

**60-DAY NOTICE OF INTENT TO SUE UNDER THE ENDANGERED SPECIES  
ACT**

**Rocky Mountain Wild  
1536 Wynkoop St. Ste 900  
Denver, CO 80202**

**Grounds for Action  
1055 Waite Dr.  
Boulder, CO 80303**

**August 14, 2026**

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED, AND ELECTRONIC MAIL

TO : Claire Levy, Marta Loachamin, Ashley Stolzmann  
Boulder County Board of County Commissioners  
1325 Pearl St., Third Floor  
Boulder, CO 80302  
Cc'd to: commissioners@bouldercounty.gov

Boulder County Parks & Open Space  
5201 St. Vrain Road, Longmont, CO 80503

Secretary Doug Burgum, U.S. Department of the Interior,  
1849 C Street NW, Washington, DC 20240

**COPIES TO:**

Boulder County Attorney Ben Pearlman,  
P.O. Box 471, Boulder, CO 80306

Director Brian Nesvik, U.S. Fish and Wildlife Service,  
1849 C Street NW, Washington, DC 20240

Regional Director, U.S. Fish and Wildlife Service,  
Mountain–Prairie Region (Region 6),  
134 Union Blvd., Lakewood, CO 80228

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**Re: 60-Day Notice of Intent to Sue for Violations of the Endangered Species Act — Unlawful  
“Take” of the Threatened Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*) Through  
Planned Drone Aerial Application of Indaziflam (Rejuvra) and Imazapic (Plateau) on Boulder  
County Open Space**

Dear Commissioners, Secretary, and Director:

This letter provides formal notice, under Section 11(g) of the Endangered Species Act (“ESA”), 16 U.S.C. § 1540(g)(2)(A)(i), that Rocky Mountain Wild and Grounds for Action intend to file a citizen suit against the Boulder County Board of County Commissioners and Boulder County Parks & Open Space (collectively, “Boulder County” or the “County”) for violations of Section 9 of the ESA, 16 U.S.C. § 1538(a)(1)(B) — which, as applied to the threatened Preble's meadow jumping mouse, is extended

through the Service's special rule under Section 4(d), 16 U.S.C. § 1533(d), and 50 C.F.R. § 17.40(l) — arising from the County's planned drone aerial application of the herbicides indaziflam (marketed as Rejuvra) and imazapic (marketed as Plateau) in and adjacent to occupied and suitable habitat of the threatened Preble's meadow jumping mouse. Unless the violations described below are cured within 60 days, Rocky Mountain Wild and Grounds for Action intend to seek declaratory and injunctive relief, and any other relief the court deems appropriate, in the United States District Court for the District of Colorado.

Rocky Mountain Wild raised these concerns informally in its letter to the Commissioners dated January 30, 2026. This letter serves as formal statutory notice.

## **I. The Noticing Parties**

**Rocky Mountain Wild** is a non-profit conservation organization headquartered in Denver, Colorado, dedicated to protecting, connecting, and restoring wildlife and wild lands in the Southern Rocky Mountains. Rocky Mountain Wild has a long-standing programmatic and advocacy interest in the recovery of the Preble's meadow jumping mouse. Its staff and members use, study, and enjoy the Boulder County foothills open space properties at issue — including Rabbit Mountain, Hall Ranch, Heil Valley Ranch, and the Red Hill area — for wildlife observation, recreation, and scientific and educational purposes, and derive concrete aesthetic, recreational, scientific, and conservation benefits from the presence and recovery of the Preble's meadow jumping mouse and the riparian habitat on which it depends. The planned herbicide applications threaten those interests.

**Grounds for Action** is a local Boulder-based conservation and advocacy organization focused on protecting soil, seeds, and species. Grounds for Action and its members work to promote healthy ecosystems that are free from harmful chemical spraying and other degenerative landscape practices — including the proposed spraying of indaziflam and imazapic in the open spaces of Boulder. Members of Grounds for Action have a history of advocating for and working to protect the Endangered Species Act listed Preble's meadow jumping mouse and the native foothills ecosystems in Boulder County. The impacts of this proposed spraying on the local seedbank, surrounding farms, native plants, Preble's mouse, and other species and natural values will cause harm to Grounds for Action and its members. Grounds for Action's members use and enjoy the affected Boulder County foothills open space — including Heil Valley Ranch, Hall Ranch, Rabbit Mountain, and the Red Hill area — for recreation, wildlife observation, and educational and scientific purposes, and are injured by the planned applications' threat to the Preble's meadow jumping mouse and the native foothills ecosystem on which those interests depend.

All correspondence regarding this notice should be directed to counsel:

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## II. The Species

The Preble's meadow jumping mouse (*Zapus hudsonius preblei*) is listed as a threatened species under the ESA. 63 Fed. Reg. 26517 (May 13, 1998). The U.S. Fish and Wildlife Service has designated critical habitat for the species in Colorado. 75 Fed. Reg. 78,430 (Dec. 15, 2010).

The Preble's mouse is a riparian-obligate species. Its survival depends on dense, continuous herbaceous vegetation along streams, in wet meadows, and in adjacent upland zones. It forages at ground level on seeds, fruits, insects, and fungi produced largely by the annual forbs, sedges, and grasses of these moist corridors, and it relies on dense ground-level vegetation for nesting, hibernation cover, dispersal, and predator avoidance. Its home range and movement patterns require intact vegetative structure along streambanks and in side-channel and upland habitats.

The proposed treatment areas identified below include or lie adjacent to drainages, riparian corridors, ephemeral draws, wet meadows, and saturated upland benches where Preble's has been documented and that constitute occupied or suitable habitat, including habitat mapped as occupied by Colorado Parks and Wildlife. *See Attachment 1 – CPW habitat map with overlay of proposed spray area.*

## III. The Activity Constituting Take

The County's 2024 Integrated Weed Management Plan commits the County, through Appendix B, to drone aerial application of indaziflam (Rejuvra) — and, per the County's public statements and the January 30, 2026 correspondence, imazapic (Plateau) — over approximately 2,500–3,000 acres of foothills open space, including at Rabbit Mountain, Hall Ranch, and Heil Valley Ranch, including the Red Hill treatment areas. The planned application is scheduled for the fall of 2026.

The following characteristics of the activity are directly relevant to take:

1. **Persistence and mechanism.** Indaziflam is a pre-emergent herbicide that binds in the upper soil layer and suppresses germination of shallow-rooted annual species for a prolonged period — up to approximately four years, and potentially longer under Front Range conditions. Imazapic is likewise soil-active and persistent. Both remain biologically active in soils and seedbanks for extended periods.
2. **Effect on the Preble's food base and cover.** By suppressing germination of the annual forbs, grasses, and sedges that produce the seeds, fruits, and insect- and fungi-supporting vegetation on which Preble's depends, and by reducing the dense ground-level vegetative structure the species requires for nesting, foraging, sheltering, and predator avoidance, the applications will degrade the essential features of occupied and suitable habitat. The County's own post-fire research has documented substantial declines (up to ~75%) in short-lived native species following such treatments.
3. **Direct exposure pathways.** Because Preble's forages on the ground surface and nests in soil-level vegetation, individual mice present in the treatment zones will be directly exposed to the applied herbicides and their residues through (a) dermal absorption while moving through freshly treated vegetation and soil; (b) ingestion of contaminated seeds, fruits, fungi, and insects; and (c) direct contact from drone deposition and drift onto animals and the microhabitats they occupy.

4. **Drift, runoff, and incomplete avoidance.** Aerial/drone application cannot reliably avoid the side-channel draws, wet benches, and upland habitats Preble's occupies, even if principal waterways are avoided. Pre-emergent herbicides migrate downslope with precipitation, snowmelt, and storm runoff into riparian soils and waters. The Rejuvra label itself identifies the product as having a high potential to reach surface water via runoff and classifies "habitats of endangered species" as protected "sensitive areas" where application is prohibited.
5. **County's proposed mitigation measures.** At its May 21, 2026 public meeting, the County proposed the following measures for the Red Hill drone treatment at Heil Valley Ranch: a 660-foot buffer to dwellings; a 100-foot buffer on property lines without dwellings; a 100-foot buffer on dry drainages, stated to be "adapted to the CPW Preble's Meadow Jumping Mouse Species Activities Map"; placement of drift cards along property boundaries; an organic drift retardant added to the spray mix; soil sampling within buffered areas; enhanced neighbor notifications; and a treatment window "during dormant season for sensitive flora and fauna" — that is, application while the Preble's meadow jumping mouse is hibernating. For the reasons set out in Section V, these measures do not avoid take.

#### **IV. The Take: Legal Standard and Application**

Section 9 of the ESA prohibits any person, including a governmental instrumentality, from "taking" a listed species without authorization. 16 U.S.C. § 1538(a)(1)(B). "Take" means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19). The planned applications will "take" Preble's meadow jumping mice under multiple independent prongs of that definition.

##### **A. Direct take — killing, wounding, and harming individual animals.**

The planned applications are an affirmative act directed at the specific treatment areas, which are occupied or suitable Preble's habitat, and will actually kill or injure identifiable individual mice present there through direct dermal absorption, ingestion of contaminated food items, and direct contact from deposition and drift. This constitutes take by "kill[ing]," "wound[ing]," and "harm[ing]" under the plain statutory text, and independently by "harass[ment]" — a definition the July 14, 2026 rescission left intact, having removed only the definition of "harm" — as defined at 50 C.F.R. § 17.3 (an intentional or negligent act creating the likelihood of injury by significantly disrupting normal behavioral patterns, including breeding, feeding, and sheltering). This direct-take theory does not depend on the rescinded regulatory definition of "harm" and satisfies the narrowed interpretation the Services adopted in *Rescinding the Definition of "Harm" Under the Endangered Species Act*, 91 Fed. Reg. 43,300 (July 14, 2026) — namely, that take requires "an affirmative act . . . directed immediately and intentionally against a particular animal." *Id.* The County's affirmative decision to disperse a persistent, toxic pre-emergent over identified acres of occupied habitat, where mice forage and nest at ground level, is precisely such an act.

##### **B. Take by habitat modification — "harm".**

The applications will also cause take by "harm" in the traditional sense: significant habitat modification or degradation that actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, and sheltering. By eliminating the annual vegetation, seed

production, and dense ground cover on which Preble's depends across occupied riparian and adjacent upland habitat — for multiple years, given the herbicides' persistence — the applications will impair the species' essential behaviors and cause injury and death to individual mice. This theory governs any application undertaken on or before September 13, 2026, which is judged under the regulatory definition of “harm” in effect on the date of the conduct; the rescission published July 14, 2026, applies only prospectively and does not require reevaluation of conduct or authorizations predating its September 14, 2026 effective date.<sup>1</sup> Rocky Mountain Wild and Grounds for Action further maintain that habitat modification that kills or injures listed wildlife remains “harm” under the best reading of the statutory text, and reserves all rights to challenge the validity and application of the rescission.

### **C. Both definitions are satisfied.**

Because the notice pleads direct take independently of any habitat-modification theory, the planned applications constitute unlawful take under the ESA whether evaluated under the regulatory definition of “harm” in effect through September 13, 2026, or under the statutory prohibition as the Services interpret it on and after September 14, 2026.

## **V. The County's Proposed Buffers and Dormant-Season Timing Do Not Avoid Take**

As described in Section III, the County's May 21, 2026 materials propose buffers (660 feet to dwellings; 100 feet on dry drainages and on undeveloped property lines), drift cards, an organic drift retardant, soil sampling in buffered areas, and a dormant-season treatment window timed to the period when the Preble's meadow jumping mouse is in hibernation. None of these measures is an incidental take permit, a habitat conservation plan, or the product of FWS consultation, and none authorizes take under Section 10. More fundamentally, the buffers and dormant-season timing do not prevent take of the Preble's meadow jumping mouse. They mitigate off-site effects to neighboring dwellings; they do not eliminate the exposure and habitat-degradation pathways through which the applications will kill, injure, and harm individual mice, as set out below.

### **A. Chemical persistence defeats the dormant-season timing limitation.**

The premise of the timing limitation is that no mouse is present and active at the moment of application. But indaziflam is a persistent, soil-active pre-emergent that binds in the upper soil layer and remains biologically active for up to approximately four years after application; Imazapic is likewise soil-active and persistent. *See Attachment 2 - Brakenridge (2024)*. Applying these chemicals while the mouse hibernates therefore does nothing to remove them before the mouse emerges. Preble's hibernates for much of the year — from approximately October through May — and then emerges to forage, breed, and shelter at ground level throughout the active season and for multiple active seasons thereafter. 63 Fed.

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<sup>1</sup> The County should think carefully before building any defense on the rescinded definition. The July 14, 2026 rescission drew at least four federal lawsuits within days of its promulgation, each contending that it is unlawful — contrary to the ESA, to *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687 (1995), and to the Administrative Procedure Act. *See, e.g., Ctr. for Biological Diversity v. Burgum*, No. 2:26-cv-02474 (W.D. Wash.); *Swinomish Indian Tribal Cmty. v. Nat'l Marine Fisheries Serv.* (W.D. Wash.). No court has upheld the rule, and it may be vacated before this matter is resolved. Boulder County — which markets itself as a steward of open space and imperiled wildlife — should ask whether it truly wishes to stake the killing of a threatened species on a still-contested, Trump-administration rollback that a federal court may soon set aside. In any event the question is academic: as shown above, the planned applications effect a “take” under the statutory prohibition however “harm” is defined.

Reg. 26,517, 26,518 (May 13, 1998). The persistent residues, and the multi-year suppression of the annual forbs, grasses, and sedges that produce the mouse's seed, fruit, fungal, and insect food base, are still present in the treated habitat when the mouse becomes active. The timing limitation shifts the date of application; it does not shift the window of exposure or the years-long window of harm. Take occurs when the mouse contacts, ingests, and depends on the contaminated and degraded habitat after emergence — precisely the direct-take and habitat-modification pathways described in Section IV.

**B. The dormant-season window coincides with peak off-site transport and exposes occupied hibernacula.**

Timing the application to the dormant season does not merely fail to avoid take; it aggravates the transport pathway. A late-fall-through-early-spring application places persistent herbicide on and in the soil immediately before the Front Range's peak precipitation, snowmelt, and runoff season, mobilizing the chemical into the drainages, wet meadows, and riparian soils the buffers were nominally meant to protect at exactly the time transport is greatest. In addition, Preble's constructs hibernacula in well-drained soils, frequently in the upland slopes and benches adjacent to riparian corridors — the same steep, rocky foothills terrain the drone program targets for cheatgrass. Depositing a persistent toxin onto or immediately adjacent to occupied hibernacula, from which the animals will emerge in spring into contaminated soil and vegetation, is an affirmative act creating a likelihood of injury to identifiable individual mice. Additionally, these toxins could seep their way into the areas the mice are hibernating resulting in take of dormant mice.

**C. The buffers do not prevent drift into occupied habitat.**

The Rejuvra label directs that applications be made only when there is little or no risk of spray drift or off-site movement into "sensitive areas," which the label defines to include "habitats of endangered species." See *Brakenridge (2024)*, see also *Attachment 3 - Rejuvra Label*. The County's buffers do not satisfy that command. First, drone aerial application inherently produces spray drift; the County's own protocol places drift cards at the buffer boundary and evaluates them after each application, expanding buffers or suspending application only if herbicide is detected at the boundary — a regime that treats drift as an operating reality rather than preventing it, and a drift retardant reduces but does not eliminate droplet drift. Second, the label's prohibition contains no distance-based safe harbor; the question is whether drift will occur and reach the protected area, not whether a particular setback is observed. Third, the County's own prior aerial application of this same product in this same foothills terrain — the November 1, 2022 helicopter application of Rejuvra at Hall Ranch — drifted beyond its buffers onto adjacent unprotected areas, and did so under recorded zero-wind conditions. Fourth, the 100-foot buffer is keyed to "dry drainages" and to the CPW Species Activities Map, a coarse planning layer; it does not correspond to the actual extent of occupied and suitable Preble's habitat, which includes side-channel draws, wet meadows, saturated benches, and the upland zones within the species' home range and dispersal movements. Drift that reaches any of that habitat, or the mice within it, is take.

**D. The buffers do not prevent runoff and snowmelt transport into occupied habitat.**

Even assuming a buffer could stop airborne drift, a horizontal no-application setback does nothing to stop the chemical applied on the treated acres upslope from migrating downslope into the buffered drainages and riparian habitat. The Rejuvra label classifies the product as having a "high potential for reaching surface water via runoff" for months after application, and warns that injury may result where treated soil

is washed, blown, or moved off-site. *See Attachments 2, 3.* Indaziflam is moderately mobile in soil and some of its metabolites are highly mobile. Precipitation, snowmelt, and storm runoff will carry the persistent residues from the treated uplands into the very drainages, wet meadows, and riparian soils and waters that constitute occupied and suitable habitat — and, as noted in Section V.B, the dormant-season timing places the application immediately before the season of maximum runoff. A buffer measured in horizontal feet cannot arrest hydrologic transport; it channels the contamination into the habitat rather than away from it. Indaziflam is also acutely toxic to aquatic invertebrates and is stored in the tissues of aquatic organisms, degrading the aquatic-insect component of the mouse’s food base and creating additional ingestion exposure. *See Attachment 2 - Brakenridge (2024).*

#### **E. Long-term ingestion and food-base loss injure the mouse when it is active.**

Because the residues and the suppression of annual seed-producing vegetation persist for years, the mouse is exposed and injured throughout its active seasons: (a) by ingesting contaminated seeds, fruits, fungi, and insects, and by dermal contact with treated soil and vegetation while foraging and nesting at ground level; and (b) by the loss of the dense herbaceous food base and cover on which the species depends. The County’s own commissioned post-fire study documented that native short-lived species richness was approximately 75% lower in sprayed areas than in unsprayed areas following such treatments. That food-base loss is not a one-time dormant-season event: it manifests when the mouse forages, and it is particularly acute in late summer and early fall, when Preble’s must accumulate the fat reserves required to survive its long hibernation. Suppressing the seed production the mouse relies on for pre-hibernation fattening impairs an essential behavioral pattern — feeding — in a manner that causes injury and death, and thus constitutes take by “harm” for any application governed by the pre-September 14, 2026 standard, and under the best reading of the statutory prohibition. This food-base injury operates alongside — and does not depend on — the direct exposure pathways described in Section IV.A (dermal contact, ingestion of contaminated food items, and deposition and drift onto individual mice), which independently constitute take by “kill[ing]” and “wound[ing]” regardless of how “harm” is defined.

#### **F. The measures are voluntary, self-administered, and unenforceable, and do not substitute for ESA authorization.**

Finally, the proposed measures are neither monitored for species effects nor enforceable as take authorization. The County’s soil sampling is confined to “buffered areas,” and its “small mammal studies” and “interdisciplinary team review” are internal exercises, not the product of consultation with the U.S. Fish and Wildlife Service or a Section 10 incidental take permit supported by a habitat conservation plan. A buffer or timing window unilaterally adopted by the alleged violator, without Service review and without an approved plan containing enforceable avoidance, minimization, monitoring, and mitigation measures, does not authorize the take that will occur and does not cure the Section 9 violation. To the extent any measure reduces exposure at the margins, it does not eliminate the drift, runoff, persistence, and ingestion pathways described above, each of which independently results in take.

### **VI. The Take Is Not Authorized: No § 4(d) Exemption and No Section 10 Permit**

Because the Preble’s meadow jumping mouse is a threatened species, the Section 9 take prohibition applies to it through the Service’s special rule under Section 4(d), 16 U.S.C. § 1533(d), codified at 50 C.F.R. § 17.40(l). That special rule exempts from the take prohibition only certain narrowly defined

activities, and it reaches only take that is “incidental to and not the purpose of an otherwise lawful activity.” 50 C.F.R. § 17.40(l)(1). The single exemption arguably relevant here — for noxious weed control, 50 C.F.R. § 17.40(l)(2)(vi) — exempts incidental take only where the weed control is “conducted in accordance with” (A) federal law, “including Environmental Protection Agency label restrictions”; (B) applicable state noxious-weed laws; (C) applicable county bulletins; and (D) “[h]erbicide application guidelines as prescribed by herbicide manufacturers.” The County cannot satisfy these conditions.

The Rejuvra label directs that applications be made “only when there is little or no risk of spray drift or movement of applied product into sensitive areas,” which the label expressly defines to include “bodies of water (ponds, lakes, rivers, and streams)” and “habitats of endangered species,” and it warns that the product has a high potential to reach surface water via runoff. For the reasons set out in Section V, the planned drone applications cannot satisfy that restriction: drift, runoff, and snowmelt transport of a persistent, soil-active pre-emergent into the drainages, wet meadows, and riparian corridors that are both “bodies of water” and occupied Preble’s habitat is foreseeable — and, on the County’s own November 1, 2022 experience at Hall Ranch, actual even under recorded zero-wind conditions. An application that will move off-site into those sensitive areas is not “conducted in accordance with” the EPA label restrictions or the manufacturer’s application guidelines, and so falls outside § 17.40(l)(2)(vi)(A) and (D). The County’s unilateral buffers do not cure the defect: as shown in Section V, the label’s sensitive-area restriction contains no distance-based safe harbor, and a horizontal setback does not arrest hydrologic transport. The same defect independently defeats condition (B) as Colorado’s Pesticide Applicators’ Act makes it unlawful to apply a pesticide “in a manner inconsistent with labeling directions or requirements,” C.R.S. § 35-10-117(1)(i), so applications that will move off-site into the label’s sensitive areas are not “conducted in accordance with... applicable State laws for noxious weed control”.<sup>2</sup> The Section 4(d) exemption therefore does not apply, and the planned take is unauthorized.

The County has not obtained an incidental take permit under ESA Section 10(a)(1)(B), 16 U.S.C. § 1539(a)(1)(B), and has no approved habitat conservation plan authorizing take of the Preble’s meadow jumping mouse incidental to the planned applications. Absent such authorization, any take is unlawful under Section 9. Federal Register notices reflect that incidental-take permits and habitat conservation plans for the Preble’s meadow jumping mouse have been sought and processed for other actions in Boulder and other Front Range counties within the species’ range — confirming that the Section 10 pathway is available and is the expected mechanism for authorizing incidental take of this species. Proceeding with the applications without that authorization violates the ESA.

## **VII. How to Avoid Suit**

Rocky Mountain Wild and Grounds for Action do not seek to prevent lawful weed management. The noticing parties’ concerns would be fully resolved, and litigation entirely avoided, if the County commits to discontinuing its use of indaziflam (Rejuvra), imazapic (Plateau), or other harmful chemicals, on its open space. Short of that, the County can avoid litigation only by taking, at a minimum, the following steps within the 60-day notice period:

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<sup>2</sup> Whether the County’s Integrated Weed Management Plan authorizes applications consistent with C.R.S. § 35-10-117(1)(i) is squarely presented in pending state litigation. *Dandy Lyons Brigade v. Boulder Cnty. Bd. of Cnty. Comm’rs*, No. 2024CV127 (Boulder Cnty. Dist. Ct.).

1. **Refrain from drone aerial application** of indaziflam (Rejuvra) and imazapic (Plateau) in and adjacent to occupied or suitable Preble's meadow jumping mouse habitat at the identified properties;
2. **Use non-chemical or mechanical weed-control methods** in those areas in place of the planned herbicide applications; and
3. **Revise the 2024 Integrated Weed Management Plan** to remove drone aerial application of indaziflam and imazapic in and adjacent to occupied or suitable Preble's habitat.

Because the planned applications will take Preble's meadow jumping mice regardless of the buffers imposed or the season of application — for the reasons set out in Section V — only refraining from those applications, or adopting genuinely protective alternatives, will avoid suit. The buffers and dormant-season timing the County proposed on May 21, 2026 do not satisfy these steps: those unilateral measures are not Service-approved, address only off-site effects to dwellings, and leave intact the drift, runoff, persistence, and ingestion pathways that will take Preble's meadow jumping mice.

Rocky Mountain Wild and Grounds for Action are willing to meet and confer during the notice period to discuss a resolution.

## **VIII. Notice Compliance and Conclusion**

This letter satisfies the notice requirements of Section 11(g), 16 U.S.C. § 1540(g)(2)(A)(i), providing information sufficient to permit the County to identify and correct the alleged violation. It identifies the alleged violators — the Boulder County Board of County Commissioners and Boulder County Parks & Open Space; the violation — the unlawful take of the threatened Preble's meadow jumping mouse in violation of Section 9 of the ESA, 16 U.S.C. § 1538(a)(1)(B); the activity giving rise to that violation — the planned drone aerial application of indaziflam (Rejuvra) and imazapic (Plateau) in and adjacent to occupied and suitable habitat of the species; the location — the Boulder County foothills open space areas covered by the County's 2024 Integrated Weed Management Plan (App. B; Implementation Maps B-4b, B-5, and B-6) — the Red Hill drone-treatment areas on Heil Valley Ranch Open Space, as depicted on the attached map, together with the additional drone-application areas at Hall Ranch and Rabbit Mountain — all in and adjacent to occupied or presumed-occupied Preble's meadow jumping mouse habitat along the foothills riparian corridors near Lyons; and the dates — the planned application date(s) in the fall of 2026 and any subsequent applications. The names and addresses of the noticing parties, and the name, address, and telephone number of their counsel, appear above.

In sum, the planned applications will kill and injure individual members of a threatened species, and the County holds no incidental take permit under Section 10(a)(1)(B) and no approved habitat conservation plan authorizing that harm. Any resulting take is therefore unlawful under Section 9 — whatever season the County selects for application and whatever buffers it imposes — for the reasons set out above. Rocky Mountain Wild and Grounds for Action do not invoke the ESA's citizen-suit provision lightly. They remain willing to meet and confer during the notice period toward a resolution that serves both the County's legitimate weed-management goals and the survival and recovery of the Preble's meadow jumping mouse, and the County can avoid litigation altogether by taking the steps identified in Section VII within the notice period.

If the County does not do so, then upon expiration of the 60-day period Rocky Mountain Wild and Grounds for Action intend to commence a citizen suit against Boulder County in the United States District Court for the District of Colorado under 16 U.S.C. § 1540(g), seeking declaratory relief; preliminary and permanent injunctive relief to prevent the unlawful take of the Preble's meadow jumping mouse; an award of litigation costs and reasonable attorney and expert witness fees under 16 U.S.C. § 1540(g)(4); and any further relief the court deems just and proper. Should the applications become imminent before the notice period expires, the noticing parties reserve the right to seek immediate injunctive relief, in this or any other forum, to prevent irreparable harm to the species.

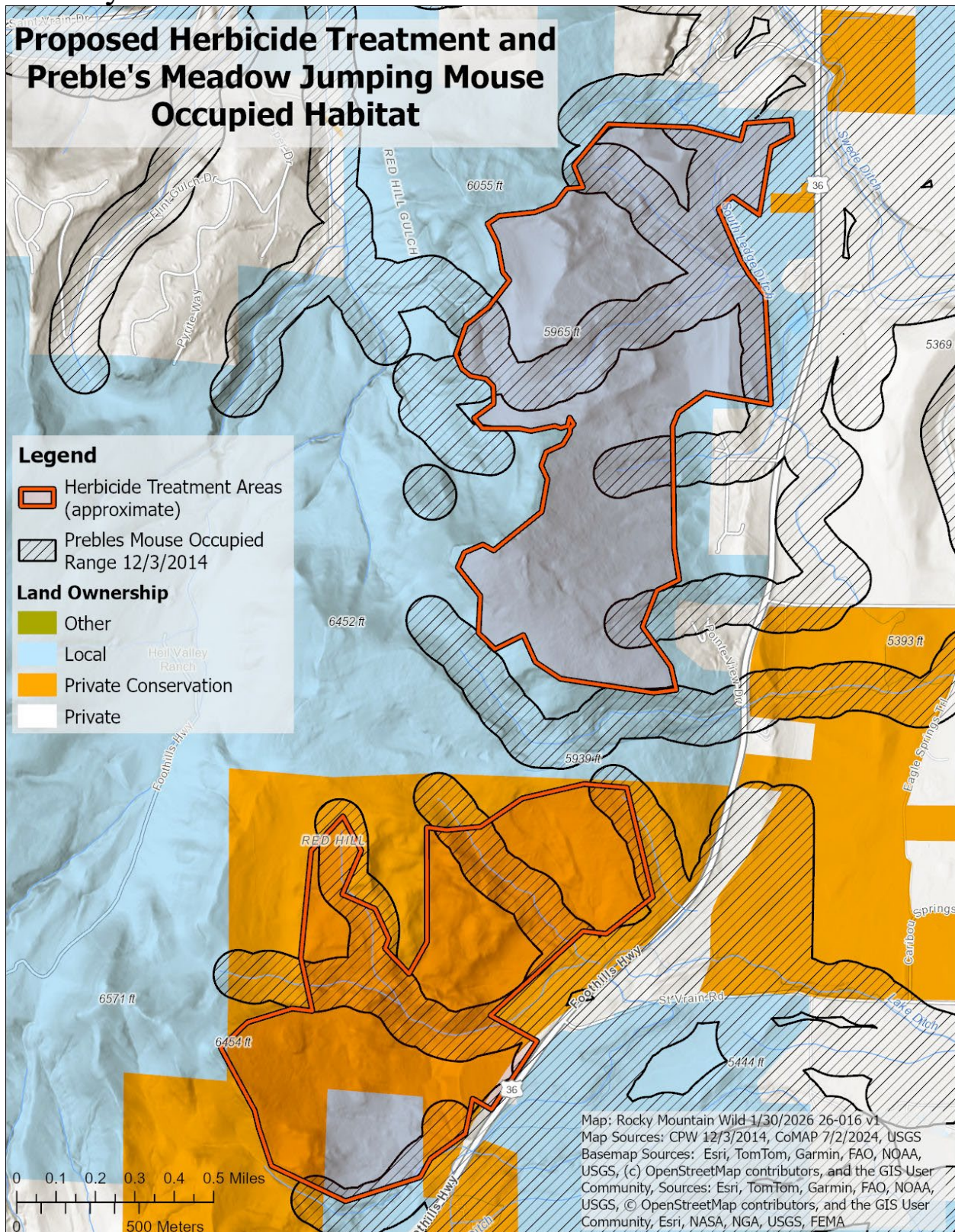
Respectfully,



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## Attachment 1 — CPW Habitat Map with Proposed Spray-Area Overlay



## Attachment 2

### **Should Indaziflam (Rejuvra™) Be Sprayed on Front Range Parks and Open Space land?**

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#### **The Chemical**

Rejuvra™ is a proprietary formulation of active ingredient (indaziflam, 19%) and the rest undisclosed adjuvants. It was approved in mid-2020 by the Trump Administration EPA for weed control on rangelands <sup>1</sup>.

Another product, Esplanade 200c™, is also 19% indaziflam and has been marketed by the same company since at least 2014. The only difference between Esplanade™ and Rejuvra™ is that the last is labeled for application on pasture or rangeland which will be grazed. Previously, the same formulation, marketed as Esplanade, carried this restriction: “Do not graze or feed forage, hay, or straw from treated areas to livestock”. The relaxing of this restriction for Rejuvra™ is based on EPA judgement concerning the likelihood of indaziflam and daughter chemical residues in food reaching levels above thresholds of concern.

When sprayed onto the land surface, this synthetic petrochemical binds to the topsoil a few inches below the surface. It thereby prevents germination of all shallow-rooted annual species (including, for example, cheatgrass). The chemical degrades under typical environmental conditions to other daughter (by-product) chemicals, but only slowly; it continues to poison all annual seedlings for up to 4 years.

It is a pre-emergent herbicide. It stops seedlings from sprouting and does not kill most already-green vegetation. Perennial plants sending up shoots from roots below the indaziflam barrier are unaffected. Persistence in the soil layer over at least several years is important for the objective: suppressing annual plants and allowing perennials to grow instead.

#### **The Target**

The benefit of this relatively newly invented chemical for weed control along the Colorado Front Range is that it inhibits annual plants and may allow more perennial grass to grow. This requires, however, that such plants and deep seeds and roots are already present in treated areas or that reseeding is accomplished. The herbicide treatment can thereby improve rangeland productivity by providing better forage for cattle. After the annual non-native grasses and plants, such as cheatgrass, are controlled, the perennial grasses can, potentially, take their place.

Front Range, Colorado parks and open space lands include large parcels that are managed for plant and animal conservation. The goal in such properties is to maintain “natural” vegetation and wildlife, reduce negative effects from past land use such as overgrazing and soil erosion, and also, where possible, reduce risk to surrounding areas from wildfire.

In regard to the last, cheatgrass is well-known for its “fire ecology” in the arid sage brush-dominated areas of Utah, Nevada, and other states. After cheat invasion, previously nearly bare-ground desert soils host dense, monocultural stands of cheat. This is prone to fires after it dies in mid-summer. After wildfires occur, leaving bare soil, the cheat then re-invades. Cheat provides some benefit, however, to local herds of antelope, bighorn sheep and other herbivores: important forage in the spring. It was planted by ranchers in the mid-20<sup>th</sup> century in some of these arid lands to provide more cattle forage. However, there is increased risk to local human settlements from wildfire: the cheatgrass provides fuel for such where there was very little before.

Cheat is non-native and considered a noxious weed in most western states, but efforts to eradicate it where it is present have been largely unsuccessful. Climate change may be favoring its further spread, as may also be the case for human-related disturbance in urban fringes. Unlike in arid sagebrush ecosystems, cheatgrass is not invasive in healthy Front Range grasslands and shrublands. It mainly colonizes bare ground. Where dense monocultural patches of it occur, this is commonly due to prior disturbance that has suppressed vegetation and provided bare soil areas for cheatgrass germination. Compared to native grasslands and shrublands, cheatgrass provides a lower fuel loading. Dry grass of any species, however, poses a fire hazard risk when growing adjacent to homes or farm storage structures. In such hazardous locations along the Front Range, replacing cheat with perennial grass does not reduce this risk because the latter is also seasonally dry and brown.

The barbed seeds (awns) of cheatgrass can harm cattle or horses that feed on it. Around urban areas also, pets can suffer from the seeds being embedded in noses, mouths, paws, and ears. Like many native plants, cheat is prickly, and perennial grasses are more desirable in settled areas.

### **The Product Label**

The question now to be addressed is: should the cheatgrass growing in Front Range open space natural landscapes be controlled by Rejuvra™ applications?

The EPA-approved product label <sup>1</sup> includes relevant information. On it, the maker warns about the persistence in the environment, the chemical’s ability to be transported off-site, and the bare-ground issue. It states that a reseeding program is needed when treating cheatgrass. From the product label:

- “This product is classified as having a high potential for reaching surface water via runoff for several months or more after application.”
- “DO NOT apply when powdery dry soil or light or sandy soils are known to be prevalent in the area to be treated. Treatment of powdery dry soil and light sandy soils, when there is little likelihood of rainfall soon after treatment, may result in off target movement and possible damage to susceptible crops and desirable vegetation.
- Injury to crops or desirable vegetation may result if treated soil is washed, blown, or moved onto land used to produce crops or land containing desirable vegetation.
- Applications should be made only when there is little or no risk of spray drift or movement of applied product into sensitive areas. Sensitive areas are defined as bodies of water (ponds, lakes, rivers, and streams), habitats of endangered species and non-labeled agricultural crop areas.
- Removal of dense stands of annual grasses or other weeds in degraded areas with few perennial species remaining may result in large areas of bare ground devoid of vegetation. Before making applications in such areas, a multi-year restoration management plan should be in place.

The *Boulder County Weed Management Plan* is now in review. Clearly, it should be responsive to these and other warnings on the product label. There are dense stands of cheatgrass in some areas. They have been and are the target of Rejuvra™ spraying campaigns, including from the air. Application of the chemical in any areas that will not be reseeded or otherwise managed to prevent cheatgrass return violate the EPA product label: which sets a minimum standard for legal use. Where applications have occurred without such a multi-year restoration management plan, they are in violation of the product label, and potentially against federal law.

In this regard, cheatgrass does provide some ecosystem services. Where it grows on sloping land, it reduces runoff and erosion. In areas managed for nature, it may be more desirable than no vegetation cover. The long term goal is expansion of perennial native grasses into these treated areas. But simply spraying the Rejuvra™ cannot accomplish this. Instead, as noted, reseeding and a restoration plan to prevent the chemically-induced bareground from becoming overgrown with cheatgrass is necessary. However, the cost for this over large areas of thousands of acres may be too high to be practical.

### **Other Ecosystem and Public Health Effects**

The native flora consists of both deep- and shallow-rooted species; all of the latter will be controlled. This includes threatened and endangered Colorado species if they are present

in the treated acreage. In lands managed for conservation of natural ecosystems, the potential loss of such species must be of major concern.

Some examples of undesirable effects:

1. From a Boulder County-sponsored study <sup>2</sup>: "For (short-lived) native species, in burned areas, richness was 75% lower in sprayed areas than unsprayed areas, and this difference was highly significant" (page 11). The study also documents significant losses in species richness for native long-lived forbs in sprayed *unburned* areas. Native long-lived grasses as well exhibited decreased richness in sprayed parcels. The spraying mainly favored perennial non-native grasses (see their Table 4)<sup>2</sup>. The chemical applications in this case actually favored non-native species
2. Such results agree generally with those of other field studies from other western U.S. locations which show pervasive and undesirable plant ecological effects <sup>3,4, 5</sup>. Meanwhile, inventories of native plants on Boulder County open space lands document the many native species that will be controlled if they are within the area treated by Rejuvra™ <sup>6</sup>.
3. Potential negative effects on local aquatic ecosystems and soil microbiota are expected and have been observed in some studies. It is especially concerning that indaziflam is being stored in the tissue of aquatic organisms such as mussels. In some cases, however, it is the surfactant or other non-active ingredients that are the cause of negative effects <sup>7-10</sup>.
4. Indaziflam itself is newly determined to be a potent amoebicide <sup>11</sup> and is thus expected to poison this component of soil microbiota <sup>12</sup>.
5. There may also be undesirable indirect ecological effects from the point of view of wildlife conservation. The decimation of all annual plant species in the areas to be treated could have major effects on local native insect and bird species <sup>13,14</sup>. Cheatgrass has for many decades been resident in the Front Range foothills ecosystem. It provides a food source for deer, elk, and bighorn sheep at a potentially critical time in early spring <sup>15,16</sup>. If we are to expend major effort in attempting local eradication of cheat, evaluation of the expected benefits versus the expected losses is clearly in order.
6. Finally, the product was considered not likely to be carcinogenic to humans according to the EPA standards when it was approved. However, a new study demonstrates that in fact it is genotoxic to standard Hep2 (human) cells <sup>17</sup>. Because of how recently indaziflam was approved for use, and its persistence in the environment and ability to be transported after rainstorms into drainages, this potential new hazard is important. It is likely that the tolerance thresholds for indaziflam residues in food could in the future be set much lower if further studies

confirm such findings, and in this case also the approval for rangeland use would require reconsideration.

### **Rejuvra™ in Boulder County's Version 2 Weed Management Plan**

Many of these concerns have been previously raised with the agency (Boulder County Parks and Open Space) charged with preparing a revision to Boulder County's Weed Management Plan. A helicopter spraying campaign against cheatgrass using Rejuvra™ has now been modified to aerial drone applications. However, in the version 2 Plan, this spraying campaign has so far been otherwise left as is. It would treat an additional 3000 acres of open space land for cheatgrass in the name of "biodiversity", without acknowledgement of any negative effects on the ecosystem or public health. It also is not accompanied by a restoration program designed to address the bare ground issue. Here below is text quoted from this Draft Plan:

*"Since 2019, BCPOS has successfully conducted treatments on about 4,300 acres of cheatgrass infestation within High Biodiversity Areas. And now, populations of cheatgrass within those treatment areas have been largely eradicated. Without competition from that cheatgrass, native plant communities in the treatment areas have rebounded from native seed source still present in the soil.*

*These past treatments have consisted of broadcast herbicide application to infested areas accompanied by ongoing monitoring. Going forward, drone application is planned for foothills areas where access is challenging due to steep and/or rocky terrain. These properties are identified with an asterisk (\*) in the list below and identified on Implementation Map B-4b, Drone Application for Biodiversity Preservation. The drone application areas are about 3,000 acres in total."*

This text asserts that 4300 acres of cheatgrass have been "largely eradicated" where sprayed, and that native plant communities are rebounding. These already-treated areas are not, however, mapped, nor is any evidence presented for the resurgence of native plants on them.

Also, the 7300 total acres likely does include local drainages and wetlands, and rare and endangered plants. There is no detailed surveying of such, and no establishment of the critical buffers needed for drainages and local wetlands; at least not published in any of the associated planning documents. Given the acute toxicity of this chemical to aquatic invertebrates, fish, and (very likely though untested) amphibians and reptiles, this is an glaring omission in a Plan purporting to be about protecting biodiversity.

To emphasize this point, it is also the case that in the version 2 Plan there is no evaluation of any negative effects of this past and proposed chemical treatment whatsoever. This is surprising: even in the cheat control studies in which indaziflam is one of the chemicals used, and which include conclusions that it is a useful tool in rangeland restoration, there

is included abundant information on negative effects on non-target species<sup>18</sup>. The science is there to consider such effects and incorporate into decision-making, but the Weed Management Plan is silent on them.

To summarize:

- There is no long-term restoration plan for the treated acres described,
- There is no monitoring program described for evaluating where and which native plants are returning, and
- No monitoring is described for Rejuvra™ and daughter chemical levels in the soils and runoff and the soil and aquatic biota.

## **Recommendations**

Rejuvra™ should not be sprayed on Front Range parks and open space land before demonstration that the expected ecological benefits will outweigh the expected negative effects. This is necessary work that should proceed any large scale spraying campaign of this chemical. Per the product label, it should also not be sprayed without specific long term management plans directed at re-establishing the vegetation cover.

After several years of chemical use on these properties already, there are still no data concerning whether (or not) any of the chemical has found its way into local wetlands or surface water after storm events. No assays have been performed. After completion of the planned work, a total of 7300 acres of land will have been aerially sprayed with this chemical formulation absent any assessment of the benefits and the drawbacks. This should be unacceptable given that the goals of such work are ecological in character.

Badly needed are metrics to assess progress towards specific ecological goals. Thoughtful study and analysis of fundamental questions could be accomplished, to address questions such as: 1) Where is the target species (cheatgrass) actually providing a net ecosystem service and need not be controlled at all. Where is its growth instead indeed posing an actual ecological threat? 2) What are the long term plant succession prospects in “pure” cheatgrass stands in typical Front Range grasslands and shrublands? Are they now fixed in cheatgrass cover, or will other shrubs and grasses eventually be established without any control interventions? Finally, 3) Are climate change and urban fringe-related NOx pollution now promoting rapid cheatgrass spread? Land management for ecological restoration purposes requires efforts to answer such urgent but difficult questions.

## **Two Sample Recommendations From Other Agencies**

Even state extension services that accept chemical weed control as a central tool for cheatgrass control provide clear guidance about the steps that need to be taken to accomplish the management objective. For this (cheatgrass) weed target, spraying campaigns alone do not work.

Below is one such guidance from the Montana State University extension service. It highlights several matters detailed above: the persistence of this herbicide in the environment, the accompanying need for post-spraying monitoring, and the requirement for long term management plans including reseeding.

*“If planting desired species into areas treated with Rejuvra™, avoid planting for at least 8 months and then conduct a field bioassay to determine residual herbicide effects on desirable species. The active ingredient persists, which is ideal for annual grass control, but needs to be taken into consideration if revegetation is necessary as part of an integrated weed management plan”*

<https://www.montana.edu/extension/judithbasin/crops-and-livestock/news-and-alerts/rejuvra-epa-approval-rangeland.html>”

Also see a review jointly conducted by the Massachusetts Department of Environmental Protection Office of Research and Standards and the Massachusetts Department of Agricultural Resources regarding indaziflam applications in rights-of-way. It describes the critical importance of determining areas where aquatic species as well as amphibians and reptiles may be in residence and thus directly affected by applications of this chemical. Again, these are concerns that are entirely absent from the version 2 Boulder County Weed Management Plan but which certainly should be included. From that governmental agency review:

*“However, impacts to amphibians and reptiles are based on surrogate toxicity information for fish and birds respectively, and as such have additional uncertainty. Therefore, additional precautions should be taken as warranted to identify potentially significant amphibian and reptilian habitat prior to application. Sensitive non-target plant species have been identified as organisms of concern. Given that herbicides are designed to control plants, this is not surprising. This information, coupled with the fact that indaziflam is moderately mobile and some of its metabolites are highly mobile strongly indicates that application of indaziflam should be targeted as much as possible to avoid impacts on non-target plants. Measures that minimize drift should be used in applying this product. In addition, as with any application, a preliminary field survey should be conducted prior to application to identify any plants on the endangered species list and/or any other plant species that are important to that ecosystem.”*

<https://www.mass.gov/doc/indaziflam-2022/download#:~:text=Based%20upon%20the%20available%20database,Rights%2Dof%2DWay%20Regulations.>

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# Attachment 3

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                            |                                                  |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>U.S. ENVIRONMENTAL PROTECTION AGENCY<br/>Office of Pesticide Programs<br/>Registration Division (7505P)<br/>1200 Pennsylvania Ave., N.W.<br/>Washington, D.C. 20460</p> | <p><b>EPA Reg. Number:</b><br/><br/>432-1613</p> | <p><b>Date of Issuance:</b><br/><br/>3/31/20</p> |
| <p><b>NOTICE OF PESTICIDE:</b><br/><u>  X  </u> Registration<br/><u>     </u> Reregistration<br/>(under FIFRA, as amended)</p>                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                            | <p><b>Term of Issuance:</b><br/>Conditional</p>  |                                                  |
| <p><b>Name of Pesticide Product:</b><br/>REJUVRA PLUS</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                            |                                                  |                                                  |
| <p><b>Name and Address of Registrant (include ZIP Code):</b><br/>Bayer CropScience<br/>PO Box 12014<br/>2 TW Alexander Drive<br/>Research Triangle Park, NC 27709</p>                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                            |                                                  |                                                  |
| <p><b>Note:</b> Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.</p>                                                                                                                                                                                                               |                                                                                                                                                                            |                                                  |                                                  |
| <p>On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.</p>                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                            |                                                  |                                                  |
| <p>Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.</p> |                                                                                                                                                                            |                                                  |                                                  |
| <p>This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:</p>                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                            |                                                  |                                                  |
| <ol style="list-style-type: none"> <li>1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.</li> </ol>                                                                                                                                                                                                                                                                         |                                                                                                                                                                            |                                                  |                                                  |
| <p><b>Signature of Approving Official:</b><br/><br/><i>Emily Schmid</i><br/><br/>Emily Schmid, Product Manager 25<br/>Herbicide Branch, Registration Division (7505P)</p>                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                            | <p><b>Date:</b><br/><br/>3/31/20</p>             |                                                  |

2. You are required to comply with any future pollinator data requirements described in the interim decision document identified below:

Interim Registration Review Decision for Rimsulfuron

If you have questions about the decision document listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division:

<http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

3. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 8/23/2019
- Alternate CSF 1 dated 8/23/2019

If you have any questions, please contact Sarah Meadows by phone at 703-347-0505, or via email at [meadows.sarah@epa.gov](mailto:meadows.sarah@epa.gov).

Enclosure

**ACCEPTED**

3/31/2020

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No.

432-1613

|             |       |    |           |
|-------------|-------|----|-----------|
| INDAZIFLAM  | GROUP | 29 | HERBICIDE |
| RIMSULFURON | GROUP | 2  | HERBICIDE |

# Rejuvra® Plus

[Editorial Note – [Bracketed] text is optional]

[Editorial Note – Marketing claims positioned here]

## Water Dispersible Granule

Preemergence and Postemergence Herbicide for Rangeland Restoration West of the Mississippi River and for Restoration and Protection of Conservation Reserve Program (CRP) Lands and Natural Areas e.g. Parks and Open Space, Wildlife Management Areas, Recreational Areas, Fire Rehabilitation Areas, Prairies and Fire Breaks.

### ACTIVE INGREDIENT(S):

Indaziflam..... 24.30%

Rimsulfuron..... 16.70%

OTHER INGREDIENT ..... 59.00%

TOTAL: 100.00%

Contains 0.243 pounds indaziflam per U.S. pound (243 grams ai/kg)

Contains 0.167 pounds rimsulfuron per U.S. pound (167 grams ai/kg)

EPA Reg. No. 432-1613

EPA Est.

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

See [Back][Side] Panel for First Aid Instructions and [Leaflet][Booklet] for Complete Precautionary Statements and Directions for Use.  
(Note to reviewer: Location of additional precautionary statements, directions for use will vary between those listed, depending on container type/size.)

For MEDICAL and TRANSPORTATION Emergencies ONLY Call 24 Hours a Day 1-800-334-7577

For PRODUCT USE Information Call 1-800-331-2867

Net Contents:

PRODUCED FOR



Bayer Environmental Science  
A Division of Bayer CropScience LP  
5000 CentreGreen Way, Suite 400  
Cary, NC 27513

## FIRST AID

|                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>If swallowed:</b>                                                                                                                                                                                                                         | <ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything to an unconscious person.</li></ul> |
| <b>If on skin or clothing:</b>                                                                                                                                                                                                               | <ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>                                                                                                              |
| <b>If in eyes:</b>                                                                                                                                                                                                                           | <ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>                                                  |
| <b>In case of emergency, call the toll-free Bayer CropScience LP Emergency Response telephone number: 1-800-334-7577. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.</b> |                                                                                                                                                                                                                                                                                                                                                |
| <b>Note to Physician:</b> No specific antidote is available. Treat symptomatically.                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                |

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

- Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing.
- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove and wash contaminated clothing before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Waterproof gloves.

### USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### ENGINEERING CONTROLS

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

## USER SAFETY RECOMMENDATIONS

- Users should wash hands after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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## ENVIRONMENTAL HAZARDS

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This product is toxic to fish, aquatic invertebrates, and plants. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high watermark. Do not contaminate water when disposing of equipment rinsate or wash water. This product may enter water through spray drift or runoff. Follow directions for use to avoid spray drift and runoff.

### Surface Water Advisory

This pesticide may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level well maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential of this product entering water from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

### Ground Water Advisory

This pesticide has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

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## DIRECTIONS FOR USE

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**It is a violation of Federal law to use this product in a manner inconsistent with its labeling.  
Read the entire label before using this product.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**IN THE STATE OF NEW YORK ONLY: NOT FOR SALE, DISTRIBUTION OR USE IN NASSAU OR SUFFOLK COUNTY.**

### MANDATORY SPRAY DRIFT REQUIREMENTS

#### Aerial Applications:

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use  $\frac{1}{2}$  swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

#### Ground Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or target Vegetation.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

#### Boom-less Ground Applications:

- Applicators are required to use a Medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

### SPRAY DRIFT ADVISORIES

#### Boom-less Ground Applications:

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

#### Handheld Technology Applications:

- Take precautions to minimize spray drift.

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### **Controlling Droplet Size – Aircraft**

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

### **BOOM HEIGHT – Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

### **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

### **WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### **NON-TARGET ORGANISM ADVISORY**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

### **WINDBLOWN SOIL PARTICLES**

Rejuvra Plus has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying Rejuvra Plus if prevailing local conditions may be expected to result in off-site movement.

## **PRODUCT INFORMATION**

Rejuvra Plus is a preemergence and postemergence herbicide for rangeland restoration west of the Mississippi River and for restoration and protection of Conservation Reserve Program (CRP) lands and natural areas e.g. parks and open space, wildlife management areas, recreational areas, fire rehabilitation areas, prairies and fire breaks.

Apply Rejuvra Plus to the soil as a uniform broadcast spray for the prevention of new weed emergence. Rejuvra Plus is a water dispersible granule formulation containing indaziflam and rimsulfuron. Rejuvra Plus controls weeds by two modes of action. Indaziflam inhibits cellulose biosynthesis in plants and rimsulfuron inhibits production of amino acids necessary for protein synthesis and plant growth.

Rejuvra Plus can be applied to terrestrial non-crop sites that contain areas of casual water of a temporary nature as a result of surface water collecting in equipment wheel ruts or in other depressions created by management activities not to include man-made wetland areas or man-made ditches carrying water (temporary or permanent in nature).

Aerial applications of Rejuvra Plus are allowed.

## **USE RESTRICTIONS**

- Do not apply more than a total of 6 ounces of Rejuvra Plus per acre (0.091 lb indaziflam and 0.062 lb rimsulfuron) within a twelve-month period.
- Do not apply more than two applications of Rejuvra Plus in a 12-month period.
- Do not apply directly to water or to soil where standing water is present except as specified on this label.
- Do not apply in or on irrigation ditches.
- Do not treat or allow spray drift or runoff to fall into irrigation ditches.

- Do not apply this product to water-saturated soil, frozen, or snow covered ground.
- Do not apply Rejuvra Plus to newly seeded desirable grasses.
- Do not apply Rejuvra Plus through an irrigation or chemigation system.
- Do not apply or otherwise permit this product or sprays containing this product to come into contact with any non-target crop or desirable plants.
- Do not make applications when circumstances favor movement from treatment sites or if there is risk of spray drift or movement of applied product into sensitive areas. Sensitive areas are defined as bodies of water (ponds, lakes, rivers, and streams), habitats of endangered species and non-labeled agricultural crop areas. Refer to the Spray Drift Management section of this label for more details.
- Do not use on residential or commercial turf, golf courses, sod farms, or production and landscape ornamentals.
- Do not spot spray around desired plants due to the variability of the actual application rate. Excessive application rates may result in severe plant injury or death.
- Do not spray around trees trunks that are not fully callused and have mature brown bark, unless protected from spray contact by nonporous wraps, grow tubes or waxed containers.
- Do not use Rejuvra Plus in a spray solution with pH of below 4.0 or above 8.0, or with spray additives that buffer the pH to below 4.0 or above 8.0, since degradation of Rejuvra Plus may occur.
- Rejuvra Plus is not for sale, distribution, or use in Nassau County or Suffolk County in New York State.
- Do not apply by air in New York State.

## USE PRECAUTIONS

- Avoid using Rejuvra Plus in areas where soil runoff or erosion is likely to occur.
- Avoid application to powdery, dry, light or sandy soil when there is little likelihood of rainfall soon after application. Injury to crops or desirable vegetation may result if treated soil is washed, blown, or moved into these areas.
- Applications made during periods of intense rainfall, to soils saturated with water, or soils through which rainfall will not readily penetrate may result in runoff and movement of Rejuvra Plus.
- Avoid using Rejuvra Plus on desirable plants that exhibit low vigor or poor health as they may be more susceptible to crop injury.
- Avoid direct or indirect spray contact with foliage, green bark, roots, or fruit of desirable plants as it may cause localized crop injury or death.
- Treated soil should be left undisturbed to reduce the potential for Rejuvra Plus movement by soil erosion, by wind, or water.

## APPLICATION INSTRUCTIONS

- Rates provided on this label are based on broadcast treatment.
- Apply Rejuvra Plus alone or in an approved tank mixture in a minimum of 10 gallons of spray mixture per acre unless otherwise specified on this label.
- Use higher spray volumes to improve distribution in high densities of emerged weeds or debris.
- Best weed control is obtained when Rejuvra Plus is applied to a dry or slightly moist soil surface. Allow 48 hours without rain or irrigation to bind herbicide to the soil, followed by a 0.25 to 0.5 inch of water within 21 days of application. If weeds have begun to emerge at application, a foliar active herbicide is recommended.
- Application made when excessive crop or weed debris is present on the soil surface may prevent a uniform distribution of the product reaching the soil and consequently may reduce weed control. Performance may be improved by removing the debris prior to applying Rejuvra Plus. In very dense stands of living weeds, an application of a foliar active herbicide first then followed 3-6 weeks later with the application of Rejuvra Plus is recommended for improved performance.

## Ground Application (Broadcast)

Apply Rejuvra Plus with a properly calibrated sprayer according to the manufacturer's directions and check periodically to be certain that the equipment is working properly prior to each use. Uniform application is essential for satisfactory weed control. Avoid overlap. Shut off spray booms while starting, turning, slowing, or stopping to avoid off-target application.

When spraying close or next to ponds, lakes, rivers, and streams be cognizant of keeping the spray solution from reaching the water.

For all ground applications, follow these guidelines:

- Use spray volumes of 10-100 gallons per acre with spray boom height and spray pressures as low as practical.
- Use medium or coarser droplet producing nozzle tips.
- Use drift control additives and shielded sprayers where practical, and spray when wind speed is low. See the Spray Drift Management section for more details.
- The use of a hand-held or backpack sprayer is allowed, especially when treating smaller areas. The water volume and use rates are the same on a given area as if treating with a much larger boom sprayer.
- When using a hand-held or backpack sprayer, do not exceed the use rate restrictions stated on this label.