



May 3, 2022

Seth Flanigan  
Project Manager  
U.S. Department of the Interior  
Bureau of Land Management  
HQ-220, 1387 South Vinnell Way  
Boise, ID 83709

**Re: Notice of Intent To Prepare a Programmatic Environmental Impact Statement for Approval of Herbicide Active Ingredients for Use on Public Lands**

Dear Mr. Flanigan,

As presidents of national and regional weed science societies, we fully support the Bureau of Land Management's (BLM) notice of intent to prepare a Programmatic Environmental Impact Statement (PEIS) for approval and use of the following herbicide active ingredients in vegetation treatments on public lands:

- aminocyclopyrachlor
- clethodim
- fluazifop-p-butyl
- flumioxazin
- imazamox
- indaziflam
- oryzalin
- trifluralin

### **The National and Regional Weed Science Societies**

The Weed Science Society of America (WSSA), Aquatic Plant Management Society (APMS), North Central Weed Science Society (NCWSS), Northeastern Weed Science Society (NEWSS), Southern Weed Science Society (SWSS) and the Western Society of Weed Science (WSWS) represent over 3000 weed scientists from the U.S. and around the world. Our members include academic, governmental, and private industry research scientists; university extension educators and outreach specialists; and federal, state, and private land managers. **We are very concerned about the impact of invasive weeds on our federally managed lands.**

### **Invasive Annual Grasses- A Biological Wildfire**

The infestation and continued expansion of invasive annual grasses in western prairies and sage brush biomes is analogous to a biological wildfire. Cheatgrass (*Bromus tectorum*) already covers more than 50 million acres in the western U.S., with an estimated 14 percent annual rate of spread. Cheatgrass, along with newer invaders like medusahead (*Taeniatherum caput-medusae*), and ventenata (*Ventenata dubia*) continue to increase wildfire risk, shorten fire return intervals, exacerbate drought, reduce forage for wildlife and livestock, and have longterm negative implications for carbon and climate.

While climate change has received considerable attention as a factor in altered fire regimes, we know that the presence of **invasive annual grasses increases fire occurrence by up to 230 percent and fire frequency by up to 150 percent** ([Invasive Grasses Increase Fire Occurrence and Frequency Across U.S. Ecoregions](#). Fusco et al. *Proceedings of the National Academy of Sciences*. Nov 2019). Fire activity in the Great Basin is largely predictable based on accumulating fuel conditions from invasive annual grasses and drought ([Where there's smoke, there's fuel: Predicting Great Basin rangeland wildfire](#). Smith et al. bioRxiv 2021).

### **Restoring Sage-Grouse Habitat**

As with wildfire management, a variety of treatments or techniques must be available for the management of these invasive weeds including prevention; early detection; timely integrated management with biological, physical, chemical, or cultural controls; and site rehabilitation. An integrated weed management approach that gives equal consideration of all management tools, including herbicides, is critical for managing these extensive landscape-scale invasive annual grass infestations.

Partnerships among federal, state, and county governments, private landowners, and nongovernmental organizations throughout the western U.S. have organized to address invasive annual grasses and the protection and reclamation of the sagebrush biome. These landscape-scale partnerships are effective in developing common goals, but their success is limited without integrated weed management tools that reach across jurisdictional boundaries.

These eight herbicide active ingredients are all registered by the EPA and several of them have been used safely for decades already in other range and pasture management settings. Indaziflam, first registered by EPA in 2010, is a selective herbicide that has a mode of action not

previously available in habitats like sage brush biomes. Public-sector weed scientists have demonstrated that a single application of indaziflam will control cheatgrass for multiple years, and in many cases, without reduction in perennial native species richness or abundance. ([Effect of Indaziflam on Native Species in Natural Areas and Rangeland](#). Clark et al. *Invasive Plant Science and Management*. 12(1),60-67. May 2019).

Repeated use of indaziflam by itself is not the sole answer to cheatgrass management. Other research has shown indaziflam should likely be reserved for use in areas that are heavily invaded by invasive annual grasses and have seed banks that are comprised of non-desirable species, rather than in diverse native mountain sagebrush communities. ([Indaziflam controls non-native annual mustards but negatively affects native forbs in sagebrush steppe](#). Meyer-Morey et al., *Invasive Plant Science and Management*. 14: 253-261. Published online: 27 Oct. 2021).

**Having these eight herbicides available as tools in integrated weed management programs targeting invasive annual grasses gives us the best chance we have ever had at landscape-scale restoration of our native sage brush biomes.**

#### **The PEIS Process is Time Consuming and Costly**

The BLM's vegetation treatment assessment process through a PEIS per the National Environmental Policy Act (NEPA) has historically proven to be OVERLY TIME CONSUMING and costly. BLM's "[Protocol for Identifying, Evaluating, and Using New Herbicides](#)" notes "*the process should take approximately 2 fiscal years to complete once a need for an available product is identified*". The 2016 PEIS for [National Vegetation Treatments Using Aminopyralid, Fluroxypyr, and Rimsulfuron on BLM Lands administered lands](#) **took almost 10 years to complete**. Those three herbicides were first registered by EPA in 2005, 1998, and 1995, respectively, meaning they were available to other federal, state, and private landowners for more than a decade before BLM could use them.

Consequently, BLM is seriously hampered in cooperating with other federal and state land management agencies to effectively treat and manage invasive annual grasses on a landscape-scale. The weed management tools under consideration now will help BLM manage the invasive weeds that now infest nearly a third of the 245 million acres under BLM management.

We appreciate your immediate attention to issuing a notice of intent to prepare the PEIS for approval and use of the eight aforementioned herbicides for use in vegetation treatments on public lands. We would be happy to further discuss how we can work together to expedite the PEIS and achieve landscape-scale restoration of some of BLM's most beautiful, and ecologically and culturally important habitats and biomes. Our scientific societies and members stand ready to assist BLM with the assessment and implementation of scientifically sound integrated weed management practices on public lands.

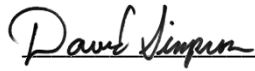
Sincerely,



Dr. Stanley Culpepper  
President  
Weed Science Society of America



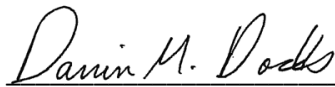
Dr. Ryan Thum  
President  
Aquatic Plant Management Society



Dr. David Simpson  
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Dr. Jacob Barney  
President  
Northeastern Weed Science Society



Dr. Darrin Dodds  
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Dr. Joel Felix  
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