



December 9, 2025

*Sent via electronic and certified mail*

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**RE: Notice of Violations of the Endangered Species Act Relating to the U.S.  
Fish and Wildlife Service's Determination that Designating Critical  
Habitat for Bartram's Stonecrop Is "Not Prudent".**

Dear Secretary Burgum, Director Nesvik, Acting Assistant Director Shultz, and Acting Regional Director Jacks:

With this letter, the Center for Biological Diversity provides notice to the U.S. Fish and Wildlife ("FWS") that the agency's determination that designating critical habitat for Bartram's stonecrop (*Graptopetalum bartramii*) is "not prudent" violates Section 4 of the Endangered Species Act ("ESA").<sup>1</sup>

**Legal Background**

The ESA requires FWS to designate "critical habitat" "to the maximum extent prudent and determinable" concurrently with its listing of a species as threatened or endangered.<sup>2</sup> Critical habitat includes the specific areas occupied by the species with "physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection."<sup>3</sup> It also includes specific areas unoccupied by the species at the time of listing "upon a determination by [FWS] that such areas are essential for the conservation

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<sup>1</sup> Final Rule listing Bartram's stonecrop as a Threatened species with a Section 4(d) rule, 86 Fed. Reg. 48545 (Aug. 31, 2021).

<sup>2</sup> 16 U.S.C. § 1533(a)(3)(A).

<sup>3</sup> *Id.* § 1532(5)(A)(i).

of the species.”<sup>4</sup> “Conservation” is in turn broadly defined to include “all methods and procedures which are necessary to bring endangered species or threatened species to the point at which the measures provided pursuant to [the ESA] are no longer necessary.”<sup>5</sup>

Under the ESA’s plain language, “conservation” is accordingly “a much broader concept than mere survival.”<sup>6</sup> Accordingly, the “clear” purpose of critical habitat designation “is for [FWS] to carve out territory that is not only necessary for the species’ survival but also essential for the species’ recovery.”<sup>7</sup>

Once FWS designates critical habitat, Section 7 of the ESA requires federal agencies to consult with FWS to “insure” that their actions are not likely to “jeopardize the continued existence” of listed species *or* “result in the destruction or adverse modification” of critical habitat.<sup>8</sup> Protection against the destruction or adverse modification of critical habitat is thus separate from, and additional to, protection against jeopardy to a species.<sup>9</sup> Such designation also affords substantial, additional protection for a species beyond the consultation requirement, “through informing management partners of important habitats, stimulating scientific surveys or research, promoting voluntary conservation actions, and raising public awareness of habitats that are essential.”<sup>10</sup>

Section 4(a)(3)(A) of the ESA provides two exceptions to the requirement that FWS designate critical habitat: determinations of “not determinable” or “not prudent.” If FWS makes a not determinable finding, it must move forward with a critical habitat designation rulemaking within one year “based on such data as may be available at that time, designating, to the maximum extent prudent, such habitat.”<sup>11</sup> In contrast, a not prudent determination is the agency’s final decision, and is thus the only wholesale exception to FWS’ duty to designate critical habitat.<sup>12</sup>

The term “prudent” is undefined under the ESA but means “careful and avoiding risks.”<sup>13</sup> This is in line with Congress’s “avowed intent ... that a ‘not prudent’ finding regarding critical

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<sup>4</sup> *Id.* § 1532(5)(A)(ii).

<sup>5</sup> *Id.* § 1532(3).

<sup>6</sup> *Sierra Club v. U.S. Fish & Wildlife Serv.*, 245 F.3d 434, 441 (5th Cir. 2001).

<sup>7</sup> *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir. 2004).

<sup>8</sup> 16 U.S.C. § 1536(a)(2) (emphasis added).

<sup>9</sup> *Sierra Club*, 245 F.3d at 443.

<sup>10</sup> 89 Fed. Reg. 24300, 24317 (Apr. 5, 2024).

<sup>11</sup> 16 U.S.C. § 1533(b)(6)(C)(ii).

<sup>12</sup> FWS may also “exclude” specific areas of critical habitat from designation where it determines that the benefits of exclusion will outweigh the benefits of designation. 16 U.S.C. § 1533(b)(2).

<sup>13</sup> Cambridge Dictionary, *Prudent*, <https://dictionary.cambridge.org/us/dictionary/english/prudent>; see also *Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.*, 792 F. Supp. 3d 50 (D.D.C. 2025) (“‘prudent’ connotes ‘sound judgment, caution, and far-sightedness.’”) (cleaned up).

habitat would only occur under ‘rare’ or ‘limited’ circumstances.”<sup>14</sup> FWS itself has repeatedly recognized that “circumstances in which [it] determines critical habitat designation is not prudent are rare[.]”<sup>15</sup>

In 2019, FWS significantly revised its ESA implementing regulations, enumerating five circumstances in which it may find designation of critical habitat would not be prudent, while retaining the circumstance FWS relied on in this case: “[t]he species is threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of threat to such species.”<sup>16</sup> In addition to establishing several new categories of not prudent findings, the 2019 regulations also departed from 35 years of prior regulatory direction requiring FWS to consider the benefits of critical habitat designation before making a “not prudent” determination.

## **Factual Background**

### **1. Bartram’s Stonecrop.**

Bartram’s stonecrop is a striking blue-green desert succulent of the Crassulaceae family that is endemic to the Sky Islands of southern Arizona and northern Mexico. It is found within Madrean woodlands on rocky outcrops in deep, narrow canyons at elevations from 3,500 to 6,800 feet. Madrean woodlands, comprising the majority of habitat within the Sky Islands, are a forested community characterized by evergreen oaks, as well as pine and juniper trees. The stonecrop roots into shaded crevices covered with deep vegetative litter on rock ledges and cliffs and is nearly always found in close proximity (~30 feet) of streambeds, springs, or seeps.

Bartram stonecrop’s reliance on moist microhabitat conditions makes it particularly vulnerable to loss of water, including groundwater extraction, arising from mining and the related impacts of drought and climate change. Other documented threats include altered fire regimes, livestock grazing, and recreation. Like many succulents, the species also faces some degree of pressure from illegal collection. All these vulnerabilities are magnified by the very small size of almost all the species’ populations.

FWS most recently estimated that 50 populations of the stonecrop remain across 12 mountain ranges.<sup>17</sup> Nine of those ranges are within the United States: the Baboquivari, Chiricahua, Dragoon, Mule, Pajarita-Atascosa, Patagonia, Rincon, Santa Rita, and Whetstone

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<sup>14</sup> *Sierra Club*, 245 F.3d at 443 (citing H.R. Conf. Rep. No. 97-835, at 24 (1982), *reprinted in* 1982 U.S.C.C.A.N. 2860, 2865; H.R. Rep. No. 95-1625, at 16-17 (1978), *reprinted in* 1978 U.S.C.C.A.N. 9453, 9466-67); *Nat. Res. Def. Council v. United States DOI*, 113 F.3d 1121, 1126 (9th Cir. 1997) (“The fact that Congress intended the imprudence exception to be a narrow one is clear from the legislative history.”).

<sup>15</sup> 81 Fed. Reg. 7414, 7429 (Feb. 11, 2016).

<sup>16</sup> 50 C.F.R. § 424.12(a)(1)(i); 86 Fed. Reg. at 48567-68.

<sup>17</sup> 86 Fed. Reg. at 48546.

Mountains.<sup>18</sup> The species appears extirpated from the Empire range. Nearly all stonecrop populations are very small, with more than half supporting fewer than 50 individual plants. In total, FWS estimates that fewer than 4,300 individual plants exist within the U.S. populations, within occupied habitat totaling approximately 17 acres.<sup>19</sup> Nearly 90% of these populations are located on federal public lands: 67% on lands administered by the U.S. Forest Service, and 22% on lands administered by the National Park Service.<sup>20</sup>

## **2. FWS Listing of Bartram’s Stonecrop as a Threatened Species and Determination that Designating Critical Habitat Is Not Prudent.**

Although Bartram’s stonecrop was first identified as a candidate for listing in 1980, FWS never took action to protect the species. In light of the synergistic and escalating threats to the species, the Center petitioned to list Bartram’s stonecrop on July 7, 2010. On August 8, 2012, FWS published a 90-day finding that the petition presented substantial information indicating that the species may warrant listing.<sup>21</sup> After more than seven years of additional delay, FWS issued a positive 12-month finding on December 6, 2019, along with a proposed rule to list the species as threatened.<sup>22</sup>

In the proposed rule, FWS identified “groundwater extraction and prolonged drought” and “altered fire regimes” as the “stressors that pose the largest risk to the future viability of the species.”<sup>23</sup>

FWS found that current mining operations are the biggest source of “dewatering of streams,” which “may lead to overstory canopy losses and resulting loss of shade, as well as reduction in spring and streamflow and humidity in nearby Bartram’s stonecrop populations.”<sup>24</sup> FWS specifically identified the proposed Rosemont Mine in the Santa Rita Mountains as a project that could “significantly impact” nearby stonecrop populations.<sup>25</sup>

FWS acknowledged that “many” additional areas “may be explored and/or mined in the future,” and “a number” of “proposed mines are identified for development” within that range.<sup>26</sup> In the event of such development, FWS predicted that the “loss or reduction of groundwater, stream flow, or spring flow” near a stonecrop population “could lead to the extirpation of that population.”<sup>27</sup> In all, current and future projected mining could occur in as many as 10 Sky

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<sup>18</sup> *Id.*

<sup>19</sup> *Id.* at 48547.

<sup>20</sup> 86 Fed. Reg. at 48563.

<sup>21</sup> 77 Fed. Reg. 47352.

<sup>22</sup> 84 Fed. Reg. at 67063.

<sup>23</sup> *Id.* at 67076.

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

Island mountain ranges with stonecrop populations, and “could lead to extirpation” of any or all of these populations.<sup>28</sup>

In conjunction with its proposed listing rule, FWS determined that designating critical habitat for Bartram’s stonecrop was not prudent because it found “there is currently an imminent risk of take attributed to collection or vandalism,” and “mapping of critical habitat is expected to increase such threat.”<sup>29</sup> In support of this conclusion, FWS cited to an incident in the 1990s when tagged individuals of the plant were uprooted and taken from the Santa Rita Mountains, and a 2016 Google search that found an advertisement from a collector in Texas seeking Bartram’s stonecrop seedlings or cuttings.<sup>30</sup>

In April 2021, the Center sued to compel the overdue final listing rule.<sup>31</sup> Following initiation of this legal action, FWS listed Bartram’s stonecrop as a threatened species on December 6, 2019.<sup>32</sup>

In support of its listing decision, FWS prepared a “Species Status Assessment 2.0” (“SSA”). The SSA analyzed the projected future condition of the stonecrop under four different “scenarios” based on the “primary influences” on the species’ viability. FWS identified these influences as “loss of water availability; erosion, sedimentation, and burial; altered fire regime; and loss of shade.”<sup>33</sup> FWS described the four scenarios as continuation of the current stressors; continuation of the current stressors but with conservation measures implemented; a “moderate” increase in stressors; and a “major” increase in stressors.<sup>34</sup>

FWS concluded that “while there are multiple stressors to the remaining populations, these stressors are not immediately impacting all populations such that Bartram’s stonecrop is currently in danger of extinction,” and thus did not list the species as endangered.<sup>35</sup>

FWS also determined, however, that “the stressors that pose the largest risk to future species viability are primarily related to habitat changes,” including groundwater extraction from mining.<sup>36</sup> FWS noted that “these stressors are occurring and impacting Bartram’s stonecrop and

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<sup>28</sup> *Id.* Since the stonecrop is only found in 9 Sky Island mountain ranges within the U.S., it is unclear if FWS’ estimate also includes potential mining in Mexico. In any event, FWS’ acknowledgment serves to illustrate that mining is a pervasive and systematic risk to the continued existence of Bartram’s stonecrop throughout the entirety of its range.

<sup>29</sup> *Id.* at 67088.

<sup>30</sup> *Id.* at 67077.

<sup>31</sup> *Ctr. for Biological Diversity v. U.S. Fish and Wildlife Serv.*, Case No. 1:21-cv-1045 (filed April 15, 2021).

<sup>32</sup> 84 Fed. Reg. 67063.

<sup>33</sup> 86 Fed. Reg. at 48558.

<sup>34</sup> *Id.* at 48553.

<sup>35</sup> *Id.* at 48563.

<sup>36</sup> *Id.*

will continue to do so for the next 40 years.”<sup>37</sup> FWS chose a foreseeable future analysis of 40 years “because this is within the range of predictions of available hydrological and climate change model forecasts, is within the time period of the Rosemont Mine effects and represents eight generations of Bartram’s stonecrop.”<sup>38</sup> FWS thus concluded that Bartram’s stonecrop is “likely to become in danger of extinction within the foreseeable future throughout all of its range,” and listed the species as threatened.<sup>39</sup>

In reaching its listing decision, FWS confirmed its earlier finding that designating critical habitat for Bartram’s stonecrop is not prudent, while asserting that “[d]uring the comment period, we did not receive any substantive comments, or any comments that would require us to change the not prudent determination.”<sup>40</sup>

### **Notice of ESA Violations**

FWS’ not prudent determination was arbitrary and capricious and violates its duty under the ESA to designate critical habitat to “to the maximum extent prudent” in several respects.<sup>41</sup>

Under the ESA’s plain language, structure, history, and purpose, the “best meaning” of this provision is that FWS must designate critical habitat except in those rare and narrow circumstances in which the agency establishes that the designation will provide no benefit to the species.<sup>42</sup> In line with Congress’s “avowed intent ... that a ‘not prudent’ finding regarding critical habitat would only occur under ‘rare’ or ‘limited’ circumstances,” FWS itself has repeatedly acknowledged that exceptions to its duty to designate critical habitat are “limited to situations in which designating critical habitat would not further the conservation of the species.”<sup>43</sup> This requirement has also been repeatedly upheld by the courts in challenges to prior FWS “not prudent” determinations.<sup>44</sup>

In this case, FWS found that “designating critical habitat is likely to increase threats to the species due to illegal collectors,” while failing to address or even acknowledge any of the myriad benefits of such designation.<sup>45</sup> This failure is particularly incongruous given FWS’

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<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> *Id.* at 48567-68.

<sup>41</sup> 16 U.S.C. § 1533(b)(6)(C)(ii).

<sup>42</sup> *Loper Bright Enterprises v. Raimondo*, 603 U.S. 369, 400 (2024).

<sup>43</sup> See, e.g., 81 Fed. Reg. 7414, 7429 (Feb. 11, 2016); 84 Fed. Reg. 45040, 45041 (Aug. 27, 2019).

<sup>44</sup> *Sierra Club v. U.S. Fish & Wildlife Serv.*, 245 F.3d 434, 443 (5th Cir. 2001) (citing H.R. Conf. Rep. No. 97-835, at 24 (1982), *reprinted in* 1982 U.S.C.C.A.N. 2860, 2865; H.R. Rep. No. 95-1625, at 16-17 (1978), *reprinted in* 1978 U.S.C.C.A.N. 9453, 9466-67); *Nat. Res. Def. Council v. United States DOI*, 113 F.3d 1121, 1126 (9th Cir. 1997) (“The fact that Congress intended the imprudence exception to be a narrow one is clear from the legislative history.”).

<sup>45</sup> 50 C.F.R. § 424.12(a)(1)(i).

express acknowledgment during the listing process that “the stressors that pose the largest risk to future species viability” of Bartram’s stonecrop “are primarily related to habitat changes,” including groundwater extraction from mining.<sup>46</sup> FWS has provided no plausible basis for determining that the risk of illegal collection, which is not listed as a “primary stressor” on the species, outweighs the impacts of habitat loss that would otherwise be addressed by a critical habitat designation.

Critical habitat would provide essential protections to the overwhelming majority of stonecrop populations found on our federal public lands; in particular, by requiring the Forest Service to consult with FWS to ensure that any project on National Forest lands does not destroy or adversely modify that habitat.<sup>47</sup> As the listing rulemaking for the stonecrop illustrates, such protections will be particularly important in relation to the many potential mining projects within the species’ range that threaten extirpation of affected populations through groundwater depletion and associated stream, seep, or spring drawdown. Although the Forest Service is also required to consult with FWS to ensure that any such projects do not jeopardize the continued existence of the stonecrop, critical habitat provides distinct and additive protections, particularly with respect to the species’ recovery. FWS failed to provide any consideration of this central statutory benefit of critical habitat before making its “not prudent” determination.

FWS’ conclusion that it can only designate critical habitat in a manner that would reveal precise locations of Bartram’s stonecrop also lacks a rational basis. FWS, for example, provides no explanation regarding how designating critical habitat will result in illegal collectors knowing anything more about the location of Bartram stonecrop populations than is already provided in the rulemaking documents, SSA, or the literature cited therein.

Moreover, the ESA does not require FWS to designate critical habitat in a manner that reveals specific site locations. Critical habitat is *not* synonymous with the location of individual plant populations. Instead, the agency’s regulations require only that FWS provide a map and narrative description of the outer boundaries of the designation.<sup>48</sup>

Notably, the agency’s designation of critical habitat for beardless cinchweed (*Pectis imberbis*), another imperiled Sky Island plant species considered in the same rulemaking as Bartram’s stonecrop, illustrates this distinction. The cinchweed has been reduced to an even smaller number of individuals spread across an even smaller area than the stonecrop—only six known populations in the United States remain in an area totaling approximately 5 acres.<sup>49</sup> Simply drawing a precise line around the exact location of known plant populations would not meet the ESA’s legal requirements for critical habitat designation, because the “physical and or biological features essential to the conservation of the species” invariably extend beyond those exact boundaries. In the case of the cinchweed, FWS selected the boundary of each critical habitat unit “to include 1 km (0.62 mi) of foraging and reproductive habitat for pollinators that

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<sup>46</sup> 86 Fed. Reg. at 48563.

<sup>47</sup> 16 U.S.C. § 1536(a)(2).

<sup>48</sup> 50 C.F.R. § 424.12(c).

<sup>49</sup> 84 Fed. Reg. at 67082.

are necessary for beardless cinchweed.”<sup>50</sup> This conservative approach yielded a critical habitat designation totaling 10,604 acres.<sup>51</sup> In short, a lawful critical habitat will not (and should not) be so precise as to direct people to individual plant populations, or provide any more specificity regarding plant location beyond the information already widely available in the public domain.<sup>52</sup>

Finally, FWS failed to address or even acknowledge multiple comments it received questioning the factual basis for the Bartram’s stonecrop “not prudent” determination. For example, one commentor, a biologist with experience studying the species, noted that “Bartram’s stonecrop is more difficult to propagate than the other species of stonecrop, which I would view as a deterring reason NOT to collect it, rather than making it more vulnerable to collection.” The biologist further noted that “[i]n wild populations the lifespan is short for an individual and the plants do not readily reproduce vegetatively, so they [are] not very desirable to grow despite how neat they look.”<sup>53</sup>

FWS provided no acknowledgment or response to this and other comments, but instead inaccurately and arbitrarily stated, in boilerplate language, that it “did not receive any substantive comments, or any comments that would require [it] to change the not prudent determination or the rationale for it.”

### **Conclusion**

As provided by the ESA’s citizen suit provision, if FWS does not remedy these violations within the 60-day notice period, the Center for Biological Diversity intends to pursue legal action.<sup>54</sup> If FWS believes any of the foregoing to be in error, has any questions, or wishes to discuss the matter, please contact me at bsegee@biologicaldiversity.org

Sincerely,



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<sup>50</sup> *Id.* at 67091.

<sup>51</sup> *Id.* at 67092.

<sup>52</sup> The Center also specifically noted this point in its comments on the draft listing rule and not prudent determination (noting that FWS could designate “with polygons large enough to buffer individual specimens and thereby deter inducement to collection.”).

<https://www.regulations.gov/comment/FWS-R2-ES-2018-0104-0021>

<sup>53</sup> <https://www.regulations.gov/comment/FWS-R2-ES-2018-0104-0022> (emphasis in original).

<sup>54</sup> 16 U.S.C. § 1540(g)(2)(C).