

Guidelines and Licensing Requirements for Tapping and Collecting Sap from Maple Trees on Department of Forests, Parks and Recreation Lands

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The purpose of this document is to provide guidelines for the production of maple sap as part of a long-term sustainable forest management practice on lands owned by the Department of Forests, Parks and Recreation (“Department” or “FPR”).

It is recognized that monocultures can increase susceptibility to insect and/or disease damage and should be discouraged. It is also recognized that the risk of infrastructure damage by squirrels increases with the percentage of conifers in a stand and that an ideal stand for maple sap production is a mix of hardwood species with maple as the dominant component.

Site specific guidelines will be developed on a case-by-case basis for each license area to identify trees that the Department wishes to have reserved from tapping or otherwise protected for reasons including, but not limited to, protection of potential veneer quality trees¹ or for tree health protection. These trees will be marked by or under the direction of a Department forester as determined by the Department on a case-by-case basis by painting or any other non-removable method indicated by the State.

Tapping Guidelines

Sugar or hard maple (*Acer saccharum*) and red maple (*Acer rubrum*) shall both be considered tappable species. The Department may review and approve all trees to be tapped prior to tapping in any year.

The health of individual tappable trees must be assessed and the allowable taps reduced or deferred where a tree shows signs of stress.

Tappable trees shall have a healthy crown and show minimal sign of dieback. Tree health may be evaluated by the Department, and at risk trees may be reserved from tapping at the Department’s discretion. Indicators of tree risk include, but are not limited to, poor crown condition, slow tap hole closure, predicted or prior defoliation, weather damage, visible damage due to disease, fungus, insect infestation, drought or physical trauma. Trees that are not at risk may be tapped according to the following standards:

¹ For these purposes, “potential veneer quality tree” shall mean a sugar maple that has no visible defect on any side for the first 12 feet of log height and no visible rot at the stump.

10-20" DBH 1 Tap
20"+ Larger DBH 2 Taps

Diameter at breast height (DBH) means tree diameter measured outside the bark at a level 54 inches above the ground on the highest side of the tree when the tree is on a slope, and measured from between any root buttresses. DBH shall be measured with a diameter tape as used in the forestry profession and not with calipers, a Biltmore stick or its equivalent, or any other means than a diameter tape. Where a swell, abnormality, deformity or other protuberance occurs at the prescribed height of measurement, the measurement shall be taken immediately above the swell, abnormality, deformity or other protuberance. All doubts as to whether a tree is of sufficient DBH to qualify for tapping shall be resolved in favor of not tapping.

No tree shall contain more than two taps and tap holes should be placed as far apart as possible. In an ideal situation, tap holes should not be placed closer than three inches horizontally and twelve inches vertically from an open tap hole. Holes should not be placed closer than three inches horizontally from a visible dead seam if possible. Tap holes shall not exceed 5/16" in diameter and shall be drilled no deeper than 1.5" total depth into the tree's white wood. Trees shall be tapped only once per year. Taps must be removed from each tree at the end of each sugaring season.

For multi-stem trees that separate within 4.5 feet from the ground each stem shall be considered one tree, for trees that fork higher than 4.5 feet from the ground, the stems shall be collectively considered a single tree.

Tree and Forest Health Issues

As stated above, no tree shall have more than two taps, and no tree less than 10" DBH will be tapped. No sanitizing materials may be used in tap holes. The Licensee must take precautions to avoid tree wounding such as vehicle and other mechanical damage during operations and maintenance activities. Soil compaction by vehicles must be minimized.

Any proposed vegetation management must be approved in writing in advance by the Department in a document setting forth the approved activity and any requirements and/or limitations associated therewith. This includes, but is not limited to fertilization, thinning, treatment of invasive or native species, and any use of a pesticide. The Licensee will encourage regeneration of appropriate species in the understory. Chainsaws may be used to remove downed limbs that are in the way of or have damaged tubing systems. Felling of trees of any size (live or dead) without prior approval of the Department is prohibited.

Sap may be collected using either buckets or tubing. All tubing systems shall be installed and managed according to best management practices as outlined in “North American Maple Syrup Producers Manual 2nd Edition” or approved successor document(s). Tubing systems may be left in place during the off-season if they do not interfere with trail-related activities as determined by the Department and as specified in individual license agreements. Vacuum pumps may be used for sap collection and the noise from these vacuum pumps kept to a minimum.

The end of mainlines may be anchored into trees using lag bolts or sleeved wires. The use of nails to support tubing, either main lines or laterals is prohibited. Where wires or cables come into contact with a tree, either blocking or sleeves shall be used to prevent the wire or cable from becoming imbedded into the tree.

The use of an ATV or snowmobile may be allowed for the installation and maintenance of tapping systems. The use of these vehicles shall be restricted to the areas specifically identified for each licensed site and shall be restricted to the Licensee or those working for the Licensee for the installation and maintenance of tapping systems only. The Licensee will report any unauthorized use of motorized vehicles that occurs on the site in any season to Department staff.

The Department may, on a case-by-case basis for extensive tapping installations, authorize the seasonal use of larger equipment to transport main lines for installation and removal. The Department must approve the use of larger motor vehicles in advance, in writing in the license agreement or in a separate document. Such written approval or license shall contain conditions and limitations on use including, but not limited to the following: 1) the equipment shall be used only under dry or frozen conditions and may be further limited by the Department based on the season and on-site conditions; 2) identification of authorized vehicle access route(s); 3) entry shall be as minimal as possible; 4) requirements to install and replace or repair any gates, barricades or berms as soon as the work using the vehicles is completed; 5) all access roads must be built and maintained according to guidelines provided by the Department. Any road, ditch or crossing device that is installed for maple production must be maintained and repaired at the sole expense of the Licensee to a condition satisfactory to the Department.

All access trails and/or roads shall be routinely maintained by the Licensee and all culverts, crossings, and/or water bars must be kept in good working condition. Where a motorized vehicle must cross a permanent stream, a temporary bridge shall be constructed and utilized and the Department notified. Licensees must comply with applicable guidelines contained within the “Acceptable Management Practices For Maintaining Water Quality On Logging Jobs In Vermont” **and all specific requirements in their license agreements related to the** use of all existing or constructed roads. The Acceptable Management Practices (or AMP’s) will also be used to guide design and spacing for drainage devices, protective strips or other water protection items not specifically detailed here or spelled out

in the license agreement. If snow plowing of a forest highway is required for operations and approved by the Department, the Licensee shall be responsible for such plowing and any associated costs and shall be responsible for any damage to the roadway or ditches resulting from this activity. Designated snowmobile trails may not be blocked or plowed by Licensees without prior written permission of the Department.

Practices to Be Applied During Maple Sugaring Operations to Protect Soil and Water Resources

The Licensee is responsible for installing and maintaining all erosion control and water quality protection measures during and after the sugaring season. Licensees shall submit plans and maps that show the expected road and access trail usage and construction as well as main lines and the approximate number of taps that will be served by them.

Licensees may make arrangements for the use of private access points and existing graveled forest highways to access sugar license areas and sap collection stations. Any road construction on state land is limited to short spurs or landings to access sap collection stations. Licensee will be required to repair any damage to forest highways and other roads on state land that their use may cause, as well as to maintain such roads as may be associated with normal wear and tear related to their use of them.

1. Snowplowing of forest highways to access sugaring operations will be of the shortest distance possible and on gravel surfaces for sap collection and related purposes only. The state lands forester in charge will be notified before snowplowing operations are to begin.
2. All temporary access construction will be done to standards and approved by the state lands forester in charge.
3. Roads will be gated or blocked at the Licensee's expense when not in active use for sugaring or line maintenance as per the direction of the state lands forester in charge. Licensee will be provided with any necessary gate keys or lock combinations to state-owned gates so that they can access the licensed sugarbush.
4. Road surfaces will be adequately drained. Ditches will be constructed to divert water from road surfaces if needed. Culverts will be placed if needed to the specifications of the state lands forester. Ditches and culverts will be kept free of debris in all seasons. Silt fencing, diversions, hay bales and other erosion check devices may be required during construction or during use in the spring sap collection. These shall follow the standards outlined in the AMP's.

5. Weight limits will be established on state forest highways by the state lands forester in charge if necessary during sap hauling. To minimize road damage, Licensee will make every attempt to haul large sap loads out during early morning hours or at other times when the road bed is frozen.
6. Maintenance of roads will be as needed. Prompt attention will be made to ruts or other surface issues related to spring usage. Grading, graveling and ditch maintenance will be done annually when the road dries out following sugaring.
7. Vehicles will not ford streams or wet areas. Temporary bridges designed for the weight of the vehicle will be required. The State does not design temporary bridges or recommend load weights and does not accept liability for any bridge failure or problem.

Access Trails

1. Constructed trails will be allowed for use by tractor or ATV for spring sap collection activities or for work on lines in frozen conditions or dry weather. Vehicle size or tire type may be restricted during spring collection.
2. Access trail construction will be of the shortest length possible and will be approved by the state lands forester. Trail construction and maintenance will take place in dry weather prior to spring sap run.
3. Pitches of 20% grade on trails will not exceed 300 feet. Trails will not be built that exceed 20% grade.
4. Trails will not ford streams or wetlands. Temporary bridges will be required if needed. No brushing in of streams will be allowed. Culverts for trail crossings will be discouraged in favor of bridges. No slash or other debris shall be allowed in streams.
5. Buffer strips along access trails and roads will be in place along streams and wetlands in accord with the AMP's.
6. Trails will not be built on existing hiking, skiing, biking or snowmobile trails without Department approval. Crossing of these trails shall be avoided.
7. Licensee will be required to fill and smooth trails that develop ruts and may be required to armor some stretches with gravel or rocks. Water bars will be installed at the direction of the state forester.
8. Roads, trails and turnoffs will be required to be seeded and mulched after construction.

9. Trails may need to be blocked or gated to prevent inappropriate recreational vehicle passage when not in active use for management activities.

Guidelines for Buildings and Equipment Needed for Tapping and Sap Collection on Public Lands

Temporary buildings, power lines or other structures needed for pumps, reverse osmosis systems (R/O's), storage tanks and/or generators associated with a tapping operation may be authorized by the Department in a license agreement. Structures such as sugar houses and gift shops are considered permanent structures and are not allowed. The Licensee shall be responsible for obtaining and complying with any and all permits that may be required. Any structures so authorized shall be considered property of the Licensee and all property taxes associated with these structures shall be paid to the town by the Licensee. Structures may be built on either a concrete slab or wooden floor with prior written approval. Any structure (other than sap storage tanks) shall be painted or stained an earth tone in the dark range of color, preferably green, brown or grey. Roofing shall also be in the dark color range. At the termination of the license agreement the Licensee must remove all equipment, utility lines and structures including concrete slabs or wooden floors unless otherwise authorized in writing by the Department. The ground must be smoothed, grass seed spread and mulched.

Fuel tanks for generators and/or pumps are allowed but must be installed and maintained under all local, state and federal regulations, including but not limited to the Environmental Protection Agency's "Spill Prevention, Control and Countermeasure Rule" and Licensee is responsible for obtaining all requisite permits. Tanks must be sited with Department consultation and approval. Tanks must be inspected no less than every five years and prior to any license renewal request. Licensee shall immediately report any fuel spills or leaks shall to the State's Emergency Hazardous Spills Hotline (1-800-641-5005).

A Security Bond or letter of credit in the amount of \$3.00 (three dollars) per tap must be issued for the benefit of the Department by Licensee authorizing the Department to call in the security bond or letter of credit to restore any and all damages to the license area and/or removal of materials Licensee may leave behind at the termination of a license. The security bond or letter of credit must be issued for the term of the license plus an additional 3 months.

Advisory Board:

An Advisory Board will be established. It will consist of a total of eight members; three representatives from the Vermont Department of Forests, Parks and Recreation, three members of the Vermont Maple Sugar Makers Association, one

representative from either the Proctor Maple Research Center or UVM Extension, and one representative from the Vermont Forests Products Industry.

The mission of this group is to advise the Department on this program. The Advisory Board will recommend program guidelines and advise the Commissioner of the Department in the selection of candidates for certain parcels of land whenever needed. The Advisory Board shall meet at least once each year during the month of May to advise the Department, and on an as needed basis as may be requested by the Commissioner.

The Department will coordinate closely with the Advisory Board but assumes ultimate responsibility for administration of this program.

Guidelines, Criteria, and Process for Awarding Sugaring Licenses

Periodically, interested parties will be invited to submit an application to the Department for a sugaring license. The applications will include a detailed description of the proposal including approximate number of taps proposed, equipment to be used, access to be used, roads to be built, structures/power lines to be erected/installed, identification of site-specific constraints and how these will be addressed by the applicant, financial business plan and other elements of their proposal as well as a description of the applicant's sugaring expertise, knowledge, experience, and commitment to sound resource management and stewardship. Sugaring licenses will not be bid out to the highest bidder as license fees will be pre-determined (see below). Instead, awarding of sugaring licenses will be based on the following criteria:

1. Sugarbush Management and Operations: Compliance with current sugarbush management and operations standards, guidelines, and recommendations as contained within the "North American Maple Syrup Producers Manual 2nd Edition", or other sources approved by the Commissioner. (In instances where such sources contain standards or guidelines that differ from those outlined within this document, then the guidelines contained within this document shall be followed). Demonstrated commitment to sound resource stewardship and management as articulated in the application.
2. Expertise, Ability, and Capacity of Applicant: Prior sugaring experience, ability to move forward in timely manner, demonstrated financial capacity to undertake the proposed work, etc.
3. Miscellaneous: Location of applicant to licensed area, level of necessary supporting infrastructure (power, storage building(s), road and trail network), completeness/quality of application, educational values of proposal, applicants' financial/legal standing with the State, etc.

In the event that more than one applicant for a sugaring parcel is qualified, submits their application on time, meets all necessary requirements, and if the Commissioner believes there is no obvious benefit to the State in awarding the sugaring license to a particular party, then the successful applicant will be determined by lottery. In no event shall a current member of the Advisory Committee apply for or be awarded a sugaring license.

License Fee and Payment Process

The payment formula described below will be used each year to determine the fee per tap assessed as the annual Licensee fee. The standard base administrative fee for all ANR licenses of \$50 will be assessed. In addition, the Advisory Board will estimate by May 1st of each calendar year the average current price being paid per pound for bulk Vermont Fancy Grade maple syrup and Vermont Commercial Grade. Once these prices have been set, then the average between the two prices will be calculated. Twenty five percent (25%) of this average will be the amount charged as rent per tap for the following year by the Department. The Department will provide this information to each Licensee on or before December 1 of each year along with an invoice for the coming year's license fee which must be paid by January 1. The first years per tap fee will be based on the Licensee's estimated number of taps. Subsequent annual license fees may be adjusted to reflect the actual number of taps

License agreement terms will be for five years with the potential for two additional renewable five year terms. Each new renewal will be signed by the Licensee and the Department two-years prior to end of the current five year term. The Department will not approve a renewal unless the Licensee has actively sugared the site for at least two years during the preceding five year term. If the Licensee has complied with all license terms and condition and has demonstrated responsible stewardship and care of the licensed parcel, the succeeding five year renewal period cannot be unreasonably withheld. This represents a possible total of up to 15-years (three consecutive five year terms) under a single license agreement. Two years prior to the end of the maximum 15-year term, the Licensee may indicate their intent to apply for a new license which may be approved at the discretion of the Department. Upon the written approval of the Department, license agreements may be assigned to another member of the Licensee's immediate family.

At each five year renewal, the license may be revised to align with current research and accepted practices regarding tapping technology. At the end of the license period and upon the termination of a sugaring license, the State reserves the right to delay or deny the issuance of a new sugaring license for forest management or other resource management purposes.