

How Reef's Shivwits Development Plans Imperil Endangered Species

Federally endangered species and other at-risk species of plants and animals on or near the Shivwits reservation face serious harm or extinction caused by the Reef Capital Partners/Black Desert plans to develop and construct three 18-hole chemically contaminated golf courses, and airport, and resort. This immense project will decimate a massive amount of virgin landscape, mow under an entire ecosystem, displace native vegetation and wildlife, and replace endangered species natural habitat with non-native turf grass. The impact of such global environmental disruption on intact soil, native plants, animals, birds, bees, fish, and other creatures, especially those which are already at risk or endangered, will be significant.

The addition of enough toxic irrigation wastewater to water 3-18-hole golf courses in the Mojave Desert, and the construction of an additional practice course, a resort, and an airport, and possibly several more recreation fields will quantifiably increase the negative environmental impact of the development. Toxic irrigation wastewater will flow down from the uphill golf courses onto vulnerable landscapes hosting endangered species and the species upon which they depend for survival. The region's torrential rainstorms will sweep chemically contaminated red dirt mixed with rainwater and spread PFAS, pesticide, and Chemicals of Emerging Concern (including hormones, pharmaceuticals, microplastics, and nanoparticles) remainders downhill and into the Santa Clara River and watershed, further effecting endangered and at-risk species downstream.

Endangered species found on and near the Shivwits Reservation put at risk of extinction by Reef's massive golf course resort include the **Mojave Desert Tortoise, the Southwestern Willow Flycatcher, and the Shivwits and Holmgrens Milkvetch.**

The Mojave Desert Tortoise is an ancient and vulnerable species which is a valued part of the Shivwits peoples' culture and is known in the Paiute language as "the Warrior." It's endangered due to habitat degradation and fragmentation caused by development. Ongoing threats are due to non-native invasive vegetation, disease, and predation, each of which would increase from Reef's golf course resort development. [Surveys in 2020-2022](#) revealed Mojave Desert Tortoises to be present in several prime habitat locations within the borders of the reservation. No independent, updated Mojave Desert tortoise survey has been done according to [protocol](#) since on the land slotted for Reef's golf courses. The reservation is situated in an important [linkage area](#) for the Northeastern Mojave Recovery Unit, which operates under the U.S. Fish and Wildlife Service's Mojave Desert Tortoise Revised Recovery Plan.

The endangered [Southwestern Willow Flycatcher](#), which has a highly specific habitat, is threatened by urbanization, and intensive breeding. Nest monitoring and surveying fieldwork is currently being done along the Santa Clara River—including stretches near the Shivwits Band of Paiutes Reservation where stormwater discharges would flow from Reef's chemically contaminated golf course irrigation. The Southwestern Willow Flycatcher prefers dense vegetation near the Santa Clara River for breeding, nesting, and feeding activities. Conservation efforts are focused on habitat protection and restoration, which will be nearly impossible to attain due to the negative environmental effects of Reef's toxic golf courses being located just uphill.

[The Shivwits milkvetch](#), a federally endangered plant, is one of the rarest plants in the world, so rare it's only found in a few locations worldwide, including on and near the Shivwits Reservation. The **Holmgren's milkvetch cactus**, found near the same locations, is also endangered. The endangered species [designation](#) for both these milkvetches cites threats and habitat loss from urbanization and vegetation control, including the herbicide application, mowing, and seeding procedures routinely used for golf course upkeep and maintenance. The endangered species designation for both milkvetches also affords protection to the ground nesting bee pollinators necessary for milkvetch survival. Ground nesting bees are at [severe risk](#) due to the toxic pesticides and other chemicals in Reef's contaminated golf course irrigation water.

[The Endangered Species Act](#) applies to tribal lands and federal agencies are required to consult with tribal governments before significant land disturbance or potentially destructive construction activities can occur. Strict [requirements](#) exist for construction anywhere near the critical habitat of endangered species, including areas in the vicinity of the construction sites like Reef's where stormwater discharges will flow into receiving waters such as the Santa Clara River.

[Secretarial Order 3206](#) ensures that the implementation of the ESA on Indian lands is administered in a way that honors the federal trust responsibility and recognizes tribal sovereignty. The Shivwits Band, as one of five constituent bands of the Paiute Indian Tribe of Utah, implemented a federally approved management plan for the critical habitat preservation of milkvetches in 2006, one which decreed that Shivwits trust lands be conserved and managed for the benefit of this species and the prevention of extinction. Updated ESA plans will also be necessary for the Milkvetches, the Mojave Desert Tortoise, and the Southwestern Willow Flycatcher.

Any construction as massive as Reefs development, which will displace an entire natural habitat where four endangered species are found, needs to be subject to rigorous federal, state, and tribal review processes. Formal **Endangered Species Act (ESA) consultations** or litigation may be triggered. Project modifications and work stoppages are a distinct possibility.

Because building a golf course in protected habitat would breach the Tribes prior federally approved conservation plan, the Paiute Indian Tribe of Utah, along with the Shivwits band, will need to assess, amend, and modify Tribal Management Plan and Habitat Conservation Plan for endangered species at risk from Reef's development. The since the Paiute Indian Tribe of Utah, not the Shivwits, a constituent band of the Tribe, is the federally recognized Tribal government, federal agencies must consult with the Paiute Tribe regarding construction risks to these four endangered species.