

Solar Plant Likely Killed 3,500 Birds in 1st Year

Chris Clarke, KCET (Los Angeles television), 4-23-15

Some new figures have been published about the likely wildlife impact of a controversial solar facility in the Mojave Desert by biological consultants working on contract with the plant -- and the numbers are startling.

According to the firm H.T. Harvey and Associates, the Ivanpah Solar Electric Generating System was the site of somewhere between 2,500 and 6,700 bird mortalities in the plant's first year of operation, between October 2013 and October 2014. The firm says the most likely actual figure is somewhere around 3,500 birds killed in that time.

That estimate is based on the firm's biologists finding 695 killed and eight injured birds while searching just under 30 percent of the project's approximately 4,000-acre footprint during that year-long period.

That incomplete search of the facility is one of the reasons that the total number of bird mortalities estimated by H.T. Harvey is significantly higher than the number of killed or injured birds actually documented by the firm. Another reason: scavengers. According to H.T. Harvey's report, scavengers documented on the Ivanpah project site included common ravens and desert kit foxes, as well as white-tailed antelope squirrels, roadrunners and turkey vultures.

"Scavenger bias" tests conducted by the firm, in which carcasses were placed to see how many were removed by scavenging animals and how soon, showed that some small carcasses were removed as quickly as 14 hours after placement during summer. Other, larger carcasses still remained after six weeks.

Lastly, H.T. Harvey sensibly assumed that human searchers and their canine assistants wouldn't find every last carcass even if the scavengers left them in place, and so the firm tested for "searcher bias" by planting carcasses and feather spots and sending the searchers out to look for them. Depending on the carcass size and the time of year, searchers generally found between 40 and 60 percent of the test carcasses.

Assuming H.T. Harvey's estimate of 3,504 birds killed at Ivanpah between October '13 and October '14 is accurate, that works out to an average of 292 bird mortalities in a month, or just under ten per day.

Of those 3,504 projected fatalities, just under 1,500 are likely to have been caused either by burn injuries from the project's concentrated solar flux, collisions with structures, or entrapment in the project's buildings or other infrastructure, while about 2,000 would be expected to show no obvious sign of those specific causes of death -- raising the possibility, says H.T. Harvey, that at least some of those 2,000 other projected mortalities might have had nothing to do, at least directly, with the power plant.

Certain species fared worse than others during that year-long time period. The 703 actual dead or injured birds documented by H.T. Harvey included 83 species, though only 19 of those species accounted for more than ten fatalities. Mourning doves fared the worst, with 98 documented fatalities, followed by yellow-rumped warblers, tree swallows, black-throated sparrows, yellow warblers, white-crowned sparrows, horned larks, Costa's hummingbirds, house finches, Anna's hummingbirds, barn swallows, greater roadrunners, American kestrels, rufous hummingbirds, brown-headed cowbirds, lesser nighthawks, Vaux's swifts, cliff swallows, and lazuli buntings.

Yellow warblers and Vaux's swifts are considered "special-status" species in California. Other special status birds documented dead at Ivanpah include bank swallows, olive-sided flycatchers, Lucy's warblers, yellow-breasted chats, and yellow-headed blackbirds.

Also on the mortality toll were 31 bats of six species, including California myotis, pallid bat, canyon bat, Mexican free-tailed bat, western small-footed bat, and big brown bat.

H.T. Harvey suggests in the report that none of the deaths of special-status species are likely to pose a threat to those species' continued survival. H.T. Harvey reports that plant operators are testing a number of methods to reduce the project's danger to birds, including changing the plant's lighting to LED bulbs, changing the positioning of the plant's thousands of mirrored heliostats, and spraying a chemical repellent at one of the plant's three units.