

NBU'S SIGNIFICANT CONTRIBUTIONS FURTHER WILDLIFE HABITAT REHABILITATION EFFORTS ON BURNED LANDSCAPES IN NEVADA

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2020 proved to be a challenging year in all aspects of life and there is no doubt that COVID-19 challenged many aspects of wildlife and habitat management. Despite these challenges, NDOW, with the great help of many partners including NBU, had another successful year rehabilitating burned landscapes! This year we were able to implement 62,220 acres of rehabilitation efforts to benefit Nevada's habitat and wildlife resources! Without your great support, many of these burned landscapes could convert to annual grass dominated rangelands that would otherwise be unproductive for wildlife for years (if not forever) into the future.

The 2020 fire season was a modest fire year consuming 259,272 acres of Nevada habitat. Much more than the 2019 fire season which consumed 82,282 acres, but significantly less than the 2018 and 2017 fire seasons which consumed 1,001,966 and 1,329,289 acres, respectively. There is no

doubt that Nevada is burning greater amounts of habitat as time goes on. From 1980 to 1999, Nevada wildfires consumed 4.2 million acres and from 2000 to 2019 fire burned 9.6 million acres. The magnitude of these fires is stressing the current system and infrastructure, which has remained largely unchanged. The problem is outpacing the ability for any one agency or entity to address rehabilitation efforts alone and demands increased partnerships to leverage resources in an efficient and meaningful way. NDOW, with the help of key partnerships such as NBU-Reno has managed to achieve meaningful post-fire habitat rehabilitation to complement the Bureau of Land Management's (BLM) efforts. Working together, the BLM, NDOW, Sportsman's Non-Governmental Organizations (NGO's) and other entities can continue to grow and leverage collective resources, talents and volunteers to rehabilitate critical habitats for species like mule deer, sage-grouse and bighorn sheep among other wildlife.



Figure 1: These 4 pictures are taken from same location of an aerial herbicide application and sagebrush and yarrow seeding on the 2018 Martin Fire. Herbicide treatment (top left) and untreated (top right). Bottom left photo is of a fence-line contrast between treatment (left side of photo) and untreated area (right side of photo).



Figure 2: Pictures above are same photo, one taken in 2018 and one in 2019 on Fairview Peak following the 2017 Bravo-17 Fire. Snowstorm kochia is abundant and filled in interspace between first year plants providing great forage for bighorn sheep, mule deer, and antelope. The site is much more stable to erosion, resistant and resilient to future fires, and providing high quality wildlife forage that otherwise would be dominated by cheatgrass without seeding intervention.



Figure 3: Pictures above are same photo, one taken in 2018 and one in 2019 on Hot Spring Range following the 2017 Hot Springs Fire. This site was drill seeded with an aerial application of forage and snowstorm kochia. Low success with drill seeded grasses due to low precipitation amounts received; however, kochia is abundant. Lower left photo is a portion that was drilled but not seeded with kochia. Mule deer and antelope pellet counts are high in the kochia seeding and low in areas not seeded with kochia. Had we not aerial seeded kochia, there would be little forage and cover for wildlife, which is crucial winter range for mule deer. With kochia, the site is more resistant and resilient to future fires, while providing high quality wildlife forage and cover that otherwise wouldn't exist without seeding intervention.

NBU's generous 2020 donation of \$150,000 will no doubt leave a lasting impact on wildlife habitat for years to come! NGO dollars are the most flexibility funding available allowing us to be nimble and responsive to achieve maximum restoration potential by maximizing our financial resources. It is your dollars that we can use to most efficiently accomplish our task! Additionally, we use your dollars as match to leverage against federal grants. The dollars donated by NBU-Reno allows us to leverage up to \$600,000 to further our rehabilitation efforts. This year the majority of NBU funds were used to purchase hard-to-find seed, which we purchased directly from growers at a more affordable price. Getting more bang for our buck enables us to stretch the number of acres we are able to treat and provides greater benefit for wildlife. We strive to select plant species that fit the ecological sites that were impacted by the fire. Sometimes in arid sites this means using Kochia, as it establishes with high degree of success where many other species have difficulty. Not only is Kochia dependable, but it provides valuable wildlife forage for many big game animals including bighorn sheep, mule deer, and antelope. Kochia is fire tolerant and will resprout if burned and therefore will continue providing quality forage even after future fires (Figures 2 and 3).

Following fire, there is a narrow window of time to implement projects to maximize the odds of success. Of course, not every fire needs to be rehabilitated as areas with healthy vegetation communities pre-fire are more likely to respond positively post fire without management intervention. Following a fire, NDOW biologists meet with our land management agencies to assess burn impacts and expected post fire vegetation recovery. In areas where the

expectation is that "natural" recovery will result in poor and degraded habitat (generally in the form of annual grass invasion such as cheatgrass), we typically choose to take management action. We use a triage approach to identify and prioritize where and what treatments to implement. We put our resources (including NGO dollars) to on the ground projects where high priority wildlife values intersect and overlap to have the greatest impact in terms of habitat uplift. Treatments can take many forms including herbicide application, aerial or drill seeding, and shrub planting, dependent upon the ecosystem threats and opportunities. For example, where cheatgrass response post fire is a threat, we will apply herbicide, fallow for one year, and seed the following year into a vacant niche, thereby giving our desirable seeded species the greatest likelihood of success (Figure 1).

Looking back over the past four years NDOW and partners have been able to successfully rehabilitate 422,355 acres of habitat in Nevada! In total, NDOW, NBU-Reno and other partners have contributed in excess of 8.75 million dollars toward rehabilitation efforts. NBU-Reno funding alone has contributed nearly \$450,000 over the last four years which has contributed significantly to these efforts, both in on-the-ground restoration activities and as match for federal grant dollars. There is little doubt that sportsmen have contributed greatly to ensure wildlife have quality habitats to survive and thrive in.

On behalf of NDOW and our Federal partners, we want to thank NBU-Reno for their significant support to Nevada's Wildlife!

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