Submitted via Electronic Comment Portal Only

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William Dunkelberger, Forest Supervisor
Humboldt-Toiyabe National Forest
1400 Franklin Way
Sparks, NV 89431

Re: Scoping Comments on Proposed Integrated Invasive Plant Treatment Project

Dear Supervisor Dunkelberger,

The Center for Biological Diversity appreciates the opportunity to provide scoping comments on the Humboldt Toiyabe National Forest's (HTNF's) Integrated Invasive Plant Treatment Project ("Project"). While invasive plants present a significant threat to Nevada's native biodiversity, so do pesticides and habitat disturbance/destruction. The HTNF must undertake a thorough and rigorous environmental review of the Project, to ensure that treatment for invasive plants does not cause undue harm to native species and biodiversity, in particular through the use of herbicides.

We commend you for recognizing that this project will require a full environmental impact statement ("EIS") and that an environmental assessment would not suffice for a project of this size, scope and significance.

This project is an opportunity to do so much more than just get a bunch of new pesticides approved. The HTNF should use this EIS to thoroughly examine the causes of invasive species and to develop an integrated pest management plan. Simply spraying an array of pesticides will not get this problem under control.

A. The EIS Must Address Root Causes of Invasive Plant Infestations

The EIS must review the root causes of invasive plant infestations, identify any past and all ongoing actions on the forest which are contributing to invasive plant infestations, and factor these root causes in the preferred alternative for this invasive plant treatment project.

For instance:

- Grazing of cattle is a leading cause of invasive plant infestations and the spread of invasive plants. This EIS must analyze the role that grazing cattle across much of the HTNF plays in the spread of invasive plants. If that analysis reveals that cattle are a significant factor in the invasive plant problem, then the EIS must consider alternatives that include limiting or reducing grazing and for cattle that remain, additional protocols for reducing the cattle-facilitated spread of invasive plants.
- Given the strong correlation between HTNF's proposed treatment areas and access roads, the EIS must examine how use of off-highway vehicle ("OHV") routes, both legal and illegal, affect the spread of invasive plants, and establish alternatives and protocols to address their role in spreading invasive plants, including potentially actively decommissioning illegal routes, evaluating the legal routes that appear to be playing the most significant role in the spread of invasives, and establishing protocols for reducing the OHV facilitated spread of invasive plants.
- There is also a significant correlation between the proposed treatment areas and intensively used recreation sites, such as in the Spring Mountains. Is intensive recreational use affecting the spread of invasive plants and if so, can the agency address the role of recreation in spreading invasive plants with measures such as informational signage at trailheads?
- There is a correlation between the proposed treatment areas and areas which have been subject to intensive vegetation treatments, including the removal of pinyon-juniper woodland communities. How does removing a native forest ecosystem contribute to the spread of invasive plants? Alternatives in the EIS should include not removing native forests in order to facilitate resilient ecosystems.

The agency must look at these critical issues as it determines the range of alternatives and preferred alternative. HTNF must address the root causes of the spread of invasive species – including but not limited to removing cattle, ceasing large-scale pinyon-juniper removal, limiting off-highway vehicles and other high impact recreational uses in ecologically sensitive areas in order to protect high priority native plant communities. The invasive plant problem will not be resolved through infestation treatment alone.

B. The EIS Must Consider the Impacts of Treatment Options on Non-target Species, Especially Federally Protected Species, Sensitive Species and Pollinators

The HTNF is home to at least 102 threatened, endangered and sensitive species. Forty species of plants and animals are protected under the federal Endangered Species Act ("ESA") in Nevada and HTNF is home to at least four ESA listed species, the Webber's ivesia, Lahontan cutthroat trout, bull trout, Mt. Charleston blue butterfly and yellow-billed cuckoo. HTNF must initiate and

complete consultation with U.S. Fish and Wildlife Service ("FWS") as required by Section 7 of the Endangered Species Act for this Project. In completing its biological evaluation, special consideration must be given to the Webber's ivesia, a listed forb which would be extremely sensitive to any drift or other unintended areal effects from herbicide application. Similarly, the Mt. Charleston blue is reliant on a complex assemblage of native annual wildflowers, and given its highly restricted range, unintended consequences from the use of herbicide could be catastrophic for the species. The Lahontan cutthroat trout could be adversely impacted by the presence of pesticides in waterways as well as any loss of streamside vegetation. Any loss of streamside vegetation also imperils the yellow-billed cuckoo.

In addition to federally protected species, HTNF harbors over one hundred US Forest Service Intermountain Region sensitive species. These include several endemic butterflies, the greater sage-grouse and the bi-state distinct population segment of greater sage-grouse, and numerous sensitive plants. Forest Service policy manuals require HTNF to determine the effects of activities on sensitive species, avoid or minimize impacts, and ensure that decisions made by the Forest do not "result in loss of species viability or create significant trends toward Federal listing," (Forest Service Manual 2670.32).

In addition to these species, special care must be given to ensure that pollinator habitat is not destroyed in any treatments for invasive species. Nevada is home to an astounding diversity of native bee species, over 1,000 native bees call Nevada home. These native bees are almost all solitary, meaning that if the mother is killed or cannot find enough forage to provision her brood, there are no other bees to help and her nest will not survive. Most solitary bees nest on the ground, meaning that they can come in direct contact with pesticides, and the use of herbicides can frequently destroy the flowers they rely on. Plants that may not be on the HTNF's radar yet may be the sole food source for one particular kind of native bee, and in turn, those plants may not be able to survive and propagate without that particular native bee to pollinate it. Worldwide, bee populations are in decline, native bees are especially sensitive to herbicides, and HTFN must take special measures to protect these vitally important pollinators.

Special care must be taken to avoid killing plants that wildlife rely on. For example thistles are commonly considered to all be invasives. However, there are five species of native thistles in Nevada that can be easily confused with the four non-native species that are treated as noxious weeks. Thistles can be an extraordinarily important food source for butterflies and bees. Any invasive species eradication project must involve education of employees and contractors so that important native thistles are not inadvertently eradicated.

C. Use of Herbicides

We encourage you to adopt an alternative that incorporates herbicides only as a last resort. Herbicides can be ineffective and have substantial adverse effects. For example, herbicides often do not kill whole plants but do cause leaves to whither, giving the appearance of an invasive species treatment being effective for a couple weeks, until the crew has left the area, the plant recovers and starts putting on leaves once more. This combined with the potential for herbicides to have substantial adverse effects clearly indicates that HTNF should allow their use only as a last resort.

HTNF needs to establish clear parameters for when to do manual, mechanical, biological and chemical (herbicide) treatments of noxious and invasive plant species. Chemical treatments should, again, be the last resort, manual should be the first. Restoration should be carefully done using only native plants, not forage plants for livestock, and should be done with minimal machinery to avoid soil compaction and disturbance. The EIS must provide more information about the specific design features HTNF intends to deploy to minimize impacts to human health, water quality, wildlife, non-target plant species and other ecosystem components.

In addition to the ground-based treatments, the EIS must disclose the full range of potential effects of the aerial application of herbicide and eliminate this from the preferred alternative. Aerial spraying should not be considered because drift risk is too high, the risk of impact to non-target species including humans in the area is very serious, especially in event of drift, and it is not targeted enough to the invasives to be effective, and can kill native plants, preventing them from filling in the spots where invasives have been eradicated. Drones for aerial spraying are even more dangerous because they won't spot hikers or wildlife. Aerial spraying causes the harassment of wildlife and can lead to mortality in some species, particularly bighorn and pronghorn. Aerial spraying of pesticides is an indiscriminate, ineffective and dangerous method of treating infestations and should not be allowed in the HTNF.

This plan currently favors herbicide treatments, ground based and aerial, over all other treatment methods, with 20,000 acres proposed for such treatment and a mere 1000 acres proposed for manual treatment. Activities such as aerial herbicide application are extraordinarily expensive, and ineffective, and yet the agency provides no justification for why this is so dramatically favored over manual treatment, which is highly targeted, does not require expensive and dangerous machinery, and has the added bonus of creating seasonal jobs.

The proposed project also includes an enormous number of potential pesticides with no justification for why so many chemicals are needed. The EIS must explain why each and every pesticide on the list is necessary. The larger the array of possible chemicals, the more risk must be mitigated. All of these pesticides come with their own risks, some more significant or famous than others, but all to be expected from products whose purpose is to kill. Dicamba, for example, is famous for drift and killing non-target species, it destroyed millions of acres of non-target fields this past year throughout the Midwest. 2,4-D use in forestry applications has caused the death of domestic animals, sickened humans and severely contaminated water bodies in Oregon forests. Many of the pesticides on this list are known to have substantial adverse effects to human health. All these risks must be disclosed in the EIS as their inclusion on the list is to be justified.

Further, the EIS must disclose whether the HTNF is considering tank mixing or otherwise using multiple pesticides at once. If so, the agency must do due diligence, searching through the US Patent Office's applications for the chemicals to determine whether any of the blends could have synergistic effects that could cause unacceptable adverse effects because the pesticide companies do not typically disclose this information to the EPA.[1]

The EIS must also disclose what kind of worker protection and training the HTNF will require for pesticide handlers? Will it require all pesticide handlers to obtain training on safe pesticide application or obtain certified pesticide handler training? How will it handle emergencies such as accidental pesticide exposure by staff inexperienced in pesticide application if such emergencies occur in remote locations?

The EIS must consider impacts to Native Americans who visit the HTNF to harvest food or materials. How will the HTNF ensure that it does not accidentally expose Native Americans to pesticides either through spraying or residue? Will the HTNF work with tribal leaders to identify places that should not be treated out of respect for tribal customs? How will the HTNF ensure that tribal voices are heard as this Project moves forward?

The project also calls for relatively high levels of treatment near communities, including Ely and Austin. The EIS must the risk of pesticide drift, exposure to recreationists, impacts to drinking water sources, impacts to streams used for recreational fishing and swimming, and any other measures necessary to protect communities large and small from pesticide drift.

[1] *See* e.g., Dr. Nathan Donley, Toxic Concoctions, How the EPA Ignores the Dangers of Pesticide Cocktails, https://www.biologicaldiversity.org/news/press_releases/2016/pesticides-07-19-2016.html (2016).

D. Adaptive Management

The proposed action includes language promoting the use of adaptive management in the development and implementation of the Project. In particular the proposed action states, "This strategy allows for use of technology and methods that are not available today but may be developed and approved in the future." By definition, new technologies and methods not available today will not have undergone a rigorous environmental review process, and thus there is no way that the Project EIS can adequately prepare for the use of such technologies and methods. This is particularly true for novel herbicides and biological controls which are not being evaluated in the scope of the Project. Many times well intentioned people have inadvertently caused significant adverse effects by deploying new herbicides or chemical controls before they are properly understood. The criteria put forward in point 5 of the adaptive management strategy on page 5 of the proposed action are items which should be factored in to decision-making about utilizing new herbicides or biological controls, but they are not an adequate substitute for a rigorous new NEPA analysis by HTNF. It would be unacceptable to use novel herbicides or biological controls without a specific supplemental NEPA review, and appropriate consultation with FWS and other agencies as applicable.

Similarly, HTNF has provided a set of maps indicating 28,475 acres of proposed treatment areas across all districts on the forest. However, the proposed action states, "These acres are proposed for treatment along with currently unmapped or uninventoried infestations." The point of an environmental review is to disclose and analyze the impacts of a proposed action, and that includes a site-specific analysis. It would be unacceptable to simply initiate the usage of herbicides, biological controls, and other invasive plant removal techniques at any location determined by HTNF's discretion with no public notice or input for the next 15 years, as HTNF proposes. The EIS must make explicit the protocols for identifying new infestations for treatment and the process for completing supplemental environmental review for treating such infestations, including consultation with the FWS and other agencies as applicable.

"Adaptive management" is not carte blanche for bypassing future NEPA requirements. The EIS must make explicit the requirements for further NEPA review should it have an adaptive management component which allows for unknown technologies, methods, and herbicides to be utilized in unknown areas.

Further compounding the necessity for herbicide, technique, and location –specific environmental analysis is the potential for impact to threatened, endangered, and sensitive species on the HTNF. Any Section 7 consultation (or non-section 7 review for sensitive species) undertaken on the Project as described in the EIS would not apply to new herbicides or methods

of biological control devised subsequent to the issuing of a Final EIS. The EIS must make explicit the procedures for consulting with FWS and conducting sensitive species analysis for any new herbicides, biological controls, or project locations. The potential for impacts to threatened, endangered, and sensitive species emphasizes the need for a supplemental NEPA review.

We thank you for your thoughtful consideration of these comments and for incorporating their content in to the EIS for this Project.

Sincerely,

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