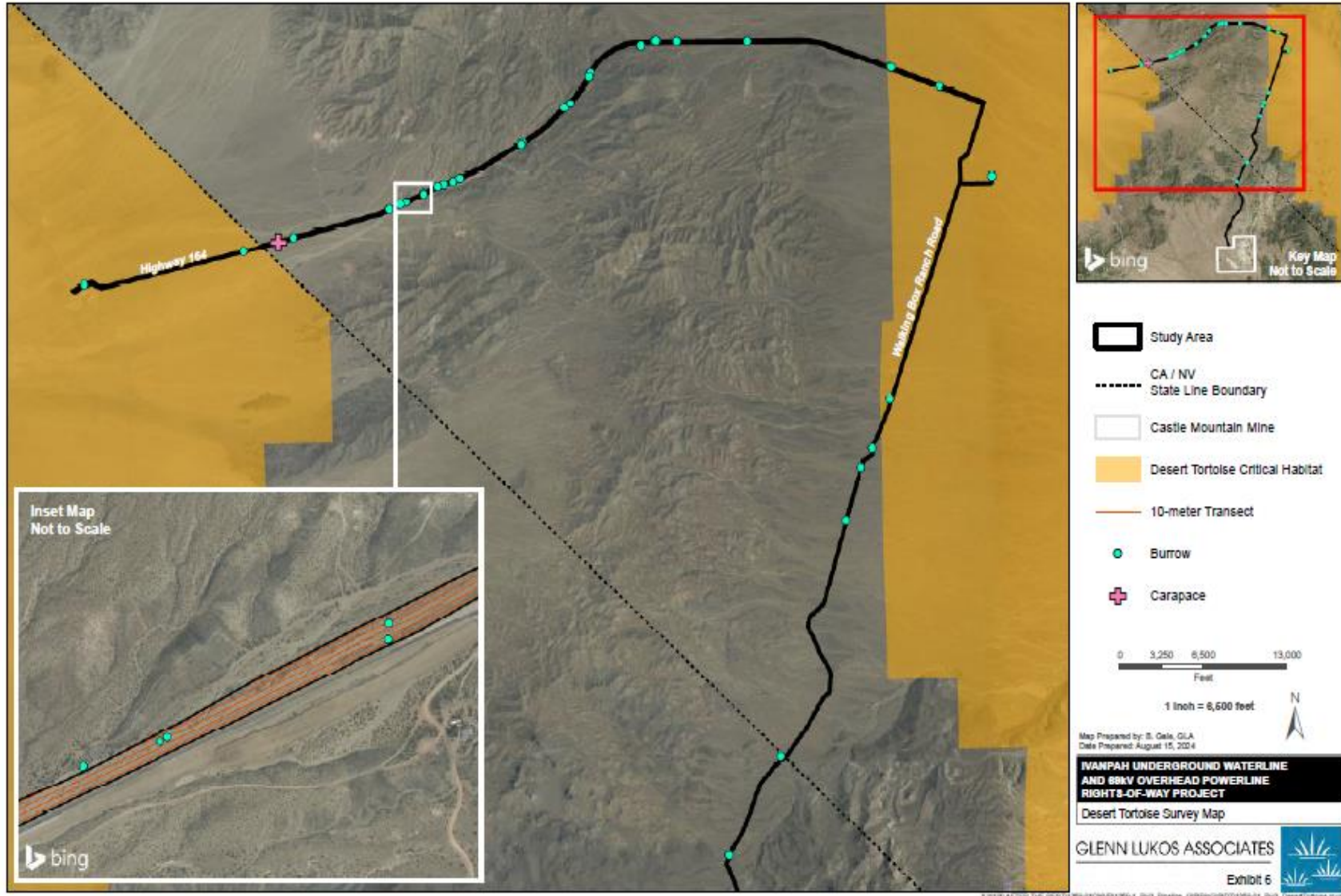


Figure 2. Location of tortoise critical habitat and the proposed pipeline and powerline by Castle Mountain Ventures, San Bernardino County, CA and Clark County, NV.

If this understanding is correct, we ask what the Applicant means by “no permanent placement of fill ... within jurisdictional waters”? Our understanding of the Project description for the pipeline is the clearing vegetation, trenching, placement of pipe, and backfilling. This would occur in washes. Backfilling to cover the pipe would be permanent. The Applicant should explain what they meant by no permanent placement of fill in waters on the U.S.

Our third question is about soil and pipe volume. Because the pipe would be 10 inches in diameter and we presume initial backfilling may include sand or non-rocky material to prevent damage to the pipe. We ask where the excavated soil that is displaced by the pipeline in the trench would be deposited? It cannot be located within the trench because there is not room for it in the trench and there would be “no permanent placement of fill” or “channel modifications.” The Applicant needs to explain how a 10-inch diameter pipeline will be buried in a trench that crosses a wash with all the excavated material backfilled into the trench while returning the bottom of the wash to its pre-project elevation (= no channel modifications).

We found conflicting information in the application package for the Project on where the soil that is displaced by the buried 10-inch diameter water pipeline would be deposited. In Appendix A, Equinox Waterline Construction Activities Report, the Applicant said, “[b]ackfilling the trench will be performed using appropriate methods to minimize impacts to the right-of-way and to minimize soil disturbance. After backfilling, any remaining soil will be placed in the pipeline trench and spread on both sides of the pipeline trench.” Our understanding of this description is that fill would be placed on either side of the filled trench. This would modify the wash bottom and contours and increase the amount and location of fill deposited in waters of the U.S. If our understanding is correct, it appears to conflict with other information provided in the application package.

If the excess trenched soil is not placed in the wash, the Applicant should describe where it would be placed. There are at least three locations where this “excess” material may be deposited—one is at an adjacent upland site, the second is an upland site located farther away, and the third is hauling it to an appropriate disposal site. If the displaced soil is placed on upland sites adjacent to washes, this soil is likely to erode into the adjacent washes with the next significant rainfall events and flow into these washes. This would adversely affect water quality in the washes in addition to other adverse environmental impacts. The second location would add to the areal extent of impacts from the Project to desert soils, vegetation, and wildlife habitat including habitat for the tortoise, and depending on location, critical habitat for the tortoise. These impacts may be outside the area indicated in the Bureau of Land Management’s (BLM) analysis of impacts in their National Environmental Policy Act (NEPA) document. Thus, this NEPA document would need to be revised. Please see additional comments on this issue under “Inadequate Description” and page 14 below.

The Applicant needs to clarify which construction practice would be implemented, the one where “all affected drainage features and access areas would be restored to pre-project contours and hydrologic conditions” or “[a]fter backfilling, any remaining soil will be placed in the pipeline trench and spread on both sides of the pipeline trench.”

Inadequate Description and Analysis of Impacts to Waters of the U.S. including Water Quality

On page 14, Nature of Direct Impacts and Nature of Indirect Impacts, the Applicant said, “Construction of the Project would result in temporary direct impacts to waters of the U.S. [w]here the buried pipeline crosses desert washes and drainage features (collectively, “washes”). Direct impacts would consist of trench excavation, pipe installation, backfilling, equipment operation, and short-term disturbance of channel substrates and banks within jurisdictional features.”

“Indirect impacts to waters of the U.S. could occur through construction-related erosion, sediment transport, accidental releases of fuels or lubricants, soil compaction, vegetation removal within the right-of-way, increased runoff from disturbed soils, and the temporary introduction of fine sediments into adjacent drainage features. Construction traffic, equipment staging, stockpiling, and worker activities could also increase the potential for pollutants to be mobilized during storm events if not responsibly managed.”

We are unsure what the Applicant means by “temporary” impacts from construction. While the construction activity in the washes and drainages may be temporary, the impacts to the ecological functions and values of these desert washes and drainage features would be long-term. For example, following vegetation removal, trenching, pipeline placement, and backfilling the natural re-establishment of native vegetation would take decades. Abella (2010) reported that after disturbance, full reestablishment of total perennial plant cover in the Mojave Desert was 76 years with full reestablishment of perennial species composition taking more than 200 years. We presume that native perennial plant species in desert washes may re-establish in a shorter time due to the increased availability of soil moisture. However, their rate of growth is affected substantially by the frequency and duration of water and soil moisture, similar to upland desert perennial plants. Additionally, the impacted area may not have vegetation reestablished to pre-Project conditions because of the introduction and spread of invasive non-native plants. Please see additional information below under “Adverse effects to native vegetation ...”

We contend that impacts from the construction and maintenance of the Project would (not could) include loss of vegetation that stabilizes soils in washes and wash banks of waters of the U.S. and prevents erosion. With the removal of this vegetation from Project implementation, these areas would be subjected to increased levels of erosion during precipitation events that would adversely affect water quality in waters of the U.S. and result in an increased sedimentation load transported down-gradient. This sediment transport may bury vegetation and change the path of waterflow in a wash. In addition if the excess fill is deposited in the washes next to the trench, this excess fill would likely (1) modify the flow pattern in the wash by raising the level of the channel bottom thereby impeding the quantity of water moving down-gradient, (2) function like a berm and redirect down-gradient flows so areas that previously received water no longer do, (3) in redirecting flows, cause new locations of erosion that contributes additional sediment to down-gradient flows, and (4) over time, slowly erode and become sediment that is transported down-gradient. Thus, deposition of excess fill next to the trench would adversely impact water quality as well as soils and vegetation located down-gradient from the trench.

Inadequate Description and Analysis of Impacts to Vegetation, Wildlife, and Wildlife Habitat

Washes are important to tortoises. They are used for movements, as foraging areas, and as locations to construct burrows. Desert tortoises tend to follow washes (Jennings 1993, Peaden et al. 2017). Thus, washes facilitate the movement of tortoises within a population (Gray et al. 2019) and would facilitate the movement of tortoises in the Piute – Eldorado Critical Habitat Unit and between this population and tortoises in the Ivanpah Critical Habitat Unit in California. Connectivity between tortoise populations both within a recovery unit (i.e., Eastern Mojave Recovery Unit) and between recovery units has been identified as necessary for maintaining genetic diversity across the distribution of the tortoise and necessary for survival and recovery (Averill-Murray et al. 2021).

Tortoises choose washes in which to forage especially in late spring (Jennings and Berry 2023). This means they spend more time foraging in washes than would be expected given the availability of this habitat with other habitats (e.g., alluvial slopes, hills) in their home ranges. Washes provide native herbaceous forbs needed by tortoises for adequate nutrition (Drake et al. 2016) and water balance (Henen et al. 1998, Henen 2002). Tortoises are selective herbivores (Jennings and Berry 2015). When native herbaceous annual and perennial vegetation is available, the majority of the tortoise's diet consists of species that are rare in occurrence including legumes (Jennings and Berry 2015). Time spent foraging in washes by tortoises increased substantially in late spring when compared to other geographic features (alluvial fans and hills) (Jennings and Berry 2015). Tortoises likely learn the locations of highly desired plants in washes and make repeated trips to feed upon them. By concentrating their search efforts within particular habitats such as small washes, tortoises may increase their chances for locating food plants with needed nutritional and water values (Jennings and Berry 2015) for survival, reproduction, and growth.

Tortoises also choose washes in which to construct burrows. “The distribution of desert tortoises has also been associated with desert washes (intermittent or ephemeral stream channels) as these features can support high densities of burrows (Bury et al. 1994, Woodbury & Hardy 1948) and facilitate movement (Gray et al. 2019)” [In Zylstra et al. 2023]. Burrows are important for tortoise survival, because they provide escape from predators and moderate temperature and humidity extremes.

The use of construction equipment and vehicles in and near washes has several adverse effects to the physical and biological features or ecological functions and values of resources normally provided by washes to tortoises. Any change to the pre-Project elevation of the wash bottom would adversely affect the surface hydrology in these washes along with soil moisture, vegetation, and habitat for the tortoise located down-gradient. These impacts would potentially extend for a few hundred meters or more down-gradient depending several factors including the amount of fill deposited in the washes from (1) backfilling the trench, (2) area of soil in the wash bottom destabilized by construction activities, and (3) intensity of precipitation events, water volume, and water velocity in the washes, which are likely to increase in intensity because of climate change.

Adverse effects to native vegetation would occur from implementation of the proposed Project. Activities that result in surface disturbance (i.e., blading, grading, and clearing) are positively associated with species richness and biomass of invasive non-native annual plants in the Mojave

Desert (Brooks and Berry 2006). Invasive non-native invasive plant species (Brooks and Berry 2006) are transported and established via construction equipment, vehicles, and other sources. The replacement of native forbs having high nutritional and water value with low nutritional non-native invasive grasses adversely affects tortoise health and survival, especially in juvenile tortoises (Drake et al. 2016).

Surface disturbance in the Mojave Desert results in conditions that favor the establishment and proliferation of non-native invasive plant species. Karban et al. (2024) compiled research results from several studies on invasive annual plants in the desert southwest. They reported that practices that disturb soil and remove vegetation, such as blading and bull dozing, open up space and resources for invasive plant species to colonize and spread to adjacent areas. Their phenology enables them to outcompete native annual forbs. Invasive plant species germinate, grow, and produce seed faster and in greater abundance than native species. Their large numbers can overwhelm native species in the seed bank. This trait also allows for greater seed dispersal, increasing the chances of a seed landing somewhere suitable for recruitment. By investing less in leaves, growing quickly, and completing their lifecycle rapidly, invasive plant species are opportunistic and able to capitalize with a high reproductive output when favorable conditions occur. In addition, invasive plant species often spread by vegetative reproduction.

Once established, invasive annual plant species outcompete native annual plant species in nearby undisturbed, natural areas with more resources, such as beneath native perennial plant canopies (Karbon et al. 2024). Thus, proximity of undisturbed natural areas to areas with surface disturbance facilitates the introduction, spread, and proliferation of non-native invasive plants into undisturbed, natural areas. Linear projects (e.g., pipelines) promote the spread of non-native invasive plant species over a larger area than non-linear projects because of their proximity or adjacent location to more areas than non-linear projects.

Thus, there are numerous adverse impacts to the tortoise from the construction of the proposed Project in washes. Unfortunately, the status and trend of the tortoise in the Eastern Mojave Recovery Unit indicate the tortoise is not likely to survive additional adverse impacts. The density of adult tortoises is below that needed for population viability (USFWS 1994a) in the Eastern Mojave Recovery Unit (Allison and McLuckie 2018, USFWS 2025). The current tortoise density continues a decades-long decline in the Eastern Mojave Recovery Unit (Abella and Berry 2016). Washes provide important physical and biological features (e.g., movement, foraging, and cover) (USFWS 1994b) that tortoises need for survival and recovery. New impacts to washes should be avoided.

Inadequate Mitigation for Impacts to Waters of the U.S.

Because the Applicant did not describe or analyze all impacts likely to occur from implementation of the proposed Project, the mitigation offered by the Applicant is inadequate.

For minimizing impacts, on page 15, the Applicant said, “Project design minimizes the area of disturbance by limiting clearing and grading to the minimum workspace necessary for safe pipeline installation.” However, the description of installation of a 10-inch diameter pipeline is a 30-inch wide trench 6 feet deep, but the ROW requested from BLM for construction is much larger, 45 feet during construction and 20 feet during operations and maintenance (BLM 2026). Because the

buried pipeline crosses several washes, this trench and associated surface disturbance including vegetation removal (usually accomplished by blading) would be up to 45 feet wide in washes with fill spread on both sides of the trench in the washes. These activities would raise or alter the elevation of the wash bottom and modify the ability of these washes to convey surface water to previously served down-gradient locations including native vegetation. Surface flow would be modified from pre-Project conditions. It would also adversely affect water quality from placement of loose soil in washes on either side of the trench and removal of vegetation from blading activities. Fill material and soils previously stabilized by vegetation would be gone and would be susceptible to erosion and down-gradient sedimentation. There would be deposition of fill material in interstate waters of the U.S. potentially increasing the acres affected under the Applicant's request for a permit under the Clean Water Act.

The Applicant should explain why a 45-foot wide right-of-way is needed to construct a 30-inch wide trench. The Council contends that in washes, a 45-foot wide right-of-way is not minimizing the area of disturbance. Rather, it would result in increased levels of vegetation removal and soil disturbance in interstate waters of the U.S. than necessary, and this removal and disturbance would add to erosion and sediment loads in washes during flow events.

Regarding vegetation, the Applicant said that reclamation of the area would be implemented. However, the method that BLM identified in their NEPA document for the mine expansion and pipeline construction was reseeding. For several projects in the Mojave Desert, BLM has allowed applicants to reseed areas with native perennial species as the primary revegetation effort during reclamation. To date these efforts have had little success. While reseeding can cover a larger area than outplanting (using containerized plants), it usually has a low success rate. Abella and Berry (2016) reported that because of cost and logistical challenges, outplanting (planting nursery-grown perennials) can be criticized for being unable to cover as much area as seeding. However, no matter how large an area is seeded, "the area revegetated is still zero if no seeded species become established, a situation not uncommon."

Other methods such as outplanting have higher success rates of revegetation. When comparing seeding to outplanting for ten native perennial species, Abella et al. (2012) reported that, in an experiment in the Mojave Desert in southern Nevada, seeding failed despite 1) protecting seeds from predation by small mammals; 2) seeding at rates of ≥ 200 pure live seeds/meter² for each species; 3) conducting germination tests to ensure that seeds were viable; 4) irrigating plots; and 5) receiving above-average precipitation in 2 post-seeding years. Thus, with the long-term loss of vegetation from washes and nearby areas from the proposed Project, the erosion of soils in washes would increase thereby adversely affecting water quality for many years as well as associated down-gradient impacts to vegetation.

Several factors are important to ensure that mitigation is successful in restoring vegetation that is removed because of the proposed Project. These include soil nutrients, soil water-holding capacity, and soil biota including mycorrhizae (Abella et al. 2015).

Because of limited availability of surface water in the Mojave Desert, any action that obstructs or changes the existing surface flows in these washes would adversely affect water availability to a

much larger area down-gradient (Devitt et al. 2022). Ecological functions and values that would be adversely affected include decoupling the flow of water from up-gradient washes to down-

gradient washes, and once decoupled, altering the area in which rain water harvesting by biological components including soils and vegetation. Devitt et al. (2002) reported the decoupling of a wash system led to a significant decline in soil moisture, canopy level NDVI (Normalized Difference Vegetation Index) values for vegetation, and mid-day leaf xylem water potentials. Plants within the first 300 meters from where the wash was decoupled were placed under significantly greater stress during the higher environmental demand summer months (Devitt et al. 2022). Thus, the availability of soil moisture from surface flow adversely affects survival, germination, growth, and abundance of native perennial and annual vegetation and the area of impact down-gradient (e.g., 300 meters) is much greater than the area of the direct impact in the wash. Schwinning et al. (2011) argued that the overall health of desert ecosystems is directly linked to the integrity of their surfaces and such drainage systems.

As previously mentioned, “Drainage channels crossed by the project will be restored to their original profiles and hydrologic function following installation activities.” We interpret this to mean that the locations and elevations of the drainage channels or washes will not be altered including the wash bottoms. If the Project is approved, the Applicant should be required to collect data prior to initiating construction and maintenance activities in any wash and again immediately after construction and maintenance activities are completed to monitor these parameters (meaning original profiles and hydrologic function) to ensure that this occurs. We make this request for several reasons previously mentioned in this comment letter including importance of washes to tortoises including for forage, water balance, movement, and construction and use of burrows and importance to water quality.

One recovery objective for the tortoise is “to ensure that habitat within each recovery unit is protected and managed to support long-term viability of desert tortoise populations” (USFWS 2011). The criterion is that “the quantity of desert tortoise habitat within each conservation area be maintained with no net loss until population viability is ensured” (USFWS 2011). We are unaware that BLM or the Applicant has proposed to implement mitigation that would fully offset the loss, degradation, and/or fragmentation of tortoise habitat from the proposed Project. Nor are we aware that for past discretionary actions in the Eastern Mojave Recovery Unit, that BLM has required the implementation of effective mitigation to fully offset the loss, degradation, and/or fragmentation of tortoise habitat. Although the footprint of the proposed Project may be small, when combined with past, ongoing, and proposed future projects in tortoise habitat including critical habitat in the Eastern Mojave Recovery Unit, these cumulative adverse impacts to tortoise habitat and therefore the tortoise are substantial. These cumulative adverse impacts explain the ongoing decline in densities and numbers of adult tortoises and the reduction in recruitment of juvenile tortoise into the adult population.

From the information provided by the Applicant, and the description and analysis provided above by the Council, we conclude that implementation of the proposed Project would result in unmitigated adverse impacts to water quality in interstate waters of the U.S. and unmitigated adverse degradation to and loss of habitat to the tortoise. This conclusion is based on analysis of direct, indirect and cumulative impacts of past and present actions and the proposed Project.

Unclear if Project is a Connected Action

The Project described and submitted for authorization under the Clean Water Act is related to the expansion of a gold mining operation. When applying for authorizations under the Clean Water Act, our understanding is that the entire project including connected actions should be submitted for environmental review. By submitting the Project (i.e., water pipeline and powerline) and not the Project with the proposed expansion of the gold mine, the Applicant is claiming that the Project is separate from the mine expansion project and not dependent on the implementation of the Project.

Under the Clean Water Act and section 404(b)(1) guidelines, “no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” The mine has operated for several years without the Project (i.e., the pipeline and powerline). In addition, in our comments on the draft environmental impact statement for the mine expansion and the comments of others, alternative ways in which the mine could obtain their water and power were suggested. The Council concludes that the proposed mine expansion is technologically and logistically practicable without construction of the proposed Project.

The Council contends that if the Project is a separate action, there are practicable alternatives available for providing water and electricity to the mine including continuing past methods used, implementing methods other than those identified in the proposed Project, and a combination of these. These alternatives should be carefully reviewed especially considering the inconsistent operation of the mine in the past. With many gold mines, operations increases during times of high gold prices and reduces or stops during periods of low prices.

If the Project is a connected action to the mine expansion, the Applicant should have included the expanded mining operations as part of the description of the project to the Nevada Bureau of Water Quality Planning. Our understanding is only the Project was submitted for review and certification. The Nevada Bureau of Water Quality should ask the U.S. Army Corps of Engineers to determine whether the Project is a connected action to the mine expansion or a separate action before reviewing and making a decision on the application for 401(a) water quality certification.

Report of Biological Surveys for the Ivanpah Underground Waterline and 69kv Overhead Powerline Rights-Of-Way Project Located in Unincorporated San Bernardino County, California and Unincorporated Clark County, Nevada

This Report of Biological Surveys (Biological Report) was prepared in August 2024. Thus, its information is more than 2 years old.

On December 12, 2024, the U.S. Fish and Wildlife Service (USFWS) proposed to list the Monarch butterfly (*Danaus plexippus*) as a threatened species and designate critical habitat under the

Federal Endangered Species Act (FESA). We were unable to find this species mentioned in this Biological Report. We were unable to find a discussion of the habitat needs of the Monarch butterfly; how the Project would likely affect this species and its habitat including habitat needed for movement and migration; or mitigation that would be implemented to avoid, minimize, or compensate for any loss, degradation, or fragmentation of this habitat.

The Mohave tui chub (*Siphateles bicolor mohavensis* = *Gila bicolor mohavensis*) is an endangered species under FESA. The Mohave tui chub occurs in a pond on the upper slopes of the alluvial fan on the north side of the Ivanpah Valley, west of Nipton. Although not in Nevada, it is likely that the aquifer that provides water for this population of Mohave tui chub also provides the water for the water source for the Project's water pipeline. The water level in the pond that supports the Mohave tui chub has dropped in elevation about 5 feet in the last few years. If this rate of water loss from the pond that supports Mohave tui chub continues, the Mohave tui chub population will not be able to survive. This is concerning because this drop is likely caused or contributed to by groundwater pumping from the aquifer under the Ivanpah Valley, the same aquifer that the Applicant is proposing to obtain additional water for mine expansion near Nipton, California and transport to the mine via the proposed pipeline.

In the documents submitted by the Applicant for water quality certification and a permit under the Clean Water Act, we were unable to find a description and analysis of the impacts to the aquifer from the proposed Project, impacts to this population of the Mohave tui chub, or monitoring and mitigation for these impacts.

The Council recommends that descriptions and analyses of direct, indirect, and cumulative impacts to listed, proposed, and special status species (e.g. tortoise, Monarch butterfly, Mohave tui chub, and others) and designated critical habitat for the tortoise should be completed before making a decision on issuing any certification or permit under the Clean Water Act. The analyses should include the most recent information from the scientific literature.

Collection of field data and reports for some species are more than two years old. The information in the reports was not updated when compiling and submitting the "Request for Section 401 Water Quality Certification for the Approximately 31.5-Mile Ivanpah Underground Waterline and 69KV Overhead Powerline Rights-of-Way Project, Located Partially in Clark County, Nevada" (Request) to the Nevada Bureau of Water Quality Planning on July 30, 2026. The updates would have reflected substantial changes in agency policies and regulatory status. For example, in 2024 BLM revised its previous policy from 2008 on Special Status Species Management. This updated policy established an agency-wide emphasis on proactive, landscape- and ecosystem-level, scientifically informed conservation and recovery of special status species and their habitats (BLM 2024). It directs BLM to:

- Comply with FESA Section 7(a)(2) consultation regulations and incorporate proactive recovery efforts into proposed actions;
- promote healthy species populations and biodiversity through landscape- and ecosystem-level management; and
- use science and adaptive management to advance conservation and recovery.

In the Request we were unable to find information on this BLM policy or how the Project would comply with this policy.

Other observations of the Biological Report included a modified definition of the “action area” and consequently inappropriate application of the action area when conducting analysis of impacts. The action area is defined in 50 Code of Federal Regulations 402.02 as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” The Biological Report defined action area as “any lands subject to ground-disturbing activities associated with the Project.” Therefore, the Biological Report looked only at direct impacts from implementation of the Project and did not describe or analyze indirect impacts to listed or proposed species. Examples of indirect impacts to the tortoise from the implementation of the Project include those mentioned earlier in this letter. They also include increased subsidies of nest sites from construction of the powerline. These nest subsidies increase the occurrence of common ravens (*Corvus corax*) and raven predation on juvenile tortoises (Kristan 2001, Boarman 2003, Boarman et al. 2006, Kristan and Boarman 2007). In addition, increased vehicle traffic on the roads to the mine from the proposed mine expansion would result in increased roadkill and food and trash brought to the mine site by people. Construction of the pipeline and powerline would result in mortality and injury to semi-fossorial animals. Common ravens and coyotes (*Canis latrans*) are effective hunters and scavengers. These new food subsidies would contribute to increased coyote and raven populations in the area, support more nesting ravens, and likely increase common raven predation on juvenile tortoises (Holcomb et al. 2021) and coyote predation on adult tortoises (Esque et al. 2010) near the Project.

The issues and impacts identified above should be analyzed before making a decision on issuance of authorizations under the Clean Water Act for the proposed Project.

We appreciate this opportunity to provide the above comments and trust they will help protect tortoises during any resulting authorized activities.

Please respond in an email that you have received this comment letter so we can be sure our concerns have been registered with the appropriate personnel and office for this Project.

Respectfully,



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Literature Cited

- Abella, S.R. 2010. Disturbance and plant succession in the Mojave and Sonoran Deserts of the American Southwest. *International Journal of Environmental Research and Public Health* 7.4 (2010): 1248-1284.
<https://www.mdpi.com/1660-4601/7/4/1248>
- Abella, S.R., D.J. Craig, and A.A. Suazo. 2012. Outplanting but not seeding establishes native desert perennials. *Native Plants Journal* 13:81–89.
https://oasis.library.unlv.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1513&context=sls_fac_articles
- Abella, S.A., L.P. Chiquoine, A.C. Newton, and C.H. Vanier. 2015. Restoring a desert ecosystem using soil salvage, revegetation, and irrigation. *Journal of Arid Environments* 115 (2015) 44-52.
<https://fwspubs.kglmeridian.com/view/journals/fwma/6/2/article-p278.xml>
- Abella S.R. and K.H. Berry. 2016. Enhancing and restoring habitat for the desert tortoise (*Gopherus agassizii*). *Journal of Fish and Wildlife Management* 7(1):255–279.
<https://doi.org/10.3996/052015-JFWM-046>.
- Allison L.J. and A.M. McLuckie. 2018. Population trends in Mojave desert tortoises (*Gopherus agassizii*). *Herpetological Conservation and Biology*. 2018 Aug 1;13(2):433-52.
http://www.herpconbio.org/Volume_13/Issue_2/Allison_McLuckie_2018.pdf
- Averill-Murray, R.C., T.C. Esque, L.J. Allison, S. Bassett, S.K. Carter, K.E. Dutcher, S.J. Hromada, K.E. Nussear, and K. Shoemaker. 2021. Connectivity of Mojave Desert tortoise populations—Management implications for maintaining a viable recovery network. U.S. Geological Survey Open-File Report 2021–1033, 23 p., <https://doi.org/10.3133/ofr20211033>.
<https://pubs.usgs.gov/of/2021/1033/ofr20211033.pdf>
- Berry, K.H., L.J. Allison, A.M. McLuckie, M. Vaughn, and R.W. Murphy. 2021. *Gopherus agassizii*. The IUCN Red List of Threatened Species 2021: e.T97246272A3150871.
<https://dx.doi.org/10.2305/IUCN.UK.2021-2.RLTS.T97246272A3150871.en>
- [BLM] U.S. Bureau of Land Management. 2024. Special Status Species Management. Handbook 6840. September 9, 2024.
https://www.blm.gov/sites/default/files/docs/2024-11/MS%206840%2C%20Rel.%206-142_0.pdf
- [BLM] U.S. Bureau of Land Management. 2026. Castle Mountain Mine Project Phase II Expansion Draft Environmental Impact Statement (DOI-BLM-CA-D090-2025-0016-EIS).

- Boarman, W. 2003. Managing a Subsidized Predator Population: Reducing Common Raven Predation on Desert Tortoises. *Environmental Management* 32, 205–217 (2003). <https://doi.org/10.1007/s00267-003-2982-x>
- Boarman, W.I., M.A. Patten, R.J. Camp, and S.J. Collis. 2006. Ecology of a population of subsidized predators: Common ravens in the central Mojave Desert, California. *Journal of Arid Environments* 67 (2006) 248–261. <https://www.sciencedirect.com/science/article/abs/pii/S0140196306003016>
- Brooks, M.L. and K.H. Berry. 2006. Dominance and environmental correlates of alien annual plants in the Mojave Desert, USA. *Journal of Arid Environments* 67:100–124. <https://www.sciencedirect.com/science/article/abs/pii/S0140196306002989>
- Bury, R.B., T.C. Esque, L.A. DeFalco, and P.A. Medica. 1994. Distribution, habitat use, and protection of the desert tortoise in the Eastern Mojave Desert. Pages 57-72 in R.B. Bury and D.J. Germano (Eds.). *Biology of North American Tortoises, Fish and Wildlife Research* 13. U.S. Dept. Interior, National Biological Survey, Washington, D.C.
- [CDFW] California Department of Fish and Wildlife. 2024a. Status Review for Mojave Desert Tortoise (*Gopherus agassizii*) Report to the Fish and Game Commission, February 2024. <https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=CESA-Listing>
- [CDFW] California Department of Fish and Wildlife. 2024b. 2022-2024 News Releases. California Fish and Game Commission Holds Hybrid Meeting, April 23, 2024. <https://wildlife.ca.gov/News/Archive/california-fish-and-game-commission-holds-hybrid-meeting11>
- [Commission] California Fish and Game Commission. 2025. CESA, Petitions to List Species Under the California Endangered Species Act, Finalized Petitions. <https://fgc.ca.gov/CESA#1089124-mojave-aka-agassizs-desert-tortoise-2025> <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=232827&inline>
- Defenders of Wildlife, Desert Tortoise Preserve Committee, and Desert Tortoise Council. 2020. A Petition to the State of California Fish And Game Commission to move the Mojave desert tortoise from listed as threatened to endangered. https://defenders.org/sites/default/files/2020-03/Desert%20Tortoise%20Petition%203_20_2020%20Final_0.pdf
- Devitt, D.A., L. Apodac, B. Bird, J.P. Dawyot, Jr., L. Fenstermaker, and M.D. Petrie. 2022. Assessing the impact of a utility scale solar photovoltaic facility on a down gradient Mojave Desert ecosystem. *Land* 2022, 11, 1315. <https://doi.org/10.3390/land11081315>
- Drake, K. K., L. Bowen, K. E. Nussear, T. C. Esque, A. J. Berger, N. A. Custer, S. C. Waters, J. D. Johnson, A. K. Miles, and R. L. Lewison. 2016. Negative impacts of invasive plants on

- conservation of sensitive desert wildlife. *Ecosphere* 7(10):e01531. 10.1002/ecs2.1531.
<https://esajournals.onlinelibrary.wiley.com/doi/pdf/10.1002/ecs2.1531>
- Esque, T.C., K.E. Nussear, K.K. Drake, A.D. Walde, K.H. Berry, R.C. Averill-Murray, A.P. Woodman, W.I. Boarman, P.A. Medica, J. Mack, and J.H. Heaton. 2010a. Effects of subsidized predators, resource variability, and human population density on desert tortoise populations in the Mojave Desert, U.S.A. *Endangered Species Research*, Vol. 12:167-177, 2010, doi: 10.3354/esr00298.
<https://www.int-res.com/articles/esr2010/12/n012p167.pdf>
- Gray, M.A., B.G. Dickson, K.E. Nussear, T.C. Esque, and T. Chang. 2019. A range-wide model of contemporary, omni-directional connectivity for the threatened Mojave desert tortoise, *Ecosphere* 10(9):e02847. 10.1002/ecs2.2847.
<https://esajournals.onlinelibrary.wiley.com/doi/pdfdirect/10.1002/ecs2.2847>
- Henen, B.T., C.C. Petersen, I.R. Wallis, K.H. Berry, and K.A. Nagy. 1998. Effects of climatic variation on field metabolism and water relations of desert tortoises. *Oecologia* 117:365-373.
<https://link.springer.com/article/10.1007/s004420050669>
- Henen, B.T. 2002. Energy and water balance, diet, and reproduction of female desert tortoises (*Gopherus agassizii*). *Chelonian Conservation and Biology* 4(2):319–329.
- Holcomb, K.L. P.S. Coates, B.G. Prochazka, T.A. Shields, and W.I. Boarman, 2021. A desert tortoise–common raven viable conflict threshold. *Human–Wildlife Interactions* 15(3):405–421.
<https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1776&context=hw>
- Jennings, W.B. 1993. Foraging ecology and habitat utilization of the desert tortoise (*Gopherus agassizii*) in the western Mojave Desert. Ph.D. Thesis, University of Texas Arlington, Texas, USA.
- Jennings, W.B. and K.H. Berry. 2015. Desert tortoises (*Gopherus agassizii*) are selective herbivores that track the flowering phenology of their preferred food plants. *PLoS ONE* 10(1): e0116716.
<https://doi.org/10.1371/journal.pone.0116716>.
- Jennings, W.B. and K.H. Berry. 2023. Selection of microhabitats, plants, and plant parts eaten by a threatened tortoise: observations during a superbloom. *Frontiers in Amphibian and Reptile Science* 1:1283255. doi: 10.3389/famrs.2023.1283255.
<https://www.frontiersin.org/journals/amphibian-and-reptile-science/articles/10.3389/famrs.2023.1283255/full>
- Karban, C.C., J.E. Lovich, S.M. Grodsky, and S.M. Munson. 2024. Predicting the effects of solar energy development on plants and wildlife in the Desert Southwest, United States. *Renewable and Sustainable Energy Reviews* 205 (November 2024): 114823.
<https://www.sciencedirect.com/science/article/abs/pii/S1364032124005495?via%3Dihub>

- Kristan, III, W.B. 2001. Effects of habitat selection on avian population ecology in urbanizing landscapes. Ph.D Dissertation, University of California, Riverside, September 2001.
<https://www.proquest.com/openview/642ff3fd741af80de1054e882feabfe/1?pq-origsite=gscholar&cbl=18750&diss=y>
- Kristan III, W.B, and W.I. Boarman. 2007. Effects of Anthropogenic Developments on Common Raven Nesting Biology in the West Mojave Desert. *Ecological Applications* 17(6), 1703–1713.
https://www.researchgate.net/profile/William-Boarman/publication/5932132_Effects_of_anthropogenic_developments_on_Common_Raven_nesting_biology_in_the_west_Mojave_Desert/links/5deea56a4585159aa470f2ad/Effects-of-anthropogenic-developments-on-Common-Raven-nesting-biology-in-the-west-Mojave-Desert.pdf
- Peaden, J.M., A.J. Nowakowski, T.D. Tuberville, K.A. Buhlmann, and B.D. Todd. 2017. Effects of roads and roadside fencing on movements, space use, and carapace temperatures of a threatened tortoise. *Biological Conservation* 214: 13-22.
<https://www.sciencedirect.com/science/article/abs/pii/S0006320717301325>
- Schwinning, S.D.R. Sandquist, D.M. Miller, D.R. Bedford, S.L. Phillips, and J. Belnap. 2011. The influence of stream channels on distributions of *Larrea tridentata* and *Ambrosia dumosa* in the Mojave Desert, CA, USA: Patterns, mechanisms and effects of stream redistribution. *Ecohydrology* 2011(4):12–25.
<https://onlinelibrary.wiley.com/doi/abs/10.1002/eco.116>
- [USFWS] U.S. Fish and Wildlife Service. 1994a. Desert tortoise (Mojave population) Recovery Plan. U.S. Fish and Wildlife Service, Region 1, Portland, Oregon. 73 pages plus appendices.
https://ecos.fws.gov/docs/recovery_plan/940628.pdf
- [USFWS] U.S. Fish and Wildlife Service. 1994b. Endangered and threatened wildlife and plants; determination of critical habitat for the Mojave population of the desert tortoise. *Federal Register* 59(26):5820-5866. Washington, D.C.
<https://www.govinfo.gov/content/pkg/FR-1994-02-08/html/94-2694.htm>
- [USFWS] U.S. Fish and Wildlife Service. 2011. Revised Recovery Plan for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*). U.S. Fish and Wildlife Service, California and Nevada Region, Sacramento, California.
<https://www.fws.gov/sites/default/files/documents/USFWS.2011.RRP%20for%20the%20Mojave%20Desert%20Tortoise.pdf>
- [USFWS] U.S. Fish and Wildlife Service. 2025b. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2024 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Las Vegas, Nevada.

<https://www.fws.gov/sites/default/files/documents/2025-08/2024-range-wide-mojave-desert-tortoise-monitoring-report.pdf>

Woodbury, A.M. and R. Hardy. 1948. Studies of the Desert Tortoise, *Gopherus agassizii*. Ecological Monographs 18(2):145-200.

<https://esajournals.onlinelibrary.wiley.com/doi/epdf/10.2307/1948638>

Zylstra, E.R., L.J. Allison, R. Averill-Murray, V. Landau, N.S. Pope, R.J. Steidl. 2023. Spatially explicit model for density. Ecosphere 14(3):1-18.

<https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.4448>