Alaska Non-Timber Forest Products Harvest Manual

For Commercial Harvest on State-Owned Lands

State of Alaska
Department of Natural Resources
Division of Mining, Land and Water

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Introduction

Non-timber forest products are generally defined as products derived from biological resources. Examples of non-timber forest products may include mushrooms, conks, boughs, cones, leaves, burls, landscaping transplants, roots, flowers, fruits, and berries. Not included are minerals, rocks, soil, water, animals, and animal parts.

Timber products such as firewood, saw-timber, pulpwood, cull logs, house logs, small round-wood, poles, posts, and Christmas trees are also excluded. Persons interested in harvesting these timber forest products should contact their local Alaska Division of Forestry office.

Species of aquatic plants, excluding the rushes, sedges and true grasses, growing in a marine aquatic or intertidal habitat are under the jurisdiction of the Alaska Department of Fish & Game. Contact your local ADF&G office to obtain information about commercial harvest permits for these species.

The State of Alaska abounds in natural resources that have sustained life, culture, and economy for centuries and continue to do so. As part of the Department of Natural Resource's mission to "develop, conserve and enhance natural resources for present and future Alaskans," the Division of Mining, Land and Water (DMLW) recognizes the importance of both sustainability and opportunity in the management of the non-timber forest product resources in the state. The standards set in this manual exist to protect, conserve and enhance these biological resources while they are being sustainably harvested.

This manual provides direction to those wishing to commercially harvest non-timber forest products from general state-owned lands in Alaska managed by the DMLW, but is not a substitute for experience and expertise. It is the responsibility of the applicant to become familiar with the identity of individual species and their associated handling requirements before beginning harvest.

This manual in no way proposes to be a guide for species identification or for commercial marketing potential. Many expert resources are available for identification of plant and fungi species, and they should be consulted before any harvesting activity begins – this is especially important to avoid poisonous or harmful species. Always confirm that there is a market in or accessible from Alaska for the product you are collecting to avoid waste of resources.

This manual is as comprehensive as possible and based on currently available knowledge. This manual cannot foretell any and all situations that may be encountered in the practice of harvesting. The overriding principle that this document intends to convey is the careful stewardship of natural resources. Remember, commercial viability also depends on sustainability. When a vegetative or fungal resource is harvested responsibly, it will be available for harvest in the future as well.

Special Notices, Clarifications, and General Rules

The possession of this manual or any page thereof does not constitute permission or authority to harvest for commercial use any non-timber forest product (NTFP). An official permit must be obtained from the Division of Mining, Land and Water (DMLW) to harvest commercially on any general state land. "Commercial Use" means NTFPs harvested for the primary purpose of sale, resale, or use in a manufacturing process resulting in a product that will be sold or used for business activities.

The information in this document pertains only to general state land. A permit obtained from DMLW does not apply to state parks, or to land owned, leased or managed by other state agencies such as the University of Alaska, Alaska Mental Health Trust, Department of Transportation and Public Facilities, or the Alaska Railroad. It is the permittee's responsibility to obtain permission from public land management agencies and from private land owners (including Alaska Native Claims Settlement lands) prior to commencing any harvesting activities in a particular area or crossing private land.

The species and parts described here may be available for commercial harvest with a Limited Non-Timber Forest Products Commercial Harvest Permit through the DMLW when harvested according to the limits and restrictions established in this manual, according to 11 AAC 96.035. Any commercial harvest activities or quantities not specifically addressed in this manual must be applied for and authorized through the standard Land Use Permit, including all associated public review periods.

While using state-owned public domain land for permitted commercial harvest of non-timber forest products, harvesters must conform to 11 AAC 96.020 (generally allowed uses) and the conditions provided in 11 AAC 96.025 (conditions for generally allowed uses) for any activity for which they do not hold a valid permit. These sections specify rules for activities such as travel; access improvements; removing or using state resources for non-commercial purposes; improvements and structures on state land; disturbances to vegetation, drainage, soil, fish, and wildlife; public access; time limitations; cleanliness; fires; and damage repair. If an activity is to be undertaken that is not generally allowed, a permit must be acquired for the specific activity.

Harvesters must conform to the Alaska Historic Preservation Act (AS 41.35.200), which prohibits the appropriation, excavation, removal, injury, or destruction of any State-owned historic, prehistoric, or archeological site without a permit from the commissioner. Should any sites be discovered during the course of field operations, activities that may damage the site will cease and the Office of History and Archaeology in the Division of Parks and Outdoor Recreation ((907) 269-8721) and the appropriate coastal district shall be notified immediately.

Revisions to this Manual

From time to time the Alaska Non-Timber Forest Products Harvest Manual will need to be revised and updated as new information is accumulated. General rules, species, quantities, seasons, and harvest methods may need to be added, deleted or adjusted in order to protect resources or address new commercial interests. To ensure appropriate participation and review by resource agencies and the public, revisions to this manual will be conducted according to the following procedures:

- A revised Alaska Non-Timber Forest Products Harvest Manual, clearly showing the proposed changes, will be drafted, published and made available for review through DNR Public Notice.
- Public Notice of this draft revision document will be:
    - Provided for a minimum of 30 days;
    - Posted to the State of Alaska On-Line Public Notice System (http://notes3.state.ak.us/pn/pubnotic.nsf);
    - Published as a legal ad for a minimum of one publication in a newspaper of statewide distribution;
    - Provided to all current permit holders;
    - Provided to all Alaska Coastal Management Plan (ACMP) district coordinators;
    - Provided to all individuals and organizations included on the NTFP Harvest Manual Distribution List. *[This list will be kept by the State of Alaska, Plant Materials Center. To be included on the NTFP Harvest Manual Distribution list you can submit a request by including your name or organization name and contact information to the PLANT MATERIALS CENTER, 5310 S. Bodenburg Spur Rd., PALMER, AK 99645 or FAX: 907-746-1568 or e-mail dnr.pmc@alaska.gov.]*
- All timely comments will be reviewed, considered, and addressed by the Department of Natural Resources (DNR) in a response-to-comment document.
- Changes to the draft document will be made, and a final Alaska Non-Timber Forest Products Harvest Manual will be approved and adopted by DNR.
- Any person who submitted timely written comments will be sent a copy of the response-to-comment document, along with the final revised, approved, and adopted Alaska Non-Timber Forest Products Harvest Manual.
- Any person affected by this decision who provided timely written comment may appeal the decision in accordance with 11 AAC 02.

Products and Species Descriptions

The following pages include all the products and species, as well as the associated quantities, seasons, and harvest methods that may be available for commercial harvest with a Limited Non-Timber Forest Products Commercial Harvest Permit issued by the Division of Mining, Land and Water. Commercial harvest of any species or part thereof not described in this section, or not in accordance with the quantity, seasonal, or methodological restrictions herein specified, must be applied for through the standard Land Use Permit process, including the public review periods.

Bark

Species: all birch, including *Betula papyrifera*, *B. kenaica*, and *B. neoalaskana*

Quantity limit: 300 sheets annually, up to 10 square feet per sheet
(a sheet has a width equivalent to the circumference of the tree and a length corresponding to the vertical cut)

Harvest season: April and May only for live trees. No seasonal restriction for dead trees.

Harvest protocols:

- Whenever possible bark should be harvested from dead trees. When this is not feasible, harvest only from trees not showing signs of disease and take proper care of any harvested bark to prevent waste.
- Harvest only from 10% of the standing trees in any given area.
- Do not harvest from trees stripped in previous years.
- The outer bark only may be removed — the inner bark must not be damaged as that is where nutrients are transported between the leaves and roots. The outer bark is usually less than 0.125 (1/8) inch thick – make your incisions carefully.
- If the outer bark does not easily come off a living tree when a small vertical test cut is made, do not harvest it. In spring the outer bark should readily separate from the inner bark on live trees.

Thickness of birch outer bark does not exceed 1/8" thick. Incisions should be made accordingly shallow to prevent damage to inner bark.

The outer park peels readily from the inner bark in the spring during sap flow. Do not force bark removal as it may damage the inner bark.

Fatally damaged tree as a result of an incision made too deeply and subsequent removal of inner bark, exposing bare wood.

Bark

Species: cedar (*Thuja plicata* and *Cupressus nootkatensis*)

Quantity limit: 100 strips annually
(a strip does not exceed one-quarter the circumference of the tree in width and the height of the tree in length)

Seasonal restrictions: none

Harvest protocols:

- Whenever possible bark should be harvested from dead trees. When this is not feasible, harvest only from trees not showing signs of disease.
- For live trees, harvest only one strip per tree. Do not harvest bark from trees stripped in previous years.
- Take proper care of any harvested bark to prevent waste.
- Harvest only from 10% of the standing trees in any given area.
- The outer bark only may be removed, and from no more than 1/4 the circumference of the tree.

Cedar bark harvest must be done with great care to protect the life of the tree. Only a narrow strip should be removed, facilitated by a shallow incision. Excess bark removal may cause tree damage or death.

Bark
dyes and medicine

Species: alders (*Alnus* species)
chokecherry (*Prunus virginiana*)
currant (*Ribes* species)
elderberry (*Sambucus racemosa*)
high-bush cranberry (*Viburnum edule*)
juniper (*Juniperus communis*)
mountain ash (*Sorbus* species)
quaking aspen (*Populus tremuloides*)
red osier dogwood (*Cornus sericea*)
willow (*Salix* species)

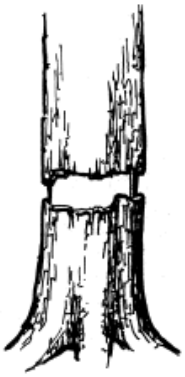
Quantity limit: 1000 pounds fresh weight annually, all species combined (fresh weight measured before drying)

Seasonal restrictions: none

Harvest protocols:

- Bark must be stripped without removing the stem or branch from the plant whenever feasible. No motorized equipment is allowed in the removal of the bark.
- Strip bark from no more than 1/3 the circumference of a stem or branch to prevent girdling and death.
- Strip bark from no more than 50% of the branches on any given plant, and from no more than 50% of the plants of one species in any area.

The removal of bark down to the sapwood around the circumference of a tree, as shown here, will cause girdling and death. Transport of nutrients between roots and leaves will cease and the tree will soon die. Girdling is prohibited.



Berries and berry-like fruits

Species: blueberry (*Vaccinium ovalifolium*, *V. alaskense*, *V. uliginosum*)
bog cranberry (*Vaccinium oxycoccus*)
cloudberry (*Rubus chamaemorus*)
crowberry, blackberry (*Empetrum nigrum*)
currant (*Ribes* species)
dwarf bilberry (*Vaccinium caespitosum*)
elderberry (*Sambucus racemosa*)
high-bush cranberry (*Viburnum edule*)
juneberry, serviceberry (*Amelanchier alnifolia*)
juniper (*Juniperus communis* - cones)
lingonberry, low-bush cranberry (*Vaccinium vitis-idaea*)
nagoonberry (*Rubus arcticus*)
raspberry (*Rubus idaeus*)
red huckleberry (*Vaccinium parvifolium*)
rose hip (*Rosa acicularis*)
salmonberry (*Rubus spectabilis*)
strawberry (*Fragaria* species)
thimbleberry (*Rubus parviflorus*)

Quantity limit: 75 gallons of any one species annually, up to 6 different species allowed for a maximum of 450 gallons total

Harvest season: no specific date restrictions, but each species must be harvested during ripeness – no green fruit is to be picked

Harvest protocols:

- No more than 1/3 of the berries in the harvest area may be harvested. Always leave a portion of healthy viable fruit undisturbed.
- If a berry rake is employed for the species being harvested, extreme caution must be used to not break branches. Many berries fruit the following year on the current year's new vegetative growth.
- Be certain of the quality standards to be met by the buyer of the harvested fruit and meet them to avoid unnecessary waste. Choose containers that will not smash the fruits nor encourage rapid spoilage.
- Do not pick commercially in areas frequented by personal-use and subsistence-use harvesters. Site-specific restrictions may accompany the issued permit and harvesting locations may have to be disclosed.

Branches and Stems

of deciduous woody species

(see also "Diamond willow" and "Cuttings")

Species: Trees: birch (*Betula* species)
cottonwood, balsam poplar, quaking aspen (*Populus* species)

Shrubs: alder (*Alnus* species)
red osier dogwood (*Cornus sericea*)
willow (*Salix* species)

Other: devil's club (*Oplopanax horridus*)

Quantity limit (annually): tree species — 2,000 stems or branches, all species combined
shrub species — 10,000 stems or branches, all species combined
devil's club — 1,000 stems or branches*****

Seasonal restrictions: none

Harvest protocols:

- Main trunks of trees MAY NOT be felled.
- Do not harvest alder, dogwood, willow or dwarf birch (shrub species) on banks of streams or rivers or on slopes greater than 15 degrees. Harvest must occur at a minimum distance of 50 feet from any waterbody.
- If motorized harvest equipment is used, do not allow fuel or petroleum lubricants to be spilled onto soil, vegetation, or water.
- Harvest shall occur from no more than 50% of the plants in any given area, and no more than 50% of the accessible stems from any one plant shall be harvested.
- ***For devil's club, harvest no more than 25% of the stems on the perimeter of a colony of devil's club plants.**
- No roots shall be taken.
- Small branches and leaves, if intended to be stripped, must be stripped from the stems on site and allowed to remain in the area to decompose for nutrient recycling. They must be left near the site of cutting, not in centralized piles.

Buds and tips

Species: balsam poplar (*Populus balsamifera*)
spruce (*Picea* species)

Quantity limit: 250 pounds fresh weight annually per species
(fresh weight measured before drying)

Harvest season: spring only for spruce, winter or spring for poplar

Harvest protocols:

- No more than 33% of the accessible buds or tips on each tree may be harvested.
- Harvest must be done by cutting with sharp, non-motorized hand tools.

Burls and galls

Large, rounded outgrowths on tree trunks

Species: birch (*Betula* spp.), cottonwood/aspen (*Populus* spp.), spruce (*Picea* spp.)

Quantity limit: 50 burled trees annually, all species combined
(Each tree must contain one or more burls/galls)

Seasonal restrictions: None

Harvest protocols:

- No more than 2 burled trees per acre may be harvested.
- Entire tree must be felled to obtain burls/galls. Do not slice burls off standing living trees.
- Cut as close to ground as possible leaving a maximum 12" stump height for felled trees. Bole (trunk) of tree must be salvaged and removed from the site. If branches and tops are not salvaged, they must be severed and scattered to decompose in the cutting area.
- Motorized harvest equipment is allowed. If a motorized tool is used, do not allow fuel or petroleum lubricants to be spilled onto soil, vegetation, or water.

Mature cottonwood with large burl

Birch with multiple burls

Cones

Species: cones from any cone-producing plant, including
black spruce (*Picea mariana*)
lodgepole or shore pine (*Pinus contorta*)
mountain hemlock (*Tsuga mertensiana*)
Sitka spruce (*Picea sitchensis*)
tamarack (*Larix laricina*)
western hemlock (*Tsuga heterophylla*)
white spruce (*Picea glauca*)

Quantity limit: 1000 pounds annually, all species combined

Seasonal restrictions: none

Harvest protocols:

- Only cones dropped from branches may be harvested, excepting black spruce. Black spruce cones may be picked from the tree, but only 50% of the cones on any given tree may be harvested.
- Always leave 25% of the fallen cones on the forest floor to produce saplings
- No damage to the tree may occur

Conks
excepting quinine conk

Species: any shelf fungi species including:
artist's conk (*Ganoderma applanatum*)
birch polypore, birch conk (*Piptoporus betulinus*)
tinder conk, chaga (*Inonotus obliquus*)
turkey tail (*Trametes versicolor*)

Quantity limit: 10,000 pounds fresh weight annually, all species combined

Seasonal restrictions: none

Harvest protocols:
- Living trees must not be damaged and standing dead trees must not be felled
- Motorized harvest equipment is allowed for harvest of chaga. If a motorized tool is used, do not allow fuel or petroleum lubricants to be spilled onto soil, vegetation, or water.

Conks
quinine conk

Species: quinine conk/agarikon (*Fomitopsis officinalis*)

Quantity limit: 75 conks annually

Seasonal restrictions: none

Harvest protocols:
- Living trees must not be damaged and standing dead trees must not be felled.
- Motorized harvest equipment is allowed. If a motorized tool is used, do not allow fuel or petroleum lubricants to be spilled onto soil, vegetation, or water.

Cuttings
dormant for revegetation

Species: balsam poplar (*Populus balsamifera*)
Barclay willow (*Salix barclayi*)
diamond leaf willow (*Salix planifolia* ssp. *pulchra*)
feltleaf willow (*Salix alaxensis*)
little tree willow (*Salix arbusculoides*)
Pacific willow (*Salix lasiandra*)
red osier dogwood (*Cornus sericea*)
Sitka willow (*Salix sitchensis*)
undergreen willow (*Salix commutata*)

Quantity limit: 100,000 total cuttings annually

Harvest season: October 15 – March 31

Harvest protocols:

- When possible, locate the harvest site before dormancy begins, as many species are difficult to distinguish without leaves. (Not all willow species are suitable for dormant cuttings.)
- Harvest no more than 33% of the material at any given site.
- Cuttings must be 3/8”–2” in diameter and no more than 5 feet long, and each must have leaf buds.
- Be familiar with and prepared for necessary storage techniques to prevent waste of viable cuttings.

Diamond willow
stems and trunks

Species: primarily *Salix bebbiana* infected with *Valsa sordida*
also *Salix pseudomonticola* and *S. scouleriana*

Quantity limit (annually): 100 stems of 2.5" maximum diameter; 25 stems of 4" maximum diameter; 10 stems of maximum 6" diameter; 5 stems of greater than 6" diameter

Seasonal restrictions: None, but bark is most easily removed from the wood when harvested in spring (April-June) during sap flow and wood is least likely to split/check during drying when harvested in winter.

Harvest protocols:

- Preferentially harvest dead stems over live ones.
- Motorized harvest equipment may be used. If a motorized tool is used, do not allow fuel or petroleum lubricants to be spilled onto soil, vegetation, or water.
- No harvest or disturbance of roots is allowed.
- No more than 50% of the diamond-marked stems may be harvested in any given area, and any stems less than 2” diameter (measured 6” above ground level) may not be cut.

Evergreen boughs

Species: any evergreen tree, including
cedar (*Thuja plicata* and *Cupressus nootkatensis*)
fir (*Abies* species)
hemlock (*Tsuga* species)
pine (*Pinus* species)
spruce (*Picea* species)

Quantity limit: 10,000 boughs total, all species combined

Seasonal restrictions: none

Harvest protocols:

- Main trunks of trees MAY NOT be felled.
- Motorized harvest equipment may be used. If a motorized tool is used, do not allow fuel or petroleum lubricants to be spilled onto soil, vegetation, or water.
- Harvest shall occur from no more than 50% of the plants in any given area, and no more than 50% of the accessible stems from any one plant shall be harvested. Do not remove entire branches — leave a portion of each pruned branch for regeneration.

Floral greenery

Species: clubmosses (*Lycopodium*, *Lycopodiella* and *Huperzia* species)
fern fronds (numerous species, excluding Aleutian shield fern)
horsetails (*Equisetum* species)
salal (*Gaultheria shallon*)

Quantity limit: 10,000 stems annually, all species combined

Seasonal restrictions: none

Harvest Protocols:

- Harvest must be done by cutting of the aerial portions of the plant with sharp, non-motorized hand tools. No below-ground disturbance is allowed.
- Only mature stems are to be harvested, and spores of spore-bearing plants are to be dispersed upon disturbance of the plant.
- No more than 33% of the mature stems in a given location shall be harvested. Leave all immature stems.
- Harvest in a given area is to occur only every other year.
- Harvest must occur at a minimum distance of 50 feet from any waterbody.

Leaves and flowers of woody plants

Species: blueberry (*Vaccinium ovalifolium*, *V. alaskense*, *V. uliginosum*)
elder (*Sambucus racemosa*)
kinnikinnick (*Arctostaphylos uva-ursi*)
labrador tea (*Ledum* species)
prickly rose (*Rosa acicularis*)
raspberry (*Rubus idaeus*)
shrubby cinquefoil (*Dasiphora fruticosa*)

Quantity limit: 1000 pounds fresh weight total, all species combined
(fresh weight measured before drying)

Seasonal restrictions: none

Harvest protocols:

- Clipping of flower heads and leaves is allowed, but stems must not be removed from the plants.
- No more than 33% of the flowers and/or leaves of any given plant may be harvested.
- Use extreme care in pulling leaves from plants to not pull up the root system. Some plants have very shallow roots.

Lichens
ground-growing

Species: any species of ground-growing lichen, including
iceland moss (*Cetraria islandica*)
reindeer lichen (*Cladina stellaris*)
Cladonia species
Peltigera species

Quantity limit: 100 pounds fresh weight total, all species combined
(fresh weight measured before drying)

Seasonal restrictions: none

Harvest protocols:

- Never harvest more than 10% of the lichens in a patch, and do not harvest in complete sections. Harvest one handful at a time and leave surrounding area intact. Only minimal disturbance should be evident when harvest is completed.
- Never harvest in the same area twice – regrowth rates are very slow.
- Harvest must occur at a minimum distance of 50 feet from any waterbody.

Harvest only in well-spaced handfuls, as indicated by the ovals in the example photograph at left. Removal of large mats of lichens is prohibited.

Lichens
tree-growing

Species: any species of tree-growing lichen, including
northern perfume lichen (*Evernia mesomorpha*)
old's man beard lichen (*Usnea hirta*)
waxpaper lichen (*Parmelia sulcata*)

Quantity limit: 300 pounds fresh weight total, all species combined
(fresh weight measured before drying)

Seasonal restrictions: none

Harvest protocols:

- The branches and trunks of the tree must remain intact.
- Preferentially harvest lichens that have fallen from the branches of trees first.
- No more than 50% of the accessible lichen on any given tree may be harvested.
- Never harvest in the same area twice – regrowth rates are very slow.

Mosses and liverworts

Species: any moss and liverwort species, including
cushion moss (*Dicranum groenlandicum*)
feather mosses (*Pleurozium schrebi*, *Ptillium crista-castrensis*, *Tomentypnum nitens*, *Hylocomium splendens*)
peat moss (*Sphagnum* species)*

*live material only. Mining of peat moss is not permitted under the NTFP commercial harvest permit.

Quantity limit: 500 pounds fresh weight annually, all species combined (fresh weight measured before drying)

Seasonal restrictions: none

Harvest protocols:

- No harvest allowed in areas of moving water. This includes banks and beds of streams, creeks, and rivers, as well as inlets and outlets to standing bodies of water. Harvest must occur at a minimum distance of 50 feet from any waterbody.
- No harvest allowed on vertical or steeply sloped surfaces.
- Never harvest more than 10% of the moss in a patch, and do not harvest in complete sections. Harvest no more than one square foot at a time and leave surrounding area intact. Only minimal disturbance should be evident when harvest is completed.
- Never harvest in the same area twice or where previous harvest is evident – regrowth rates are very slow.

Moss growing on steeply sloped surfaces, as in most of the above example photograph, should not be harvested.

Moss growing on horizontal branches may be harvested at a rate of 10%, as in the example photograph above.

Mushrooms

Species: any species of mushrooms, including
chanterelles (*Cantharellus* species)
honey mushroom (*Armillaria melea*)
king bolete, porcini (*Boletus edulis*)
morels (*Morchella* species)
puffballs (*Lycoperdon* species)
shaggy mane (*Coprinus comatus*)

Quantity limit: 5000 pounds annually, all species combined

Seasonal restrictions: none

Harvest protocols:

- Be certain of the quality standards to be met by the buyer of the harvested mushrooms and meet them to avoid unnecessary waste.
- Choose containers that will not crush the mushrooms or encourage rapid spoilage. Breathable, mesh containers are usually appropriate, and also allow dispersal of spores during transport.
- Using sharp knives to cut mushrooms at the base increases market value. Avoid pulling up mushrooms by hand or disturbing the below-ground portion of the fungus.
- **NOTE: Positive identification is absolutely essential, as many edible mushroom species appear similar to mushrooms that may cause illness or death. <u>If in doubt, do not harvest.</u>**

Non-woody perennial plants
tender edible shoots, stems, leaves, and/or flowers

Species: bulrush (*Schoenoplectus tabernaemontani*)
cattail (*Typha latifolia*)
chickweed (*Stellaria media*)*****
chives (*Allium schoenoprasum*)
dandelion (*Taraxacum officinale*)*****
dock (*Rumex* species)
fiddlehead fern, ostrich fern (*Matteuccia struthiopteris*)
fireweed (*Chamerion angustifolium*)
lambsquarter (*Chenopodium album*)*****
mint (*Mentha* species)
plantain (*Plantago major*)*****
sorrel (*Oxyria digyna*)
stinging nettle (*Urtica dioica*)
twisted stalk (*Streptopus* species)
wild celery (*Angelica lucida*)
wild rhubarb (*Polygonum alaskanum*)
violets (*Viola* species)

Quantity limit: 1000 pounds fresh weight annually, all species combined (fresh weight measured before drying)
**Exception: Non-native plant: Harvested amount does not contribute to quantity limit.*

Seasonal restrictions: none

Harvest protocols:

- Harvest must be done with sharp, non-motorized tools only. No disturbance of the below-ground portion of the plant is allowed.
- No more than 33% of the plants may be selected for harvest in any given area. Remove only 33% or less of the vegetative material from any given plant.
- Harvest in a given area is to occur only every other year.
- Note: Correct identification is essential, as some species may be harmful or fatal if ingested.
- Harvest must occur at a minimum distance of 50 feet from any waterbody.

Non-woody perennial plants

mature stems, leaves and flowers, generally for drying or processing

Species: bedstraw, cleavers (*Galium* species)
bulrush (*Schoenoplectus tabernaemontani*)
clover (*Trifolium** and *Melilotis**** species)
coltsfoot (*Petasites frigidus*)
dandelion (*Taraxacum officinale*)*
fireweed (*Chamerion angustifolium*)
goldenrod (*Solidago* species)
grasses (*Poaceae* family species)
hemp nettle (*Galeopsis bifida*)*
mint (*Mentha* species)
oxeye daisy (*Leucanthemum vulgare*)*
pineapple weed (*Matricaria discoidea*)*
pipsissewa (*Chimaphila umbellata*)
shepherd's purse (*Capsella bursa-pastoris*)*
skullcap (*Scutellaria* species)
stinging nettle (*Urtica dioica*)
stinkweed, wormwood (*Artemisia tilesii*)
strawberry (*Fragaria* species)
valerian (*Valeriana* species)
wintergreen (*Pyrola* species)
yarrow (*Achillea millefolium*)

Quantity limit: 1000 pounds fresh weight annually, all species combined
**Exception: Non-native plant: Harvested amount does not contribute to quantity limit.*

Seasonal restrictions: none

Harvest protocols:

- Harvest must be done with sharp, non-motorized tools only. No disturbance of the below-ground portion of the plant is allowed.
- No more than 33% of the plants may be selected for harvest in any given area.
- Harvest in a given area is to occur only every other year.

Roots

edible or medicinal (including root-like structures)

Species: avens (*Geum* species)
bistort, pink plume (*Polygonum bistorta*)
cattail (*Typha latifolia*)
coltsfoot (*Petasites frigidus*)
cow parsnip (*Heracleum maximum*)
dandelion (*Taraxacum officinale*)*
Eskimo potato (*Hedysarum alpinum*)
fireweed (*Chamerion angustifolium*)
horsetail (*Equisetum* species)
pond lily (*Nuphar lutea*)

Quantity limit: 500 pounds fresh weight annually, all species combined
**Exception: Non-native plant: Harvested amount does not contribute to to quantity limit.*

Harvest is limited to 50 pounds total per species for the following:
devil's club (*Oplopanax horridus*)
roseroot (*Rhodiola rosea*)
sweetflag (*Acorus americanus*)

Seasonal restrictions: none

Harvest protocols:

- Only the most minimal ground disturbance is allowed. All holes dug must be refilled.
- Harvest of fresh-water aquatic plant roots must not occur in areas of moving water. This includes banks and beds of streams, creeks, and rivers, as well as inlets and outlets to standing bodies of water. Harvest of non-aquatic plants must occur at a minimum distance of 50 feet from any waterbody.
- No more than 33% of the plants may be selected for harvest in any given area. Only 25% for aquatic plants.
- Do not dig unless there is another plant of the same species to be left within 3 feet of the one you are taking.
- Harvest in a given area is to occur only every other year.
- No harvesting on slopes greater than 15 degrees.
- Leave a portion of the root or rhizome of each plant in the ground.

Roots
for fiber

Species: Spruce (*Picea* species)
other woody species of usable quality

Quantity limit: 1,000 feet of root annually, all species combined

Seasonal restrictions: none

Harvest protocols:

- Only the most minimal ground disturbance is allowed.
- No more than 33% of the plants may be selected for harvest in any given area.
- Only 3–4 roots may be removed from each individual plant.
- Harvest in a given area is to occur only every other year.
- Harvest must occur at a minimum distance of 50 feet from any waterbody.

Seed heads
decorative

Species: any seed-producing species with decorative seed heads, excepting those in Appendix I, page 35.

Quantity limit: 5000 seed heads and stems, all species summed

Harvest season: August 15 through October 15 only

Harvest protocols:

- Never harvest more than 50% of the available seed heads from a population of any given species.
- No disturbance of the underground portion of the plant is allowed.
- Stems must be cut with a sharp, non-motorized hand tool.
- Always leave a portion of the healthiest-looking, viable plants unharvested.
- Be familiar with and prepared for proper drying, cleaning, and storage techniques in order to prevent waste.

Seeds

Species: any seed-producing species, excepting those in Appendix I, pg. 35.

Quantity limit: 32 ounces (dirty weight) of seed per species
"Dirty weight" equals undried weight of seed plus any leaves, flower parts, or chaff as collected in the field.

Seasonal restrictions: none

Harvest protocols:

- Always leave a portion of the healthiest-looking, viable seed unharvested.
- Do not disturb any portion of the plant not bearing seeds.
- Be familiar with and prepared for proper drying, cleaning, and storage techniques in order to prevent waste.
- Contact the Alaska Plant Materials Center (907-745-4469) after harvest. The Plant Materials Center may require up to one ounce of seed of any species collected for study and storage.

Transplants

plugs of a single herbaceous perennial species with root ball or rhizomes

Species: any herbaceous perennial species, excluding all species in the Orchid family, chocolate lily (*Fritillaria camschatcensis*), and those in Appendix I, page 35

Quantity limit: 1000 plant plugs annually, all species combined
a plug is sized from 2" to 10" in diameter

Harvest season: May 1 through August 15

Harvest protocols:

- Preferentially harvest from areas soon to undergo construction. Absolutely no harvesting in areas that are undergoing revegetation efforts.
- No harvesting on slopes greater than 15 degrees.
- Harvest of fresh-water aquatic plants must not occur in areas of moving water. This includes banks and beds of streams, creeks, and rivers, as well as inlets and outlets to standing bodies of water. Harvest of non-aquatic plants must occur at a minimum distance of 50 feet from any waterbody.
- No machine digging is allowed.
- Harvest from areas of excess plants of the same species. Do not dig unless there is another to be left within 2 feet of the one you are taking.
- All holes dug must be filled in.

Transplants
shrubby perennial with root ball

Species: any species of shrub, including
Alaska spirea (*Spirea beauverdiana*)
dwarf birch (*Betula nana*)
Labrador tea (*Ledum* species)
prickly rose (*Rosa acicularis*)
red osier dogwood (*Cornus sericea*)
shrubby cinquefoil (*Dasiphora fruticosa*)

Quantity limit: 250 shrubs annually, all species combined

Harvest season: Remove plants only between the time of ground thaw and leaf emergence in the spring, while the plant is still dormant. This improves the rate of successful transplanting. No harvesting permitted after May 31.

Harvest protocols:

- Preferentially harvest from areas soon to undergo construction.
- Maximum size cannot exceed 18" in height.
- Absolutely no harvesting in areas that are undergoing revegetation efforts.
- No harvesting on slopes greater than 15 degrees.
- No machine digging is allowed.
- Shrubs must be dug in areas of excess shrubs. Do not dig unless there is another shrub to be left within 2 feet of the one you are taking.
- All holes dug must be filled in.
- Whenever feasible, roots should be pruned the summer prior to harvest, and plants inconspicuously marked for spring digging. The pruning and marking of a shrub does not constitute ownership.
- Harvest must occur at a minimum distance of 50 feet from any waterbody.

Transplants
sprigs

Species: various grasses and sedges, including
beach wildrye (*Leymus mollis*)
bluejoint reedgrass (*Calamagrostis canadensis*)
Lyngby sedge (*Carex lyngbyaei*)
pendantgrass (*Arctophila fulva*)
water sedge (*Carex aquatilis*)

Quantity limit: 100,000 sprigs total, all species combined

Harvest season: May 1 through August 15

Harvest protocols:

- Preferentially harvest from areas soon to undergo construction. Absolutely no harvesting in areas that are undergoing revegetation efforts.
- Dig single plants with an appropriate manual tool to minimize disturbance to the surrounding soil and plants. No machine digging is allowed
- Harvest from areas of excess plants of the given species. Remove only 25% of the individuals from a population, leaving surrounding plants in a manner to minimize impact.
- Any holes dug must be filled in.
- No harvest on slopes greater than 15 degrees.
- Harvest of fresh-water aquatic plants must not occur in areas of moving water. This includes banks and beds of streams, creeks, and rivers, as well as inlets and outlets to standing bodies of water. Harvest of non-aquatic plants must occur at a minimum distance of 50 feet from any waterbody.

Transplants
tree sapling with root ball

Species: any species of tree, including
aspen, cottonwood, balsam poplar (*Populus* species)
birch (*Betula* species)
hemlock (*Tsuga* species)
spruce (*Picea* species)

Quantity limit: 250 saplings annually, all species combined

Harvest season: Remove plants only between the time of ground thaw and leaf emergence in the spring, while the plant is still dormant. This improves the rate of successful transplanting. No harvesting permitted after May 31.

Harvest protocols:

- Preferentially harvest from areas soon to undergo construction.
- Maximum height allowed is 8 feet tall and/or 1.5" diameter (measured 6" above ground level), whichever is greater.
- Absolutely no harvesting in areas that are undergoing revegetation efforts.
- No harvesting on slopes greater than 15 degrees.
- No machine digging is allowed.
- Trees must be dug in areas of excess trees. Do not dig unless there is another tree to be left within 5 feet of the one you are taking.
- All holes dug must be filled in.
- Whenever feasible, roots should be pruned the summer prior to harvest, and plants inconspicuously marked for spring digging. The pruning and marking of a tree does not constitute ownership.
- Harvest must occur at a minimum distance of 50 feet from any waterbody.

Appendix I: Plants never allowed for harvest

The following plant species are rare, endangered, or sensitive to harvest in other ways. DMLW will not permit their harvest by an over-the-counter permit or standard land-use permit. It is the harvester's responsibility to learn the identification of these species and to avoid disturbing them by any means.

This list contains information compiled from the National Park Service, Bureau of Land Management, and the Alaska Natural Heritage Program's Rare Plants Working Group:
(http://aknhp.uaa.alaska.edu/rareguide/Botany_Alaska_Rare_Plant_Field_Guide.htm)
(http://aknhp.uaa.alaska.edu/botany/Botany_tracking_page.htm)
(http://aknhp.uaa.alaska.edu/botany/pdfs/RPWG07_alpha.pdf)

Antennaria densifolia
Aphragmus eschscholtzianus
Arabis codyi
Artemisia aleutica
Artemisia globularia var. *lutea*
Artemisia senjavinensis
Aster pygmaeus
Aster yukonensis
Beckwithia glacialis ssp. *alaskensis*
Botrychium spp.
Carex hoodii
Carex sychocephala
Claytonia arctica
Claytonia ogilviensis
Cochleria sessilifolia
Colpodium vahlianum
Cryptantha shackletteana
Douglasia alaskana
Douglasia arctica
Douglasia beringensis
Draba aleutica
Draba densifolia
Draba kananaskis
Draba micropetala
Draba murrayi
Draba ogilviensis
Draba stenopetala
Erigeron muirii
Eriogonum flavum var. *aquilinum*
Erysimum asperum var. *angustatum*
Hymenophyllum wrightii
Lesquerella calderi
Ligusticum calderi
Lupinus kuschei
Mertensia drummondii
Oxytropis arctica var. *barnebyana*
Oxytropis kobukensis
Packera moresbiensis
Papaver walpolei
Pedicularis hirsuta
Platanthera gracilis
Pleuropogon sabinei
Poa hartzii ssp. *alaskana*
Poa macrantha
Poa porsildii
Podistera yukonensis
Polystichum aleuticum
Potentilla stipularis
Primula tschuktschorum
Ranunculus auricomus
Ranunculus glacialis var. *chamissonis*
Ranunculus kamchaticus
Rumex krausei
Salix reticulata ssp. *glabellicarpa*
Saussurea triangulate
Saxifraga aleutica
Sedum divergens
Senecio moresbiensis
Smelowskia calycina var. *porsildii*
Smelowskia pyriformis
Spenopholis intermedia
Stellaria dicranoides
Symphyotrichum yukonense
Taraxacum carneocoloratum
Thlaspi arcticum
Townsendia hookeri

Appendix II: Guidelines for non over-the-counter permit products

(Standard Land Use Permit required)

This appendix contains reference material for products not available for over-the-counter permits, but may be applied for through the standard Land Use Permit process, including associated public review periods.

Sap

Species: birch (*Betula* species)
cottonwood, balsam poplar, quaking aspen (*Populus* species)
spruce (*Picea* species)

Product: Sap

Harvest season: Late March, April, and May only (during sap flow)

Harvest protocols:

- Tap only healthy trees sized 8 inches dbh (diameter at breast height) or larger. A healthy tree shows no fire damage, no dead tops, and no visual evidence of fungi.
- Only one tap/spout per tree per year. Space subsequent year's spouts around the circumference of the tree in a spiral pattern. Sterilize spouts before using.
- No metal nails or screws may be used to attach the spout, tubing, or other harvest equipment to the tree.
- Drilled holes may be only 1 ½ to 1 ¾ inches deep and should angle upward slightly (approx. 10˚). Spouts should be tapped gently into place to avoid splitting the wood.
- Motorized transportation (ATVs, snowmachines) to the harvest area may be used if allowed by local regulations and it does not compromise ground cover or damage trails.
- Remove spouts when finished collecting sap for the season. Do not plug the hole.
- Each tree may be tapped once a year for five years. After a two year recovery period, tapping for another 5-year period may resume. This cycle may be repeated three times for a total of 15 tapping seasons per tree in a 19-year period, after which the tree must be retired.
- Refer to "Best Practices for Producing High Quality Birch Syrup" by the Alaska Birch Syrupmakers' Association for further guidelines and recommendations. A link to this page may be found at http://www.dnr.state.ak.us/ag/ag_pmc.htm

Appendix II - continued
(Standard Land Use Permit required)

Transplants
vegetative mats

Species: numerous species growing together in an area

Harvest season: May 1 through August 15 only

Harvest protocols:

- Preferentially harvest from areas soon to undergo construction.
- Absolutely no harvesting in areas that are undergoing revegetation efforts.
- No harvesting on slopes greater than 15 degrees.
- All sites dug must be filled in and re-seeded with native seed local to the area.
- Do not leave edges of the mat exposed to air, which will dry and damage plant roots.
- Harvest must occur at a minimum distance of 50 feet from any waterbody.

Glossary

bole	The trunk or main stem of a tree or large shrub
dbh	"diameter breast height" - Diameter of a tree trunk measured at 1.3 to 1.5 meters (52"-59") above ground level.
dormant	Seasonal state of plant (usually winter) when there is no growth. Plants "break dormancy" in the spring when buds swell and new leaves and flowers begin to appear.
girdling	The act of cutting or removing a ring of bark (including the inner bark) around the entire circumference of a tree trunk, resulting in the tree's death.
inner bark	Thin layer of plant tissue between the pith (or wood) and the outer protective bark. Contains the cambium layers including the xylem and phloem which transport water and nutrients between the roots and the leaves.
outer bark	The outermost layer of plant tissue surrounding a trunk, stem, or root. Tough and impermeable, the outer bark protects the inner tissues from injury, disease, and insect attack.
plug	Portion of an herbaceous plant including stems and leaves as well as roots or rhizomes with attached soil. Includes all plant parts necessary for survival and growth when transplanted.
rhizome	Underground stem or "runner." Produces roots and/or above-ground shoots at each node and allows the plant to spread into new areas. If the runner spreads above ground, it is called a "stolon."
shelf fungi	Also known as bracket fungi, these are fruiting bodies of any number of fungi in the Basidiomycota, characterized by a tough, stalkless shelf or hoof shaped structure usually growing on the side of a tree, log, or stump.
sprig	As used in this manual, the smallest transplant unit capable of regeneration. Grass and sedge sprigs must contain a portion of the root crown. It is desirable to have 2-3 above-ground stems along with some roots and/or rhizomes, but this requirement depends on the species.

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