



Oregon State
University

Specialty Crop Protection Program

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US Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington DC 2046-0001

August 2, 2023

RE: Docket EPA-HQ-OPP-2023-0327, Vulnerable Species Pilot Project for Endangered Species

Dear Ms. Matuszko,

Thank you for the opportunity to comment on the Vulnerable Listed Species Pilot Project. I am writing on behalf of the Western IPM Center. I appreciate the development of a process that works to protect our most endangered species and attempts to differentiate between areas that require the most stringent protections versus areas where mitigation measures will be sufficient for species protection.

The comments contained below focus primarily on the Oregon range of the Taylor's Checkerspot Butterfly (TCB), though the vast majority of this information is also relevant to the TCB avoidance/mitigation zones within Washington. Please find main concerns highlighted in separate sections below, followed by a list of suggestions that would improve the pilot species plan and reduce impacts on agriculture and commercial pesticide users without compromising species survival.

Concern #1: Impacts to Willamette valley agriculture, forestry, and research

The proposed avoidance area covers a wide variety of specialty crops and land uses. Table 20 (page 42) of the Pilot Plan document leaves major use sites for TCB blank. Within Oregon, there is an estimated 730,000 acres of productive agricultural and forestry land in the proposed avoidance area. Agricultural uses include a wide range of specialty crops: blueberries, vegetable crops (cauliflower, broccoli, radishes, pumpkins, peas, garlic, squash, turnips, mustard and related greens), Christmas trees, clover and grass seed crops, corn, dry beans, grapes, pasture, hops, mint, hazelnuts, and wheat. The avoidance

area also encompasses two research universities – Oregon State University (land grant) and University of Oregon.

The economic impact of no pesticide use within the proposed area is too difficult to estimate, given the short time frame allowed to provide comments and the sheer size of the avoidance zone. Landowners could make a variety of decisions on what to do with land that falls within the avoidance zone (e.g. transition to organic, change crops, absorb yield losses, allow land to fallow). Widespread changes in land management practices may allow for invasive grasses and other weeds to flourish, which would contribute to wildfire risk. Loss of management tools could render producers out of compliance with other state regulations. The following list are all impacts to consider, though this list is far from comprehensive:

- Decreased production of grass and clover seed crops, produced on approximately 120,000 acres of the TCB avoidance area. Herbicides are essential in these production systems because of seed contamination by weed seeds. Oregon is the world's leading producer of grass and clover seed. One use of this grass and clover seed is in cover crop mixes that will be required for pesticide mitigation in other parts of the country, as proposed in the mitigation measure 'picklist' in the ESA Work Plan Update.
- Compromising forester compliance with the Oregon Forests Practices Act (FPA)¹, which requires that young trees must be "free-to-grow" (vigorous, well-distributed, and ready to grow into successfully into a young forest) within six years after the previous harvest. Herbicides are integral during the first three years to ensure that competition with other plants, especially invasive weeds, is maintained at a low enough level to comply with the FPA.
- Invasive grasses and plants, such as cheatgrass or gorse, may contribute to fuels that lead to risk of explosive wildfires. Herbicides are one of many tools that land managers utilize to decrease wildfire risk^{2,3}. Needless to say, wildfire impacts are deadly, including the widespread loss of towns, property, and even human life. Wildfire risk continues to increase with drier weather experienced as part of climate change. The 2020 wildfires in Oregon burned a total of 850,000 acres. A wildfire within the avoidance area has the potential to spread to critical habitat of TCB, ironically destroying the habitat of known remaining TCB populations.
- The avoidance zone encompasses research farms and forests for Oregon State University. Inability to conduct agricultural and forestry research compromises OSU's role as a land grant university, and jeopardizes production research. For example, research is conducted into IPM research across production types (including but not limited to: berries, vegetable, hops, grass and clover seed, turfgrass, forestry). Without research and extension into proven IPM strategies developed on research farms, producers outside of the avoidance area are less likely to adopt IPM best management practices that incorporate reduced numbers of applications, newer softer chemistries, and best practices such as chemical rotation.
- In Oregon, K-12 schools are required to adopt an IPM plan, which includes IPM of sports/athletic fields through mowing, fertilization, and irrigation. OSU provides training and resource materials on these practices, however many schools struggle to implement them because of a lack of resources (Oregon has one of the lowest rates of public funding in the nation for maintenance and operation of public schools). Schools apply herbicides to make up for a lack of resources for cultural practices. Well-maintained sports fields result in less soil compaction, less weeds, and fewer student injuries.

Concern #2: Use of FWS Range maps instead of designated Critical Habitat for avoidance areas

EPA has determined that the avoidance area for TCB should cover both the designated Critical Habitat and the current range map, as shown on the species page for TCB on the FWS website⁴. Intuitively, this does make sense, given that one may expect TCB to occur throughout its range. However, calling the map a “current range map” appears to be a bit of a misnomer, as the range depicted on the map is best viewed as an imperfect historical range map. The data that went into this map is information on where suitable habitat *may once have occurred*, as well as incorporation of species reports and museum specimen locations⁵. Given that the range map of TCB depicts a series of circles in roughly equal diameter, it is unlikely that these maps are based on refined data representative of likely TCB habitat.

The best information on where protections for TCB are most important are the critical habitat, found in the Proposed Rule and Final Rule for Designated Critical Habitat for Taylor’s Checkerspot Butterfly, as well as the more recent Draft Recovery Plan for Taylor’s Checkerspot Butterfly^{6,7,8}. Per the Endangered Species Act, one of two criterion are required for designation of critical habitat: areas currently occupied by the species, or habitat unoccupied by the species, but has characteristics that are essential for the conservation of the species. Accordingly, these critical habitat areas are the most important areas for protection of TCB, and the best focus of an avoidance zone rather than the entirety of the historical species range.

In Oregon, TCB occupies two small meadow patches in the Willamette Valley: one powerline corridor maintained by BPA, and an upland prairie⁹. One of these populations may now be extirpated¹⁰. Both of these populations are restricted to the critical habitat designated by FWS in the Final Rule from 2013. Within this draft plan, EPA states “For the six species [including TCB] where EPA is proposing separate avoidance and minimization areas....avoidance areas are proposed to apply within spatial areas where the species is known to occur or within described species habitat or designated critical habitat” (page 19). Use of the range map does not meet this description of what EPA intended to designate as an avoidance area, whereas use of the TCB designated critical habitat both meets EPA’s intent while minimizing the proposed widespread impacts of a million plus acre avoidance zone.

Concern #3: Label language directing applicators to consult with IPaC/Ecosphere

Within the proposed avoidance zone, EPA proposes label language within Bulletins Live! Two (BLT) that directs applicators to visit the IPaC/Ecosphere website for consultation with FWS to obtain a permit for application. The first concern with this approach is that IPaC was not developed with private citizens (i.e. applicators) in mind. Rather, this system was developed to aid in ESA Section 7 consultations with *Federal entities* (such as US EPA) for projects that may impact listed species. While private citizens (applicators) can access IPaC, the IPaC website directs non-federal entities to visit the FWS Habitat Conservation Plans website¹¹. Per the IPaC FAQ’s:

What if my project does not have a Federal nexus (i.e., it is not being funded, carried out, or permitted by a Federal agency)?

If you do not have a Federal nexus, you may use IPaC for informational purposes.

However, if you believe your project may have adverse effects to listed species or critical habitat, please contact the local U.S. Fish and Wildlife Service office, and visit this site to

read more about options for landowners: <https://www.fws.gov/service/habitat-conservation-plans>.

Proposed language that directs applicators to IPaC when this is the inappropriate resource seeds confusion and frustration amongst users.

The second concern is about capacity issues within local FWS offices to field permitting questions by applicators. Given the breadth of the avoidance zone, hundreds to thousands of landowners and/or applicators may be seeking permits or exemptions from FWS every growing season. This represents a significant workload increase for local FWS offices. One way to streamline inquiries for TCB exemption permits would be for the local FWS office to develop and distribute a set of BMPs⁵, such as the TCB BMPs found in the PROJECTS Contractor's Handbook¹². Directing applicators to FWS simply to receive a BMP guide needlessly adds extra steps for applicators, while seeding confusion and frustration. This step could be streamlined for applicators by simply adding the BMPs into the BLT language instead.

Concern #4: Precedence & implementation of this process to other Oregon listed/endangered species

EPA indicates that this pilot program may be used as the basis for protection of other listed and endangered species. Using the TCB avoidance and mitigation zones as precedent is problematic for the following reasons:

- This approach does not utilize the best available science, as required of EPA to fulfill ESA requirements:
 - Using FWS expertise, TCB critical habitat was designated on a total of 1,941 acres of land in three Washington counties (Island, Clallam and Thurston) and one Oregon county (Benton)⁷. Conflating critical habitat with the historical species range creates wide ranging impacts (see concern #1) without enhancing species conservation.
 - The proposed avoidance area paints a broad brush approach without taking species biology into account. The TCB recovery plan *relies* upon herbicides as an important tool for habitat maintenance⁸, while the PROJECTS BMPs, developed by FWS, provide the following herbicide guidelines: “The application of herbicides for control of nonnative grasses, shrubs, and forbs, as well as removal of conifers may include broadcast or spot-spray application. Broadcast application shall only occur outside of occupied habitat with a ~3 m (15 feet) buffer. Spot-spray application of herbicide may occur in occupied habitat.”¹² While it appears that EPA intends to allow applications for TCB conservation within the avoidance zone, the proposed avoidance label language does not detail the criteria for exemptions or who might qualify, creating confusion among conservation organizations on what pesticide management activities are allowable.
 - The pilot species plan, as proposed, creates an excessively large avoidance area, shifts responsibility to applicators and FWS, and ignores expertise and BMPs that already exist for the species. This is a poor precedence for ESA compliance, and EPA should strive to incorporate the best available science into Endangered Species Bulletins.
- Expansion of this approach to species that have large historical ranges, such as Willamette daisy, would be devastating to Oregon agricultural production. Like TCB, Willamette daisy has small (less than 1,000 acre) designated critical habitat. However, the “current range map” on the FWS

website (comparable to the map utilized for the range of TCB in the pilot paper) encompasses the entirety of the Willamette Valley – one of the nation’s most important fruit and vegetable production regions. Using this broad brush approach to ESA compliance, as proposed in the pilot plan, risks devastating local economies and food supply stability, without ultimately resulting in any increased species conservation or survival.

Suggestions:

1. Utilization of critical habitat maps instead of historical range maps for designation of avoidance areas. As discussed above (concern #2), the critical habitat maps are the best currently existing data on species presence and key habitat locations.
2. Work with FWS to develop BMPs for a given species that can be implemented into BLT. This reduces unnecessary steps by applicators (e.g. consult BLT, consult IPaC, redirect to habitat conservation plans website, consult FWS office, receive BMP document; concern #3) and reduces stress on local FWS office capacity.
3. Return to a scientifically based approach of evaluation of risks to listed species by pesticide, or related chemistries. This white paper makes an implicit assumption that all conventional pesticides are likely to have potential risks listed species, while all organic pesticides are assumed to be safe to TCB and its habitat. In reality, there are likely to be hundreds of conventional pesticides that have no risk to TCB or habitat, while other organically approved pesticides certainly have risks (Bt, for example).
4. Utilize a broad range of drift, erosion and runoff mitigation measures within mitigation zones to ensure that growers have an option with which they are able to comply. Growers surveyed for their ability to implement mitigation measures presented in the Endangered Species Work Plan update indicated that only one or two options were feasible under the varied agricultural landscapes in Oregon¹³.
5. Dedicate additional time and resources into an outreach and education plan. The adoption of BLT and runoff and erosion mitigation measures represents a significant change in regulatory compliance for producers. Furthermore, many producers are not technologically savvy, or have limited to no access to the internet. Significant time will need to be devoted by outreach and extension professionals to make growers aware of label changes, mitigation measures, and BLT to maximize compliance.

One of the criteria for selection within the pilot program were species with potentially affected area that was spatially limited. The proposed label changes for TCB impacts a large amount of agricultural and forestry land, with wide ranging impacts on landscape management and agricultural production; the ability of landowners, producers and school managers to comply with state regulations; and university (including land grant university) research. Given the breadth of the area and impacts of such avoidance mitigation, it is not clear whether TCB meets the pilot program objectives in the first place, and should not be included without significant refinement to the pilot program plans.

Thank you for the opportunity to comment. Please feel free to contact me with additional questions.

Respectfully,



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To compile comments, input is actively solicited from stakeholders throughout the Pacific Northwest in an effort to convey use patterns, benefits, potential impacts, and the availability and efficacy of alternatives. These comments largely reflect expert testimony from stakeholders, including research and extension experts as well as farmers and commodity groups. The comments do not imply endorsement by Oregon State University or the Western IPM Center.

References:

¹ Oregon Department of Forestry. Forest Protections Act. Accessed August 1, 2023. <https://www.oregon.gov/odf/working/pages/fpa.aspx>

² Oregon Department of Forestry. Forest Facts: 2020 Labor Day Fires: Post-fire Challenges with Invasive Plants. 2022. Accessed August 1, 2023. <https://www.oregon.gov/odf/Documents/forestbenefits/fact-sheet-labor-day-fire-weeds.pdf>

³ The Oregon Conservation Strategy. Disruption of Disturbance Regimes. Accessed August 1, 2023. <https://www.oregonconservationstrategy.org/key-conservation-issue/disruption-of-disturbance-regimes/>

⁴ USFWS. Environmental Conservation Online System: Taylor's (=whulge) Checkerspot (*Euphydryas editha taylori*). Accessed August 1, 2023. <https://ecos.fws.gov/ecp/species/5907>

⁵ J. Everett, USFWS, Portland Field Office. Personal communication. July 31, 2023.

⁶ USFWS. 2012. Endangered and Threatened Wildlife and Plants: Listing Taylor's checkerspot butterfly and streaked horned lark and designation of critical habitat; Proposed rule. Federal Register 77(197):61937-62058.

⁷ USFWS. 2013. Endangered and Threatened Wildlife and Plants: designation of critical habitat for Taylor's checkerspot butterfly and streaked horned lark. Federal Register 78(192):61506–61578. 85 pp.

⁸ USFWS. 2022. Draft Recovery Plan for Taylor's Checkerspot Butterfly (*Euphydryas editha taylori*). Portland, Oregon. xi + 24 pages. Accessed August 1, 2023. <https://www.fws.gov/node/266264>

⁹ Kaye, T.N., A.G. Stanley, and D. Ross. 2011. Dispersal behavior and habitat selection of Taylor's checkerspot butterfly. Progress report. Institute for Applied Ecology, Corvallis, Oregon and U.S. Fish and Wildlife Service, Lacey, Washington. 27 pp.

¹⁰ Severns, P.M. and J.K. Stone. 2016. Pathogen Invasion Triggers an Evolutionary Trap for an Endangered Checkerspot Butterfly Dependent on an Exotic Host Plant. *Biological Invasions* 18:3623-3633.

¹¹ USFWS. Habitat Conservation Plans. Accessed August 1, 2023. <https://www.fws.gov/service/habitat-conservation-plans>

¹² USFWS 2020. Programmatic Restoration Opinion for Joint Ecosystem Conservation by the Services (PROJECTS): Synthesis of Programmatic Endangered Species Act (ESA) Section 7 Consultation. Version 1.2. FWS reference: 01EOFW00-2014-F-0222.

¹³ Lightle 2023. Comment submitted by the Western IPM Center. EPA-HQ-OPP-2022-0908-0111.