

***Ipomopsis polyantha* (Pagosa skyrocket, also known as Pagosa gilia) Guidelines for Colorado Department of Transportation Activities in Occupied Habitat**

The Pagosa skyrocket (skyrocket) is a rare native plant found only in Archuleta County, Colorado, in and around the Town of Pagosa Springs. Adult plants flower from May through July and start producing seeds in July and August. In the fall the adult plants die. Seeds grow into low rosettes that will bloom during the following spring or remain as seeds or rosettes until there is enough moisture. Plants grow on fine textured soils derived from outcrops of Mancos Shale. They can be found on barren shale or in ponderosa pine (*Pinus ponderosa*), pinyon pine (*Pinus edulis*)-juniper (*Juniperus spp.*) or Gambel oak (*Quercus gambelii*) communities at an elevation range of 6,800-7,300 feet (Spackman et. al 1997; Anderson 2004). The U.S. Fish and Wildlife Service (USFWS) added the Pagosa skyrocket to the List of Endangered and Threatened Wildlife in 50 CFR 17.12(h) as an endangered species on July 27, 2011 (76 FR 45054). Critical habitat was designated on September 12, 2012 (77 FR 48368).

The skyrocket is one of the few special status species in Colorado that seem to show a penchant for the Colorado Department of Transportation's (CDOT) right-of-way (ROW) making it particularly vulnerable to CDOT activities. The roadside is often less disturbed than adjacent private lands where grazing, landscaping, and building destroy plants and seed banks. In order to be responsive to the need to protect these plants, and in keeping with CDOT's Environmental Stewardship Guide, CDOT is recommending the following guidelines be implemented when activities in the ROW have the potential to adversely affect the plant or its habitat.

- 1)** CDOT environmental staff will be notified as early in the planning stage as possible but no less than 90 days before projects begin. The USFWS and the Colorado Natural Heritage Program, as well as the Bureau of Land Management and the U.S. Forest Service when applicable, will be notified as soon as possible before projects begin so that they can work with the environmental staff to develop a plan for avoidance, minimization, recovery, and restoration actions needed at specific sites, and to allow for transplanting of plants and rosettes that cannot be avoided.
- 2)** Disturbance of occupied or suitable habitat for the skyrocket will be avoided or minimized as much as possible. Surface disturbance will be avoided to the greatest extent possible from May 1 to September 1 to minimize damage to mature, reproductive plants. Prior to any unavoidable ground disturbance, all plants including rosettes will be marked with a pin flag by a qualified biologist. Where practical the biologist will document the population by counting adult and rosette plants, recording OPS coordinates for the area occupied, and taking photographs. The boundary of plant habitat will be clearly marked with orange construction fence. A biologist will be present on the site when ground work commences to ensure that avoidance guidelines are followed. If project plans change, the biologist will be notified and a new survey will be conducted.
- 3)** If soil in the ROW is to be disturbed or removed as part of CDOT activities, six inches or

less, three inches if possible, of topsoil will be stockpiled in non-habitat areas and replaced after construction to preserve the seed bank.

4) Unavoidable rosettes and plants will either be transplanted or mitigated through property acquisition according to draft guidelines for threatened and endangered plant mitigation developed by the USFWS. Transplantation sites would be monitored for a period of three years to document success of transplantation efforts. Annual monitoring reports would be prepared which assess the success of the transplantation efforts including the viability of transplanted individuals, evidence of successful germination and propagation of transplanted individuals, observable genetic effects to transplanted plants resulting from movements on the landscape, and the effectiveness of transplanting techniques. In addition to an evaluation of transplanting efforts, monitoring should confirm or provide measures to maintain the primary constituent elements of Pagosa skyrocket habitat within the transplantation site. Mitigation is preferable to transplanting and would be accomplished through the acquisition of land or permanent conservation easements on private or State lands. Impacts to habitat and individuals would be compensated at a 3:1 ratio minimum based on the acreage of impacted occupied habitat resulting from proposed activities. Mitigation sites would exhibit the primary constituent elements of Pagosa skyrocket habitat and would be located as near existing occupied habitat as feasible to promote cross pollination. When possible, mitigation sites should be contiguous as well as non-linear to better protect habitat and pollinators. A management plan for easements and properties should also be developed in order to better protect the species.

5) Underground borings are encouraged when possible.

6) All equipment will be kept on the paved roadway as long as possible.

7) Equipment staging will occur on previously existing parking surfaces or other non-habitat as determined by a qualified biologist.

8) The number of access points to a construction site will be limited to one road into the site and one road out of the site. This road should be located in an area where it will cause the least impact to the Pagosa skyrocket.

9) Whenever possible, geotextile material covered with a straw marker and several inches of fill will be placed where equipment will be driving in order to protect the topsoil and root structures during construction. When construction is complete, the geotextile, straw, and fill will be removed, allowing for quick re-growth.

10) Reseeding of disturbed areas will be allowed using, scarlet globemallow (*Sphaeralcea coccinea*), Crandall's penstemon (*Penstemon cespitosus*), native blue flax (*Adenolinum lewisii*), and Arizona fescue (*Festuca arizonica*), or other appropriate native seed mix as specified by a CDOT Landscape Architect in consultation with a qualified biologist.

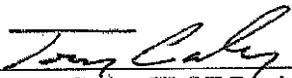
11) No herbicide will be used on US Highway 160 (US 160) between mile markers 130 and 133, and between 143 and 145.5; or on Colorado State Highway 84 (SH 84) between mile markers 18.5 and 19.0, 19.5 and 20.5, 21.0 and 21.5, and between 23.5 and 28.0.

12) No mowing will be allowed from May 1 through September 1 on US 160 between mile markers 127 and 150 or on SH 84 between mile markers 18 and 28.

Although the intent of these guidelines is to avoid or minimize impacts to the species and its habitat, their implementation does not preclude consultation under the Endangered Species Act. An analysis of the effects posed by proposed actions to Pagosa skyrocket and/or its critical habitat will continue to be an essential component to the conservation of the species. Any activities that may adversely affect the species will require consultation with the USFWS.

If there are questions or comments regarding these guidelines, please call (970) 385-1400 or (303) 512-4959.

Signed,

 1/16/13
Tony Cady, CDOT Region 5 RPEM

Susan Linner 1/17/2013
Susan C. Linner, U.S. Fish and Wildlife Service, Colorado Field Supervisor

Literature Cited

- Anderson, D.G. (2004, December 21). *Ipomopsis polyantha* (Rydberg) V. Grant (Pagosa ipomopsis): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available:
<http://www.fs.f.d.us/r2/projects/scp/assessments/ipomopsispolyantha.pdf>.
Accessed November 6, 2012.
- U.S. Fish and Wildlife Service. 2005. Review of Plant Taxa for listing as Endangered or Threatened Species; Notice of Review 70 FR 24873, May 11, 2005.
- U.S. Fish and Wildlife Service. 2008. Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Description of Progress on Listing Actions; 73 FR 75176, December 10, 2008.
- U.S. Fish and Wildlife Service. 2011. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for *Ipomopsis polyantha* (Pagosa Skyrocket) and Threatened Status for *Penstemon debilis* (Parachute Beardtongue) and *Phacelia submutica* (DeBeque Phacelia); Final Rule. 76 FR 45054 45075. July 27, 2011.
- U.S. Fish and Wildlife Service. 2012. Designation of Critical Habitat for *Ipomopsis polyantha* (Pagosa skyrocket), *Penstemon debilis* (Parachute beardtongue), and *Phacelia submutica* (DeBeque phacelia); Final Rule. 77 FR 48367 48418. August 13, 2012.
- U.S. Fish and Wildlife Service. 2012. Species Profile- Pagosa skyrocket. Available at:
<http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=Q2U7>.
- Spackman, S., B. Jennings, J. Coles, C. Dawson, M. Minton, A. Kratz, and C. Spurrier. 1997. Colorado Rare Plant Field Guide. Prepared for the BLM, USPS, and USFWS by the Colorado Natural Heritage Program.