

Categorical Exclusion Documentation
Proposed Amendment 1 to the General Agreement for Sochan Gathering for Traditional Purposes
by the Eastern Band of Cherokee Indians in Great Smoky Mountains National Park
December 12, 2019

Introduction and Proposed Action

Great Smoky Mountains National Park (GRSM) and the Eastern Band of Cherokee Indians (EBCI) entered a General Agreement on March 25, 2019 to allow up to 36 permitted members of EBCI to gather and remove portions of the spring leaves of sochan plants (*Rudbeckia laciniata*) (alternative common names: green-headed coneflower, cutleaf coneflower) from the park using traditional means. The General Agreement was established pursuant to 36 CFR 2.6, *Gathering of Certain Plants or Plant Parts by Federally Recognized Indian Tribes for Traditional Purposes*, and an Environmental Assessment (EA) prepared by the National Park Service in November 2018 and a Finding of No Significant Impact (FONSI) issued by the National Park Service in February 2019. The General Agreement, EA, and FONSI are available on the National Park Service’s Planning, Environment, and Public Comment website (<https://parkplanning.nps.gov/grsm>) under the link titled “Sochan Gathering for Traditional Purposes.”

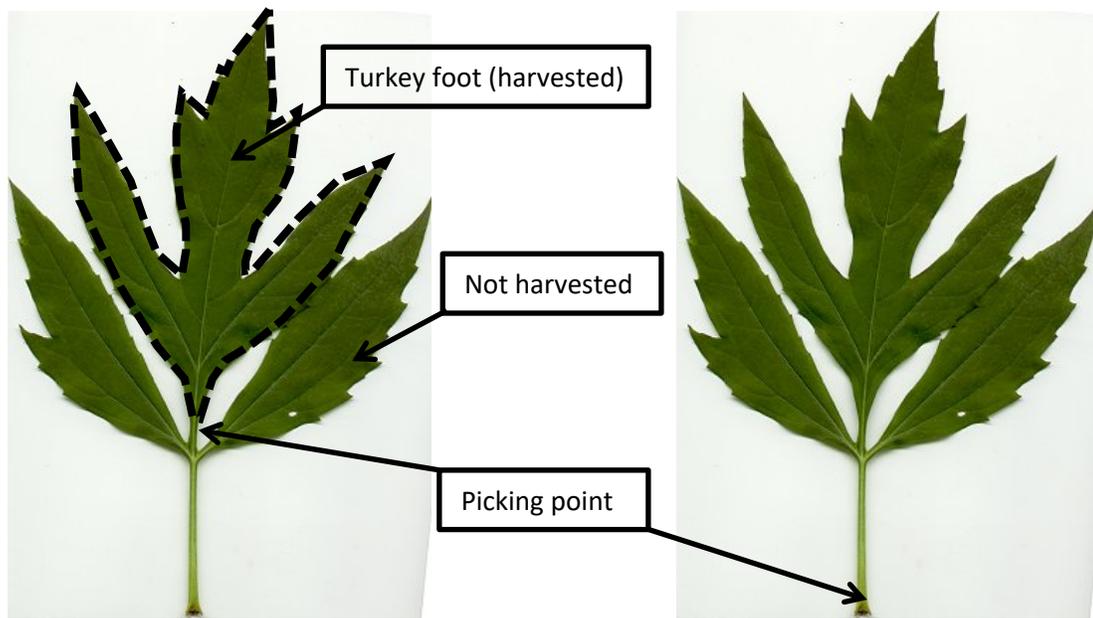
In accordance with Section 16 of the General Agreement, GRSM and EBCI staff completed a review of traditional gathering activities conducted in 2019 and identified three possible amendments to improve the General Agreement. The National Park Service is proposing to amend the General Agreement as follows prior to the 2020 gathering season:

Amendment 1.1

Page 4, Section 8 (Specific Plants or Plant Parts that May be Gathered and Removed): “Following traditional practices, permittees are authorized to gather what is referred to by the Cherokee as the “turkey foot” from sochan leaves that are between 3 to 5 inches long. The turkey foot consists of the three terminal lobes of a sochan leaf as the plant begins to grow from the rhizome in the spring (Photograph 1).”

Change to: “Following traditional practices, permittees are authorized to gather what is referred to by the Cherokee as the “turkey foot” from sochan leaves that are between 3 to 5 inches long (Photograph 1) **or whole sochan leaves that are between 3 to 5 inches long** (Photograph 2). The turkey foot consists of the three terminal lobes of a sochan leaf as the plant begins to grow from the rhizome in the spring.”

Rationale: This amendment is based on information obtained from EBCI members at a March 25, 2019 workshop indicating that traditional sochan gathering methods are not limited to gathering the turkey foot. The traditional method practiced by some individuals or families is to gather only the turkey foot, while others gather the whole leaf. This amendment recognizes differences in traditional gathering methods and allows individuals and families to continue their traditional cultural practices for sochan gathering. The requirement that no more than 50 percent of the leaves may be harvested from an individual sochan clump, rosette, or plant would not change.



Photograph 1-Turkey Foot Only

Photograph 2-Whole-Leaf

Amendment 1.2

Page 6, Section 9.(a)(4) (Times and locations at which sochan may be gathered): “All gathering activities must remain out of sight of areas such as visitor centers, major roads, parking lots, trailheads, campgrounds, and picnic areas when visitors are present.”

Change to: “All gathering activities must **not be within 80 feet of heavily visited areas such as visitor centers, trailheads, campgrounds, and picnic areas.**”

Rationale: A specific distance was added because the term “out of sight of” is highly variable and difficult to define or enforce.

Amendment 1.3

Page 6, Section 9.(a)(4) (Times and locations at which sochan may be gathered): “In addition, the following areas are off-limits to gathering: a) areas with saturated/mucky soils or standing water on the ground surface, b) research areas at Purchase Knob that contain sochan, c) and non-harvest zones identified under Section 9(6)(c).”

Change to: “In addition, the following areas are off-limits to gathering: a) areas with saturated/mucky soils or standing water on the ground surface, b) research areas at Purchase Knob (**Figure 1**) and **Old Sugarlands trail (Figure 2)** that contain sochan, c) and non-harvest zones identified in Section 9(6)(c) of the General Agreement.”

Rationale: National Park Service and EBCI staff have identified an appropriate location along the Old Sugarlands Trail in Tennessee to establish sochan control monitoring plots in accordance with Section 9.(6)(c) of the General Agreement.

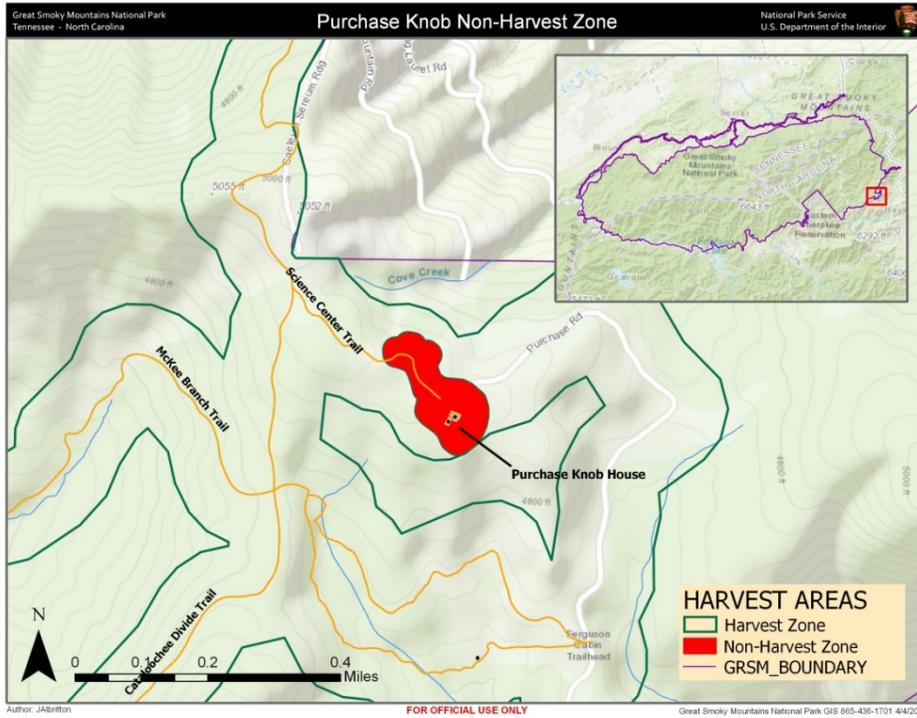


Figure 1: Purchase Knob Non-Harvest Zone

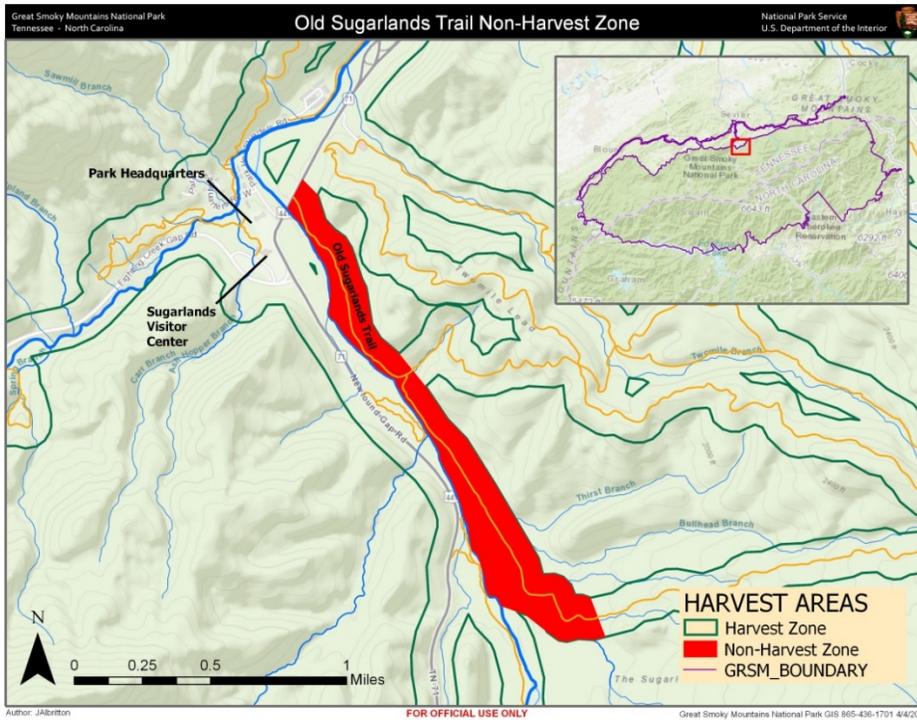


Figure 2: Old Sugarlands Trail Non-Harvest Zone

Impacts of the Proposed Amendments on Sochan

Amendments 1.2 and 1.3 are administrative changes that would have no adverse effects on sochan. Therefore, this analysis focuses Amendment 1.1, which would give permitted gatherers the option of either harvesting whole sochan leaves or the turkey foot portion of the leaves. All other gathering limitations established by the General Agreement, EA, and FONSI would still be in place. This includes a requirement that permittees not gather more than 50 percent of the aboveground biomass (leaves) from individual sochan clumps (individual spring basal rosettes) and a requirement to avoid repeated harvesting from individual sochan clumps in the same season. The EA (November 2018) and FONSI (February 2019) are incorporated into this analysis by reference.

As discussed in the EA, rhizomatous perennial plants such as sochan are resilient to leaf loss or damage because they contain ample stored starches in their root systems. The EA analyzed gathering up to 50 percent of the aboveground leaf biomass from individual sochan clumps (individual spring basal rosettes) and defined the gathering method as harvest of the turkey foot portion of the leaf. The proposed amendment would give gatherers the option of whole-leaf collection or turkey foot collection, but the total leaf biomass harvested would not change. In addition to sochan's rhizomatous growth habitats, a previous study cited in the EA suggests that sochan is resilient to whole-leaf harvest. In 2011 McCoy et al. (2018) tested the possible effects of removing 50 percent of the spring whole-leaf material from sochan plants propagated in raised beds in Cherokee, North Carolina. The harvested population was compared to an unharvested control population. Findings of this study indicated that the harvested plants were not negatively affected when compared to unharvested plants within 6 months after the harvest treatments were applied (McCoy et al. 2018).

During the field season of 2019, GRSM Inventory and Monitoring Program staff conducted the first year of monitoring as outlined in the General Agreement at five sochan plots in the park. This monitoring included three plots where sochan gathering was conducted by EBCI permittees who gathered the turkey foot portion of the leaf. Two control plots excluded from gathering activities were monitored to document natural variability within populations. Data on 580 sochan plants in 66 randomly located sample quadrats was collected from these five monitoring plots. No evidence of plant trampling or uprooting was observed, and of the plants harvested, no mortality was documented. All EBCI harvests were within authorized limits for plant parts taken and quantity limits.

GRSM Inventory and Monitoring Program staff also established three research plots in the park during 2019 where a mix of whole-leaf and turkey-foot gathering was conducted by an EBCI forest resource specialist. The objective of this research was to evaluate possible differential effects of whole-leaf vs. turkey foot collection. Data on 950 sochan plants in 113 randomly located sample quadrants was collected from these research plots. No mortality was documented in sochan plants subjected to whole-leaf or turkey foot harvesting. The results of this initial research suggest that the effects of harvesting the whole sochan leaf would be the same as harvesting the turkey foot. GRSM Inventory and Monitoring Program staff will continue to monitor the standard plots and research plots moving forward, and may add additional plots to inform future gathering strategies.

In summary, the effects of whole-leaf sochan gathering is expected to be the same as gathering the turkey foot based on the following:

- The total leaf biomass collected from individual sochan plants would not change.

- Rhizomatous perennial plants such as sochan are resilient to leaf loss or damage because they contain ample stored starches in their root systems.
- Research conducted by McCoy et al. (2018) on sochan propagated in raised beds.
- Field research conducted by the GRSM Inventory and Monitoring Program staff in 2019.

There are no substantive differences between the current proposal and its associated environmental impacts and the proposal and impacts as described in the existing EA and FONSI. The proposed amendments to the General Agreement qualify for coverage under Categorical Exclusion B.1. *Changes or amendments to an approved plan, when such changes would cause no or only minimal environmental impact.*

Public Comment Period

The public is encouraged to participate in the planning process by reviewing and providing comments on the proposed amendments to the General Agreement and the impact analysis presented above. Park Staff invite the public to comment using the National Park Service’s Planning, Environment, and Public Comment website and following the link titled “Sochan Gathering for Traditional Purposes-General Agreement Amendment 1” at <https://parkplanning.nps.gov/grsm> or by US Mail to Great Smoky Mountains National Park, ATTN: Environmental Planning and Compliance, 107 Park Headquarters Road, Gatlinburg, TN 37738. The public comment period is open through January 12, 2020. The Park Superintendent will make a decision regarding the proposed amendments after considering all public comments on the proposed amendments to the General Agreement. Please note that the Park previously held a public comment period for the original General Agreement and EA, and considered all comments received prior to issuing the FONSI. The Park is only soliciting comments on the proposed amendments at this time.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that under provisions of the Freedom of Information Act the entire comment, including your personal identifying information, may be made publicly available at any time. Although you may ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we would have the legal authority to do so.

References

- McCoy, J., W. Bridges, D. Cozzo, and T. Cabe. 2018. *Cherokee Traditional Ecological Knowledge of Sochan *Rudbeckia laciniata* L.* Draft Manuscript.
- National Park Service (NPS). 2018. *Sochan Gathering for Traditional Purposes Environmental Assessment.* Great Smoky Mountains National Park, North Carolina and Tennessee. November.
- NPS. (2019). *Sochan Gathering for Traditional Purposes Finding of No Significant Impact.* Great Smoky Mountains National Park, North Carolina and Tennessee. Approved February 27, 2019.