

BRIAN SANDOVAL
Governor



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STATE OF NEVADA
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Dear Secretary Zinke:

The Nevada Sagebrush Ecosystem Council (Council) is a governor appointed council that collaborates with landowners, tribal nations, non-governmental organizations, local, state, and federal agencies in order to address and mitigate the threats related to the sagebrush ecosystem and to the Greater Sage-Grouse (sage-grouse). I am particularly concerned about increased threats due to the steady population increase of Common Ravens (ravens) in Nevada. In accordance with the minimization of subsidies and man-made nesting and perching opportunities that our State Plan strongly encourages, I respectfully request an increase in the state-wide "take" permits to address targeted control of ravens.

In 1971, despite the fact that the population was increasing and was in no danger of extinction, the raven was added to the Migratory Bird Treaty Act of 1918, which put limitations on "take" (Cavagnolo 2015). Since that time, the population has grown exponentially across the Western U.S. and Canada. In Nevada, the population has grown from 300-600% during the last 40 years (Pardieck et al. 2017).

Ravens are capable of adapting to different types of anthropogenic changes, largely due to subsidization, which has aided in this population increase. However, being the opportunistic predators they are, ravens have impacted species that do not adapt as easily to change. These species include the vulnerable Steller's eider, the threatened Western Snowy Plover, and in Nevada, the sage-grouse and the threatened Mojave Desert Tortoise. In addition, ranchers have witnessed raven predation on newborn lambs and calves.

Nest videography confirms that ravens are the primary predator of sage-grouse nests in Nevada (Coates and Delehanty 2010; Lockyer et al. 2013), which can have a strong negative effect on sage-grouse reproduction (Coates 2007; Christiansen 2011; Dinkins 2013). In one study, the probability of nest success was less than 10% when more than 20 ravens per 10 kilometers were present in the nesting area (Coates 2007). In addition to the direct effects of ravens on sage-grouse, indirect effects are also significant. Sage-grouse are less likely to nest in areas with high raven abundance, even if it is in prime habitat, which can lower sage-grouse nest success because birds are selecting reduced quality nesting habitat (Christiansen 2011; Cresswell 2008).

It has been demonstrated that sage-grouse nest success increases when raven densities are lowered; however, this is a short-term solution that must be conducted on a yearly basis and should coincide with

methods to reduce subsidies. One study found that consistent raven removal led to reduced densities of 60%, and following treatment, the probability of sage-grouse nest survival significantly increased near the raven removal site (Dinkins 2013).

An increase in take permits would allow for effective reductions to the overall impacts of ravens, specifically when strategically applied in seasonally targeted areas, such as near landfills in the winter and nesting and brood-rearing habitat throughout the spring and summer. To ensure efficient and effective results, multiple State and Federal agencies should continue to coordinate and implement the most effective methods in appropriate treatment areas to ensure the greatest benefit to sage-grouse. Current predation management efforts outlined in the 2014 Nevada Greater Sage-grouse Conservation Plan to benefit sage-grouse include lethal predator control (raven and mammalian) and the management of anthropogenic subsidies.. Monitoring of outcomes will continue to be a significant factor in gaging effectiveness.

An increase in the removal of ravens on a consistent basis can significantly improve nest success of sage-grouse in conjunction with the multitude of activities that strive to conserve, enhance, and restore sagebrush habitats on which sage-grouse are dependent. I appreciate your consideration of this request and look forward to your response. Please let me know if I can provide anything else to assist you in your deliberation of this request.

Sincerely,

J. J. Goicoechea
Chairman
Sagebrush Ecosystem Council