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Submitted by: Tony Frates, Utah Native Plant Society, Conservation co-chair

Proposed rule: **FWS-R6-ES-2013-0082**

Subject: Critical habitat and its Draft Economic Analysis with respect to:

Endangered and Threatened Wildlife and Plants: *Penstemon grahamii* (Graham's beardtongue) and *Penstemon scariosus* var. *albifluvis* (White River beardtongue); Critical Habitat

Comments:

These comments are in response to the above May 6, 2014 proposed rule relating to a Critical Habitat designation and its associated Draft Economic Analysis and related reopening of the comment period relating to the original August 6, 2013 proposal to list.

Utah Native Plant Society rankings of the two proposed taxa and the need for listing

The Utah Native Plant Society has long been active in accumulating information about species and making recommendations to the BLM, FWS and others. Founded in 1978, the original UNPS Endangered Plants Committee developed a list of Utah rare plants that was published in the society's January 1980 newsletter. Dr. Stanley Welsh was the committee chair. The 1980 list was divided into four categories. The second highest category were "endangered" plants that were intended to be submitted with defined critical habitat. Prior to that time, an extensive technical report including Graham's penstemon surveys and descriptions of its environment had been completed (Shultz 1979).

And since that time, the Uinta Basin has been “well-canvassed” on foot by a number of very well-qualified botanists (Leila Shultz, pers. comm., March 2, 2014).

The very first species in that 1980 list in the second highest category group (which was not in alphabetical order) was *Penstemon grahamii*. (The White River penstemon had not been discovered and described until several years later.).

UNPS sponsored rare plant meetings through most of the 1980's and has co-hosted an annual rare plant meeting with Red Butte Garden since 1999 (the most recent of which occurred in March of 2014). In 2005, working with The Nature Conservancy we helped to start the Uinta Basin Rare Plants Forum the purpose of which was to foster cooperation and collaboration and try to avoid the need for listings through proactive action.

In 2007, UNPS re-established its rare plant committee and in essence started from scratch using ultimately a ranking system developed in a doctoral thesis by Walt Fertig. The ranking method involves scoring some seven different factors each of which are carefully considered (Fertig 2009). A point total of eight (8) represents that highest possible priority concern that a taxon may be assigned.

P. grahamii received a point total of 8 and *P. scariosus* var. *albifluvis* a total of 7 (since its threat level was considered somewhat less at that time) based on an evaluation of the scoring factors. Both species were then placed in the a group of highest concern as a result (extremely high, high, medium, watch, need data) based on those point totals.

As of the date of this comment, only 34 plant species (or taxa) that occur in the state of Utah have been ranked at an “extremely high” level of concern which includes for consideration all of those species in Utah that are presently federally listed under the Endangered Species Act (currently there are 25). Both *Penstemon grahamii* and *Penstemon scariosus* var. *albifluvis* have been ranked as “extremely high” (or exH), i.e. are in the highest level of conservation concern and remain at an extremely high level of concern (Utah Native Plant Society 2003-2014).

UNPS rankings/evaluations are normally given considerable weight and in the 1980's were used by the Service to provide input into its candidate species program of that era. We do also use them to provide sensitive species recommendations to federal agencies when requested. Our evaluations are made solely on the best available scientific information. The evaluations are made in a completely transparent way and when discussed in usually an annual meeting, the public is invited to attend and government agency participation encouraged. We also seek out experts beyond our own and anyone who may have knowledge about a given taxon particularly when that information may not be known to individuals on the committee or individuals who may not have been able to participate or provide input at a given meeting; input is in fact welcome at any time. Rankings/evaluations are subject to change based on the best information that is available, and anyone may comment or provide information about them at any time simply by contacting us. The results are published both in the society's newsletters and on the Utah Rare Plants web site that we coordinate.

To date we have not received a single inquiry questioning the validity of our rankings nor the process in which they were arrived. We have also never received any communications from any Utah state agency about them (other than occasional coordination with the Utah Natural Heritage Program who we consider a very valuable partner in terms of sharing information) nor have any been questioned by

any state agency and despite the fact that they are discussed at annual rare plant meetings co-hosted with Red Butte Garden (who is another highly valued organization) and made available to the public. We have also never received any inquiry nor any input disputing any of the evaluations we have made from private industry of any kind, nor has the information ever been questioned or disputed by environmental consultants or others that we are aware of.

More early history concerning UNPS/FWS rankings of Graham's and White River Penstemons:

Penstemon grahamii remained in the a "High 2" urgency for protection as of January 1982 (UNPS 1982a).

Listing packages for four Utah plant species were reported including the still unnamed White River Penstemon in early 1982 (Frates 1982). These were to be prepared for submission to the Washington office (by the Denver district office) within that year, according to an Endangered Species botanist in Denver. These species were: *Asclepias welshii*, *Glaucocarpum suffrutescens*, *Lepidium barnebyanum* and *Penstemon* sp. nov. (White River) and were considered Priority High 1(a) (Frates 1982).

An April 1982 Sego Lily article mentions a Salt Lake Tribune article dated March 11, 1982 in which Larry England discussed his concerns for a *Penstemon* species (still not formally named) he first encountered in 1977 and identified as a new species in 1980 (UNPS 1982b) and finally published in 1982

Not long following the publication of the White River penstemon, we were contacted in late 1983 by Scott Peterson of the Colorado Natural Heritage Program. His organization and others including the Colorado Native Plant Society were considering a petition to list *Penstemon scariosus* var. *albifluvis* as a result of the proposed White River Dam project by the state of Utah. We then initiated contact with Larry England of the Utah FWS field office on October 31, 1983 with concerns about this project and protection for this species.

We also sent a letter to the Environmental Defense Fund on November 3, 1983 after they contacted us asking for input as to species of concern in the state in which we stated:

". . . the state of Utah is in the process of requesting land transfers from the BLM which involve plant species such as *Penstemon grahamii* and *Penstemon albifluvis* . . . we are aware that the USF&WS is presently reviewing a transfer request that involves habitat of this species. Further, the proposed White River dam project would destroy the type locality of this species. Several Colorado groups have petitioned the USF&WS to list this species. This species should probably be listed, as it is narrowly restricted endemic."

Frates, T. November 3, 1983 letter to Bruce Manheim, Environmental Defense Fund. 1 p.

With that letter, we provided a copy of a three page T&E list.

By the time of the Feb. 22, 1985 rare plant meeting, reported in the March 1985 Sego Lily, both *Penstemon scariosus* var. *albifluvis* (with the notation "listing package under review") and *Penstemon grahamii* were in the highest category awaiting listing, i.e. Category 1 (plants for which sufficient data exists for listing) status (UNPS 1985).

Candidate status means sufficient information exists to list

These species are still waiting to be listed. Year after year they have remained in the highest categories of concern for a period now that exceeds 30 years. A species cannot become a candidate unless it meets the criteria of the ESA. The White River penstemon has continuously been a candidate species since November 28, 1983. Graham's was also a candidate since November 28, 1983, was finally petitioned for listing on October 8, 2002, then removed from candidate status only because the Service's 2006 listing proposal (in response to the petition) was withdrawn on December 19, 2006 but was then informally restored as a proposed species on June 9, 2011, and officially August 6, 2013 with the current proposal. Graham's was not reinstated as a Utah BLM sensitive species until a BLM memo dated July 30, 2009 (i.e., it lost that status when it was withdrawn from the first FWS proposal to list and almost three years passed until it was add back and since the BLM automatically considers candidate to be sensitive species). They have each remained under constant scrutiny and high concern by us during this entire time.

As candidates found eligible for listing, both Graham's and White River penstemons should have each been listed a long time ago and without our having had to file a petition (with others) to list (in the case of Graham's).

Uinta Basin Rare Plants Forum (2005 to present)

Inspired in part by suggestions made by Dr. Duane Atwood (botanical expert, former assistant curator at BYU, now retired) who played a considerable role with the Utah Native Plant Society's rare plant efforts and activities in the 1980's, a meeting was initiated by The Nature Conservancy and the Utah Native Plant Society on November 18, 2005, the purpose of which was to join efforts between industry, federal/state/county government, tribal and environmental concerns with respect to the rare endemic plants of the Uinta Basin and for the very purposes of avoiding listings given the increasing impacts and energy activities in the Basin. Developing conservation agreements for three areas, and the plants that grew in those areas, was the consensus goal from that first meeting. The first of the three areas related to the Green River Shale Endemics and included in that list were both *Penstemon scariosus* var. *albifluvis* and *Penstemon grahamii*. The second meeting was held on March 7, 2006 (which is when the group was named) and multiple meetings have continued every year since then. Meetings have been held in both Salt Lake City as well as in Vernal. The group has gathered a significant amount of information and identified information gaps and in part following a TNC process to accomplish that. Surveys and bio-blitzes have been organized and conducted for a number of rare species. The forum has initiated, mainly through the continuous and relentless efforts of the TNC's Joan Degiorgio, countless contacts and invited everyone that we could possibly think of to participate. In the beginning there were a few energy representatives that participated, but as time went on that participation dropped off to an unrecognizable level. A few state/county representatives participated from time to time but it was impossible to gain the interest of SITLA in participating, nor later anyone with the Utah Public Lands Policy Coordination Office through the end of 2013, as well as other critical state land management entities.

It was not until December of 2013 that SITLA, PLPCO and Uintah County hired SWCA to develop a conservation agreement to stop the listings. But they did not contact us nor The Nature Conservancy nor, to our knowledge, Red Butte Garden (unless through their consultant) who is also an active Uinta Basin Rare Plants Forum participant. Instead they made contacts through the Utah State University

extension location in Vernal with the idea of encouraging participation to “grow” these species in habitats that they fully intended to essentially destroy.

When a meeting was held at our request on March 26, 2014 at the Utah FWS Field Office after we first learned about the closed door negotiations that were occurring (in early March of this year) the intent of which we learned was to stop the listings, we raised the issue of the need for cooperation in working together going forward no matter what future direction was taken. Responding to that was someone via voice only from Uintah County who was surprised by that comment indicating that they had started working on this agreement going “all the way back” to December of 2013.

But where was this cooperation eight years ago? Why didn't SITLA and Uintah County participate in the 2007 conservation agreement if they were truly sincere about being proactive and cooperative efforts? Why didn't this agreement start to at least be developed when Judge Walker Miller in the Denver federal court case made his decision on June 9, 2011 that FWS had to reconsider *P. grahamii* for listing due to the reliance on incorrect information and not having considered all of the cumulative threats? Why did they wait until essentially the last minute to then cobble together an incredibly expensive document that is still very much still incomplete and inadequate all at great taxpayer (state and federal) expense? And why would they not involve those individuals and organizations that have clearly have stakeholder interests, and that have been working to help protect these species for over the last 35 years and have the most knowledge about them?

The reason is simply because the species were proposed (re-proposed in the case of *P. grahamii*) in August of last year, and the intent is to try to force a “no listing” decision, this time using different tactics than the ultimately failed tactics used previously.

The economic analysis inaccurately portrays costs and should not be relied on to not justify designating critical habitat (nor listing of the species)

The draft economic analysis does not outline any justifiable reasons for not proceeding with any critical habitat designation that the Service recommends. Almost all of the oil and gas pad costs are attributable to Graham's. White River has essentially no costs associated with it.

Further the \$2.7 million number involving Graham's for oil and gas relates to only a projection of 17 wells annually. That amounts to \$158,800 per well in additional costs they are claiming due to critical habitat designation (that number cannot be clearly derived from the other information provided in the document). A total of 17 wells is an incredibly low number compared to the high level of activity involving hundreds of new wells that have typically been added to the Basin every year over the past decade.

The costs outlined in Exhibit 5 of the the study refer to astronomically high numbers that would appear to relate to normal activities that would take place with any pad and its design. It is difficult to believe however that there would be additional costs for well pad design such as some 75% of \$45,500. Noxious weed control costs as stated cannot possibly be accurate and would not occur yearly per well, nor would the very high number quoted for re-seeding. And the biggest amount for dust control is something already required. If fact, RMP and other requirements are likely already requiring the same things being claimed as incremental costs.

And, these are not costs that are incurred in a single year per well. These are costs instead that seemingly that accrue over the lifetime of one well. And they are at best soft/indirect costs.

The math is in general very fuzzy and seemingly based on one ballpark estimate after another. An economic analysis should lay out the numbers in which the math can be easily checked and verified. That is not the case here, and it is clear that energy company provided costs have been hugely exaggerated and that amounts are being essentially counted that already have to be expended and that have very little to do with actions proposed by this rule.

Significant pollinator buffer zones are essential; an ecosystem approach is vital to avoid extinction of these species

Contrary to some posted comments, the pollinator buffer zones are absolutely essential and as the Service knows, are critical to the continued existence of both of these species. We strongly support the larger pollinator buffer zones as outlined in the critical habitat designation. They should not be any less.

In the course of making an ACEC recommendation to the BLM during the Vernal RMP process, we (along with then Center for Native Ecosystems) consulted with Dr. Vince Tepedino about what a proper buffer zone might be.

Larger bee species fly longer distances to seek floral resources (they require both nectar and pollen, and not all flowers offer both) than small bee species. In fact, not only does foraging distance increase with body size, larger bees have “disproportionately larger foraging distances than smaller bees” (Greenleaf 2007). These larger bee species therefore typically do not live close to the rare plants that they pollinate. As stated by Tepedino:

For bees to be successful, they must, at the very least, have adequate nesting habitat and food, i.e. pollen and nectar. Additional requirements, such as water and leaves or other extraneous materials sometimes used in nest construction, must be readily available. The first complication of note is that there is no guarantee that acceptable nesting habitat of the bee is conterminous with the habitat of the rare plant it pollinates. Indeed, they may be distant. The remedy is straightforward: we must discover where the bees nest, and offer those sites the same protection we offer the plants (Tepedino 1997a).

Based on his extensive experience with other species of *Penstemon* and the work that had been done on *P. grahamii* up to that point, Dr. Tepedino was fairly certain that larger species of *Anthophora*, *Osmia* as well as *Bombus* would occur along with smaller bee taxa.

Dr. Tepedino in that same personal communication dated February 10, 2006 indicated that he felt a minimum buffer zone should be a half-mile radius for our ACEC recommendation, and even that was probably restrictive. He further indicated the *Penstemon* species need pollinators to reproduce and that only one species in that genus (out of some 270+) has been shown to be fully autogamous (*P. digitalis*) and even that finding has been challenged.

In connection with another rare plant project, Dr. Tepedino provided us with a table for pollinators for two *Astragalus* species occurring in harsh habitats in Washington County with calculated pollinator

distances for observed pollinators of different sizes and based on Sara Greenleaf's 2005 PhD thesis. Species of *Anthophora* with medium body sizes had homing distances of 1.1 km and a maximum foraging distance of 2.7 km. *Anthophora* and *Bombus* with large body sizes had homing distances of 2.6 to 2.9 km and maximum foraging distances of 5.1 to 5.5 km. And a *Bombus* queen had a startling homing distance of 17 km and a maximum foraging distance of 19.2 km.

Native bee species are often solitary and ground nesting. It is critical to avoid disturbing those nests. Both to provide adequate foraging (bees need a selection of plants from which to forage that bloom over many consecutive weeks in order to survive) and try to protect and at least some bee nesting grounds, these plant species need significant buffer zones.

Based on numerous studies by Tepedino and others in the possession of the Service, most rare plants require significant amounts of outcrossing. Studies involving the White River penstemon showed that cross-pollinated flowers produced four to five times or more seeds, 15 to 17 seeds per fruit on average, compared to only 1 to 4 seeds per fruit without cross-pollination. Species of primarily *Anthophora* and *Osmia* (including two rare and at least one possibly new to science) bees and others were found visiting White River penstemon (Lewinsohn 2007) and based on the best evidence encompass the effective pollinators for that species.

Lewinsohn and Tepedino stated:

Management plans to conserve White River penstemon need to recognize that full reproductive success of this rare plant relies on a full suite of pollinating bees. It is important that the richness of bee species visiting White River penstemon flowers be maintained. A plant species obtains a degree of reproductive assurance when it is visited by a variety of pollinators. (Lewinsohn 2007)

This also demonstrates why an ecosystem approach must be taken with respect to management of these species. They cannot be simply grown from seed and re-planted; some of the current thinking by the non-federal partners in this regard must change. Instead, they require a complex ecosystem where they grow with the other native species along and with a vast array of other creatures including bees and other insects with which they have evolved along with specific soil and other requirements. These ecosystems cannot be artificially recreated following substantial surface impacts.

As outlined by Tepedino:

As oil and gas mining in the Uintah Basin proceeds, care must be taken not only to preserve extant populations of the White River penstemon, but also the nesting habitat and secondary floral resources of its pollinators. (Tepedino 1997b, Lewinsohn 2007)

Listing of these species as proposed with critical habitat on August 6, 2013 is strongly supported by the Utah Native Plant Society; the draft conservation agreement should be rejected

Overall the August 6, 2013 notice was very complete and made a very strong case for listing and we strongly support those conclusions. Our only recommendation would be that *Penstemon scariosus* var. *albifluvis* be considered for listing as endangered rather than as threatened.

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