



June 2, 2018

GMUG National Forests

Attn: Samantha Staley, Forest Plan Revision Team Leader (samanthajstaley@fs.fed.us)
Brittany Duffy, Assistant Forest Planner (brittanyduffy@fs.fed.us)

Via email: gmugforestplan@fs.fed.us

Re: Scoping Comment

Dear Ms. Staley and Ms. Duffy,

This letter is submitted in response to the request for comments in the Notice of Intent to revise the Grand Mesa, Uncompahgre and Gunnison (GMUG) Land and Resource Management Plan and to prepare an Environmental Impact Statement for the revised Forest Plan, as issued in the Federal Register on April 3, 2018. The notice requested comments on the preliminary need for change, distinctive role and contribution of the Forests, and proposed management area framework.

The American Herbal Products Association (AHPA) is the national trade association and voice of the herbal products industry. AHPA members include domestic and foreign companies doing business as growers, processors, manufacturers and marketers of herbs and herbal products, including some species obtained from wild populations on public lands. AHPA serves its members by promoting the responsible commerce of products containing herbs.

Of particular interest to AHPA and its members is the distinctive role and contribution of the GMUG Forests as natural habitats of oshá (*Ligusticum porteri*). Although not a particularly high volume herb in the U.S. marketplace, the uses of oshá root are unique and not readily replaced with other plant species traditionally used for health benefits. In addition, all or nearly all oshá root used by herbal product companies is harvested from wild populations.

AHPA therefore requests that consideration be given in preparing the revised GMUG Forest Plan to manage for permitting harvest of sustainable quantities of oshá root in these Forests. Factors that may affect such consideration may include:

- Sustainable harvest levels.
- Fair market value.
- Reserved areas for Indian Tribes.
- Pilot programs.

A discussion of each of these points follows.

Sustainable harvest levels

AHPA and several of its members that use oshá root in their products have provided financial support¹ over the past several years for research on oshá populations in the San Juan and Rio Grande National Forests. The research was carried out annually for 5 years (from 2012 to 2016) at a site in Cumbres Pass in Rio Grande National Forest, and for 3 years (2014 to 2016) at a location at Missionary Ridge in San Juan National Forest. This research focused on the effect of canopy cover on stage class and root weights of oshá, and on determining the rate of and factors affecting recolonization after harvesting of oshá root.

Earlier research has demonstrated that there are large stands of oshá in the Southwest U.S.,² and oshá has long been observed as a prominent understory forb in quaking aspen (*Populus tremuloides*) stands, including in Gunnison County, Colorado.³ Of additional significance in evaluating sustainable use of oshá is its possible relationship to declining populations of quaking aspen due to a condition termed sudden aspen decline, first observed in southwestern Colorado in 2004 and known to be affecting areas in each of the GMUG National Forests.⁴ One study noted that the overstory losses associated with sudden aspen decline have had little effect on understory communities, including oshá, and that species dominance in aspen understories have been relatively stable from 1964 to 2010;⁵ another has speculated that oshá populations may benefit from increased light availability that may come from a reduction in overstory cover.⁶

The above-described 5-year and 3-year studies in the Rio Grande and San Juan National Forests were designed with varying harvest intensities in a total of 120 plots in several habitats (meadow, forest and burned), with harvest percentages of mature plants (i.e., roots of marketable size, both vegetative and reproductive) at 0% (control plots), 33%, 66%, and 100%. Results of this research suggest that oshá population structure and root production are significantly influenced by canopy cover, but that plants have a high capacity for post-harvest

¹ Funding was provided through the American Herbal Products Foundation and also by the Rio Grande and San Juan National Forests.

² Kindscher, K., J. Yang, Q. Long, R. Craft, and H. Loring. 2013. Harvest Sustainability Study of Wild Populations of Oshá, *Ligusticum porteri*. Open-File Report No. 176. Kansas Biological Survey. Lawrence, KS.

³ Morgan, M.D. 1969. Ecology of aspen in Gunnison County, Colorado. *American Midland Naturalist* 82(1):204-228.

⁴ Worrall, J.J., S.B. Marchetti, L. Egeland, R.A. Mask, T. Eager, and B. Howell. 2010. Effects and etiology of sudden aspen decline in southwestern Colorado, USA. *Forest Ecology and Management* 260: 638-648.

⁵ Coop, J.D., K.J. Barker, A.D. Knight, and J.S. Pecharich. 2014. Aspen (*Populus tremuloides*) stand dynamics and understory plant community changes over 46 years near Crested Butte, Colorado, USA. *Forest Ecology and Management* 318: 1-12.

⁶ Kindscher, K., L.M. Martin, Q. Long, R. Craft, H. Loring, M. Sharaf, and J. Yang. 2017. Harvesting and recolonization of wild populations of Oshá, (*Ligusticum porteri*) in southern Colorado. *Natural Areas Journal*. 37(2):178-187.

recolonization under variable light conditions. With regard to the last point, this research recorded that the number and cover of reproductive plants, the number of flowering stems, and total oshá cover were all significantly less in the 100% harvest plots compared to the control treatment, with zero harvest, but that the control treatment did not differ from the 33% or 66% harvest treatment at Cumbres Pass for any of these classes, and that in the Missionary Ridge plots the number and cover of reproductive plants had less oshá in the 100% and 66% harvest treatments compared to controls.⁷

Based on this research in the San Juan and Rio Grande National Forests, these researchers have drawn the following conclusions and recommendations:⁸

Overall, it appears that low levels of harvest (33% or lower) could produce stable populations of oshá over the short term, perhaps with lower levels of root biomass, but that would have to be studied further. This rate of harvest appeared to resemble treatments that had no harvest after three and five years. We believe that the trends are clearly indicating recovery of populations. For the US Forest Service, who has an interest in monitoring long-term sustainable harvest, we recommend that they consider using for their permitting process a rate of harvest up to 50% of mature plants once every ten years (and also require pre- and post-harvest monitoring for sustainability be included in this policy). This rate of harvest should be monitored, both right after harvest to ensure that only 50% of mature plants were harvested, and after 10 years and before additional harvest to make sure that the population recovered. Harvest of 50% of mature plants is recommended because it could easily and logically be monitored, and seedlings, and especially juvenile plants, and rhizome pieces that resprout as juvenile plants could repopulate these stands. Harvesters could be given access to a large area and move from harvest patch to harvest patch each year, using a new area over each of 10 years, before returning to their original harvest location.

AHPA understands that although this research did not occur in the GMUG National Forests, similar outcomes could be expected in this part of oshá's range. In fact, another experiment carried out in Gunnison National Forest over three years (2012-2014) found that oshá was able to regrow leaves following even harvest of 100% of ramets to a depth of 25 cm, though the leaves were smaller than in control plots in which no harvest occurred, and that harvest significantly reduced the number of flowering stalks when measured just two years after harvest.⁹ To the best of AHPA's knowledge no follow-up has occurred in the interim so the

⁷ Ibid.

⁸ Kindscher, K, L. Martin, and Q. Long. (in preparation). The Sustainable Harvest of Wild Populations of Oshá (*Ligusticum porteri*) in Southern Colorado for the Herbal Products Trade.

⁹ Mooney, E.H., A.A. Martin, and R.P. Blessin. 2015. Effects of light environment on recovery from harvest and antibacterial properties of Oshá *Ligusticum porteri* (Apiaceae). *Economic Botany* 69: 72-82.

conclusions of this study may not be relevant to the 10-year inter-harvest interval recommended above.

AHPA recommends and requests by these comments that the revised GMUG National Forest Land and Resource Management Plan include a process to allow for permitting harvest of oshá root consistent with conclusions and recommendations referenced above, so that harvest of oshá in GMUG National Forests be permitted to allow harvest of up to 50% of mature plants every 10 years, that the recommended monitoring be established to ensure long-term sustainable harvest of this important plant, and that revisions to the harvest rate (both percent of mature plants and intervals between harvests) be made depending on information obtained through monitoring.

Fair market value

In 2007 and 2008 USDA Forest Service issued a proposed¹⁰ and final¹¹ rule to govern the disposal of special forest products¹² from National Forest System lands and to formally establish a pilot program to charge and collect fees for the harvest and sale of forest botanical products¹³ on National Forest System lands.

Although the effective date of the final rule was indefinitely delayed as of June 1, 2009,¹⁴ the proposed and final rule, as issued by USDA Forest Service, provide useful information and concepts in relation to the expressed purposes of the rule, identified in the preamble to the final rule as intended “to regulate the sustainable free use, commercial harvest, and sale of special forest products and forest botanical products from National Forest System lands” and

¹⁰ 72 FR 59496; October 22, 2007.

¹¹ 73 FR 79367; December 29, 2008.

¹² “Special forest products” are defined in Subpart G of the delayed final rule as “products collected from National Forest System lands that include, but are not limited to, bark, berries, boughs, bryophytes, bulbs, burls, Christmas trees, cones, ferns, firewood, forbs, fungi (including mushrooms), grasses, mosses, nuts, pine straw, roots, sedges, seeds, transplants, tree sap, wildflowers, fence material, mine props, posts and poles, shingle and shake bolts, and rails.” 36 CFR § 223.216.

¹³ “Forest botanical products” are defined in Subpart H of the delayed final rule as “Naturally occurring special forest products, including, but not limited to, bark, berries, boughs, bryophytes, bulbs, burls, cones, ferns, fungi (including mushrooms), forbs, grasses, mosses, nuts, pine straw, roots, sedges, seeds, shrubs, transplants, tree sap, and wildflowers.” 36 CFR § 223.277.

¹⁴ 74 FR 26091; June 1, 2009. AHPA notes that the current edition of the Title 36 in the U.S. *Code of Federal Regulations*, dated July 1, 2017, both records this rule and includes a statement to clarify the status of Subparts G and H as delayed: “EFFECTIVE ATE NOTE: At 73 FR 79386, Dec. 29, 2008, subpart [G and H] was added, effective Jan. 28, 2009. At 74 FR 5107, Jan. 29, 2009, the amendment was delayed until Mar. 30, 2009. At 74 FR 14049, Mar. 30, 2009, the amendment was further delayed until May 29, 2009. At 74 FR 26091, June 1, 2009, the amendment was delayed indefinitely.” See: <https://www.govinfo.gov/content/pkg/CFR-2017-title36-vol2/pdf/CFR-2017-title36-vol2-chapII.pdf> (accessed June 2, 2018).

to “help ensure the continued sustainability of special forest products and forest botanical products.”¹⁵

The proposed and delayed final rule both established processes for sale of special forest products and forest botanical products harvested from National Forests, including, with certain exceptions, rules for establishing minimum rates and determining the appraised value of special forest products and for ensuring that the sale price of forest botanical products includes a portion of the product’s fair market value and a portion of any associated costs incurred by USDA.

AHPA notes that oshá root meets the definition of both special forest products and forest botanical products as defined in the final rule, as both terms are defined to include “roots.”

AHPA submitted substantive comments throughout this rulemaking process. Among other details, AHPA expressed general support for imposition and collection of appropriate fees for commercial collection of these products. AHPA reiterates here that support and therefore supports having the Forest Service determine an appropriate sale price for oshá root commercially harvested from any National Forest.

Reserved areas for Indian tribes

AHPA notes that the GMUG National Forests issued in March 2018 a document titled, Grand Mesa, Uncompahgre and Gunnison National Forests REVISED DRAFT Forest Assessment: Areas of Tribal Importance. In relation to oshá, this document states:

“Under the terms of the Farm Bill the GMUG must allow gathering for traditional and cultural purposes, and facilitate tribal members in collecting botanical and other special forest products from National Forest System lands.... Of particular note is the importance of the ethnobotanically important oshá plant sacred to tribes affiliated with the plan area.”

“Oshá (Ligusticum porteri) is an ethnobotanically significant plant from which roots are harvested and used in various forms of medicine. It is known to grow in portions of the forest plan area, and is known as “bear root” to some tribal groups. A member of the carrot family, the plant is locally abundant but nationally rare, known for its many medicinal properties and considered a sacred plant by several Tribes including the Ute, Jicarilla Apache, Navajo and several Pueblo Tribes. Oshá is also regionally scarce likely due to the pressures of unauthorized collection and climate change. The planning area serves as important refugia for plant populations in the southwest and should be managed for sustainable personal use by tribal, Hispano and other communities.”

AHPA recognizes the ethnobotanical importance of oshá as sacred to tribes affiliated with the area in which the GMUG National Forests are located. AHPA also agrees that oshá should be properly managed to ensure sustainable personal use for tribal, Hispano and other

¹⁵ 73 FR 79367; December 29, 2008.

communities. AHPA therefore recommends that consideration be given to identifying areas within oshá's range in the GMUG National Forests where commercial harvest would not be permitted and where only individuals in these described communities would be allowed to harvest oshá.

Pilot programs.

As noted above, the delayed final rule established a pilot program to charge and collect fees for the harvest and sale of forest botanical products on National Forest System lands.¹⁶ It may be preferable from the perspective of the GMUG National Forests to include in the revised GMUG National Forest Land and Resource Management Plan a process to allow for permitting harvest of oshá root in these Forests, as recommended and requested by AHPA in these comments, in terms that are consistent with the pilot program sections of the rule. AHPA is supportive of such an approach if the GMUG National Forests determine a preference for establishing permitting for oshá harvest as a pilot program in specific areas of the Forests judged to be most conducive to such a program.

AHPA and its members greatly appreciate the opportunity to provide comments in preparation of the revised Grand Mesa, Uncompahgre and Gunnison (GMUG) Land and Resource Management Plan. Please do not hesitate to contact me if you would like to discuss any of data, recommendations or requests presented in these comments.

Sincerely,



Michael McGuffin
President, AHPA
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¹⁶ 36 CFR § 223.275 et seq.