TOWNSHIP OF MONTAGUE

Tree Canopy and Natural Vegetation Policy

Approval Date: August 6th, 2019

1. POLICY STATEMENT

The Township of Montague values its forested areas and greenspaces for their environmental, economic and social benefits and strives to increase its existing tree coverage.

2. PURPOSE

This Policy intends to support Council's goals, as expressed in the Township's Official Plan, of preserving and enhancing the Township's natural heritage resources and recognizing a healthy natural environment as a part of Montague's integral character. This Policy builds upon existing regulations and programs and offers support and guidance to residents and stakeholders

3. LEGISLATIVE AUTHORITY

Section 270(1) of the *Municipal Act*, 2001, S.O. 2001, c. 25, as amended, provides that a municipality shall adopt and maintain a policy with respect to the manner in which the municipality will protect and enhance the tree canopy and natural vegetation in the municipality.

4. APPLICATION

This Policy is applicable as a resource guide to all property owners in the Township who wish to undertake improvements to the natural condition of their property.

This Policy is also applicable to provide guidance to applicants and the Township in implementing the Official Plan's policies regarding the protection and enhancement of natural vegetation as part of a *Planning Act* approval process.

5. DEFINITIONS

"Conservation Authority" – shall mean the Rideau Valley Conservation Authority.

"Development" – shall mean the construction or expansion of a building, or the construction of infrastructure.

“Hamlet” – shall mean a small settlement area designated by the Municipality’s Official Plan.

“Mature Tree” – shall mean a tree whose main stem exceeds 20 centimetres circumference at breast height.[1]

“Native Species” – shall mean a plant species that is indigenous to the Township.

“Natural Vegetation” – shall mean plant life that grows naturally in the area composed largely of native species

“Site Plan Control Agreement”- shall mean a legally enforceable agreement between the owner and the municipality registered on the property’s title.

“Tree Canopy” – shall mean the coverage mature tree crowns have on a parcel of land.

“Vegetative Buffer” – shall mean an area of dense vegetation intended to slow runoff and trap sediment adjacent to a riparian corridor, lake or steep slope.

6.0 BEST PRACTICES

6.1 Encourage Native Species

The Township of Montague encourages the planting of natural vegetation, including trees that are native to the Montague region of Eastern Ontario. Those native to the Montague region are listed in Appendix "C."

Native species are best adapted to this local environment and are always preferred compared to introduced species which often contribute little to the local ecosystem and may become invasive. Depending on the local environment, property owners are encouraged to seek out species that are resistant to pests, drought and pollution.

See Appendix "A" for list of best practices for tree planting and care.
See Appendix "C" for a list of shrubs and trees native to Montague Township.
See Appendix "D" for tree selection tips for a changing climate

6.2 Avoid Invasive Species

Invasive species are considered plants that disrupt the natural balance of an ecosystem, often spreading over a specific area. The easiest way to control the spread of invasive plants is to avoid planting them. **Prioritize species that are**

[1] Information on native trees is provided in *Native Trees of Canada* by R.C. Hosie (1990) and through the online Ontario Tree Atlas.

native to this area, or imported plants that are known not to spread on their own.

The Township recognizes that the ecological benefit of removing invasive species over the long term exceeds the limited benefits of allowing these plants to remain in place. Different species will require different control mechanisms to remove. Methods of mechanical removal include pulling, cutting, burning, smothering or girdling.

Chemical control of invasive species or any other species should only be done sparingly and while strictly following label instructions. This should never be done near a well.

Removed plants should be disposed of in the garbage. Do not put them in the compost or discard them in natural areas. Discarded flowers may produce seeds.

6.3 Shoreline Naturalization

The Township encourages the protection and restoration of an area of natural vegetation in the riparian area adjacent a waterbody. A vegetated buffer along the shoreline (the “ribbon of life”) provides benefits to property owners including reduction in erosion, reduced maintenance, fewer geese and the infiltration and removal of pollutants such as salt, fertilizer and septic leachate. The removal of pollutants and enhancement of wildlife habitat leads to better outcomes for fish. At a minimum a 3-5 m (10-16 foot) vegetative buffer is considered beneficial however the wider the buffer the greater the environmental benefit.

Shoreline naturalization does not need to be at the expense of a view. Low shrubs, hardy perennials and other native plantings can bring the benefits of the "ribbon of life" without blocking important viewscapes. Existing sandy areas, especially south facing, can be left in place for turtle nesting grounds.

See Appendix "B" for planting suggestions for different shoreline conditions.

7. PLANNING APPROVALS

The parts of the Township that are already forested provide natural habitat not only for trees, but for the many wild species that depend upon trees, particularly migratory birds. Since much of the forest in the township has already been cleared, where possible, development should avoid remaining forested areas, in accordance with municipal and provincial policy. Those parts of the township with forest trees greater than 50 years old are the most important for protection.

7.1 Plans of Subdivision

In accordance with applicable policies of the Township's Official Plan and Section 6 of this Policy, new subdivisions approved in the Township will include conditions regarding the preservation of existing tree canopy and natural

vegetation and their restoration where appropriate. To implement this Policy and the applicable sections of the Official Plan, decision-makers are encouraged to consider the following:

- Require the planting of at least one suitable native tree in the front yard of each lot (see Appendix "C" for selection);
- Direct developers to avoid areas that already support stands of mature trees
- Require the submission of a tree protection plan and implementation of a tree replacement program where subdivisions are proposed in areas of extensive tree cover;
- Accept parkland dedication instead of cash-in-lieu where there is an opportunity to preserve intact treed features;
- Orient roads and building envelopes to maximize the preservation of mature trees;

7.2 Site Plan Control Approvals

In accordance with applicable policies of the Township's Official Plan and Section 6 of this Policy, new site plan approvals and amendments to existing site plan agreements will have regard for the preservation of existing tree canopy and natural vegetation and their restoration where appropriate. Proponents will need to show how they have taken tree canopy and vegetation preservation into account.

To implement this Policy, decision makers are encouraged to consider the following:

- Direct developers to avoid areas that already support stands of mature trees
- Require developers to identify all existing mature trees on a lot that are proposed to be removed as part of the development and replace those trees one-for-one elsewhere on the subject property or at an agreed upon location elsewhere in the Township;
- Orient roads and building envelopes to maximize the preservation of mature trees;
- Where lands are otherwise not intended to be used for development, such “surplus lands” should be managed on a minimal intervention basis with natural vegetation established and retained;
- For waterfront properties, a vegetative buffer shall be instituted in consultation with the Rideau Valley Conservation Authority, with the exception of a 5 metre wide shoreline access area.

8. MUNICIPAL LEADERSHIP

8.1 Municipal Lands

On properties owned by the Township, the Township commits to replacing any trees removed with two trees or other vegetation:

a) On the same property if feasible; or

b) On another property in the Township.

In the event that the Township needs to remove other natural vegetation, this vegetation will be compensated where possible.

8.2 Municipal Road Allowances

The Township will undertake all best efforts to preserve and protect trees within the municipal road allowance and will avoid removing live trees except where required for reasons of safety. The Township will replace any trees removed from a municipal road allowance in a Hamlet with two new trees to be planted within that same Hamlet, or, on a Township road allowance or other Township owned land elsewhere in the municipality.

8.3 Lead by Example

On municipal lands and where so engaged on private lands, the Township will, wherever possible, follow the best practices outlined in this Policy and will be guided by the overall purpose outlined in Section 2 of this policy.

9. DEVELOPING PARTNERSHIPS

The Township recognizes that other agencies have programs and policies in place that also support the objectives of this Policy and are better resourced to do deliver on these programs that implement these objectives both in the public sphere and the private sphere. As part of the comprehensive goal of improving the tree canopy and vegetation coverage, the Township supports these programs and, where appropriate, will encourage property owners and developers to participate.

9.1 Rideau Valley Conservation Authority

The Conservation Authority offers several programs to assist property owners in establishing and restoring natural vegetation on their property in accordance with the goals of this Policy. These programs include:

- ***Shoreline Naturalization Program*** that offers cost subsidized and site customized planting plans for eligible waterfront properties;
- ***Rideau Valley Rural Clean Water Program*** offers grants and technical assistance for on-farm and rural projects that can include windbreaks and forest management plans;
- ***Trees for Tomorrow Program*** that offers financial and technical assistance to private landowners and municipalities for special tree planting and reforestation projects.

9.2 Lanark County

The Lanark County Forest Conservation By-law in effect at the time of the adoption of this Policy applies to certain tree cutting and forestry practices within the Township. Nothing in this Policy shall be interpreted to conflict with the regulatory provisions of that by-law.

9.3 Other Partnerships

The Township recognizes that other government, non-government and private sector agencies may offer programs, or start offering programs that assist property owners in achieving the objectives of this Policy. The Township will consider amending this Policy as required in order to highlight and identify these new and emerging opportunities.

10. ACCOUNTABILITY

This Policy shall be administered by the Clerk Administrator or such employee as designated by the Clerk Administrator. The Clerk Administrator shall be responsible for promoting and distributing this Policy to the appropriate staff and stakeholders.

11. POLICY REVIEW

This Policy shall be reviewed at least once per term of Council. This review shall include an assessment of the tree canopy condition in the Township compared to the original adoption of this Policy. In the event that tree canopy coverage declines or does not improve in a manner satisfactory to Council, the Township may consider amending the Policy.

Appendix "A"

Best Practices for Tree Care

Planting

The first weeks and months after planting a tree is critical to ensure its long term survival. Give the tree its best chance by carefully preparing and maintaining the planting site.

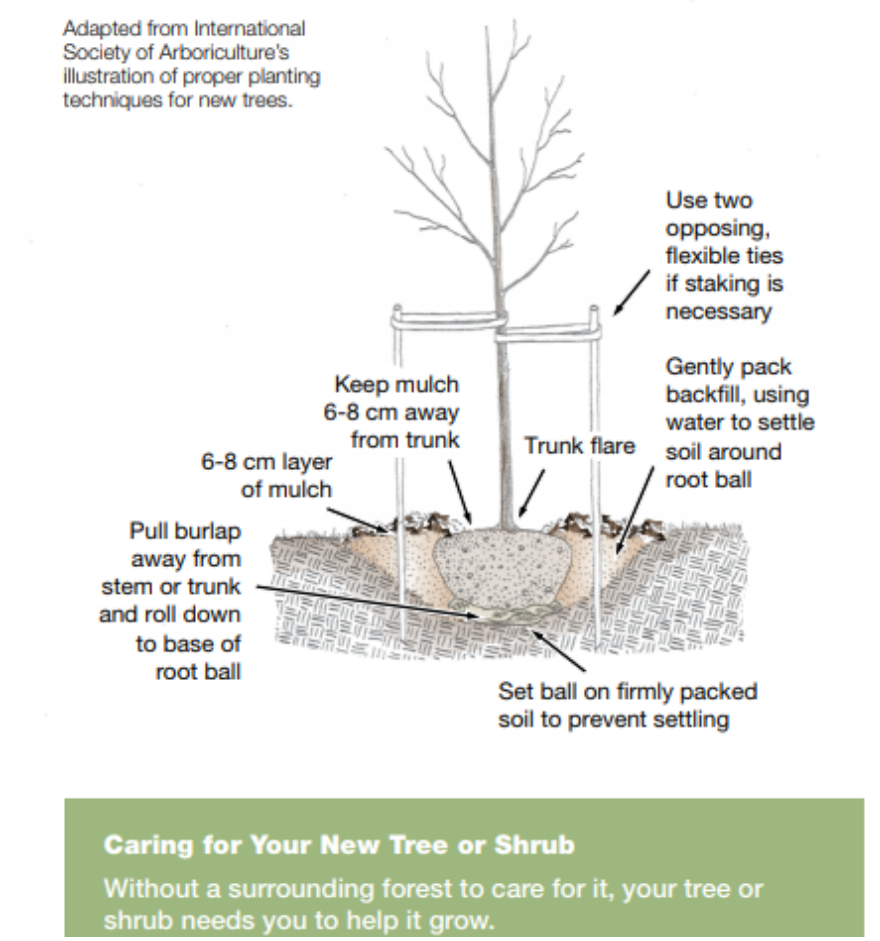


Image Source: Credit Valley Conservation

For the first year the soil around a newly planted tree should be always damp. If the conditions are dry, new trees should be watered twice weekly, however if water pools around the base or has trouble draining, cut back on watering.

When to Plant

Deciduous trees can be planted in the spring, as soon as the frost is out of the ground or in the fall, from leaf-fall until freeze-up. Poplars, willows, ash, elms, and birches tend to overwinter better if planted in the spring.

Evergreens can be planted early in the spring until four weeks after deciduous trees have opened their leaves or late in the growing season, from about the first week of August to the end of October.

Planting and Care Tips (Tree Canada)

Avoid overusing compost at the planting site.

When a tree is planted in soil that is radically different than the original soil it is growing in, or when new soil is too rich, it can be harmful to the tree as the roots will refuse to grow outside the planting hole, creating problems for the tree's roots not anchoring properly. Roots can grow in a girdling condition if the new soil they are planted in is very different than the soil it has originally grown in. When a tree is planted near a permanent structure made of concrete (i.e. retaining wall, house), roots may become girdled by being deflected from the structures.

The soil you are planting in should not be radically changed or augmented with compost, try to leave the soil conditions as native as possible. The tree's roots should be loosened up to encourage them to grow out and any girdling roots should be cut away when the tree is taken out of a container.

Trees do not always need to be braced and staked

Staking large trees is often unnecessary, except where there is bare root planting in a windy area where or where you are planting on a slope – trees need to develop a strong support and reaction to wind and sway is important to ensure that it develops this wood. Unfortunately too often the stakes and wires are left on too long and the tree grows into these.

Avoid using too much mulch

Too much mulch can damage root growth as it creates low soil oxygen but high moisture levels and can cause insect root rot and other diseases, and affect soil pH or soil nitrogen levels

Use bark or living perennial mulch, more inert than wood chips, to a maximum depth of three to eight cm (1"-3")

Fertilize carefully and not too often

Fertilizer contains one or more elements required for tree growth but should not be thought of as "food" – it is like a vitamin, not a meal and can actually stress newly-planted trees.

Use a well balanced fertilizer (10-10-10) if soil and leaves appear to be deficient and/or two years before, or two years after any root injury but not soon after tree is newly-planted.

Keep in mind the helpful insects

There are many insects who simply need trees for survival and do not harm them and can be helpful in controlling other insects that may harm trees. Identify insects found on the tree to see which are beneficial and which are not before attempting to control them.

Early pruning does not offset root loss after planting

Removing the top of the tree will impede healthy growth because it reduces the tree's capacity to photosynthesize. The tree's crown form, structure and development will be negatively affected by the removal of the top live limbs.

Only the diseased, damaged or dead wood should be removed during the first 5-10 years after planting the tree.

Source: "Tree Planting Guide" (Tree Canada): Online: https://treecanada.ca/resources/tree-planting-guide/

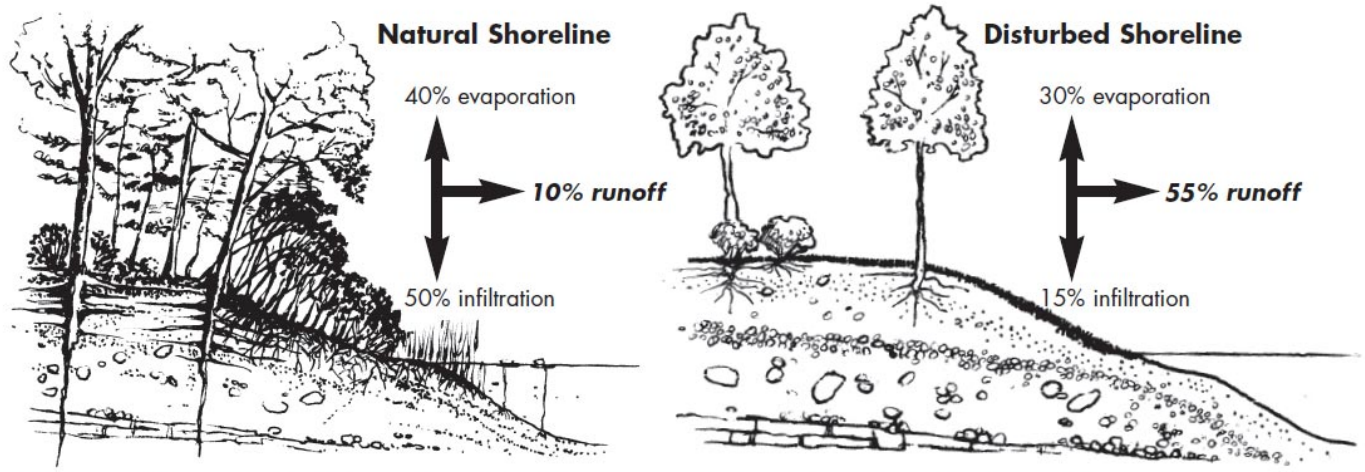
Appendix "B"

Best Practices for Shoreline Planting

Different plants thrive better in specific situations. These trees and shrubs are recommended for each of the most common shoreline environments.
Sandy, dry soil: Bush honeysuckle (*Diervilla lonicera*,), Common or Creeping Juniper, Smooth Wild Rose, Shadblow Serviceberry, , White Pine, Snowberry, Fragrant Sumac
Sandy, wet soil: Willows (pussy willow, black willow, shrubby willow, sandbar willow), Wild Black Currant, Silver Maple, Swamp Rose, Red Osier Dogwood, Showy Mountain-ash, Speckled Alder, Sweet Gale, Tamarack, Bunchberry, Buttonbush
Clay, moist, wet soil: Silky Dogwood, Black Chokeberry, Black Elderberry, Grey Dogwood, Highbush Cranberry, Meadowsweet
Clay, Dry soil: Red Oak, Smooth Wild Rose, Witch Hazel, Saskatoon Serviceberry, Snowberry, Sugar Maple
Loamy, moist, wet soil: Highbush Cranberry, Sweet Gale, Meadowsweet, Swamp Rose, Red Osier Dogwood, Buttonbush, Various Willows
Loamy, dry soil: Bush Honeysuckle, Smooth Wild Rose, Shadblow Serviceberry, Red Oak, Saskatoon Serviceberry, Snowberry, Fragrant Sumac

A well planned mix of native trees, shrubs and hardy perennials will bring the benefits of the "ribbon of life" while minimize maintenance and protect important views.

Source: loveyourlake.ca



Native vegetation protects water quality from polluted runoff, and helps soil absorb water.

Hard surfaces and reduced vegetation increase runoff and and erosion potential, and decrease absorption by the soil.

Image Source: Rideau Valley Conservation Authority

Appendix "C"

Trees and Shrubs Native to Montague Township

Native trees for planting in Montague Township*

American mountain ash	*Sorbus americana*
Balsam fir	*Abies balsamifera*
Basswood	*Tilia americana*
Bitternut hickory	*Carya cordiformis*
Black Cherry	*Prunus nigra*
Bur oak	*Quercus macrocarpa*
Ironwood	*Hophornbeam*
Pin cherry	*Prunus pensylvanica*
Red maple	*Acer rubrum*
Red oak	*Quercus rubra*
Red pine	*Pinus resinosa*
Silver maple	*Acer saccharinum*
Speckled alder	*Alnus rugosa*
Sugar maple	*Acer sacharium*
Tamarack/Larch	*Larix laricina*
White birch	*Betula papyrifera*
White cedar	*Thuja occidentalis*
White oak	*Quercus alba*
White pine	*Pinus strobus*
White spruce	*Picea glauca*

*Poplars not recommended as they are fast-growing, but brittle and relatively short-lived.
Beech, hemlock, ash not recommended as they are at risk of fatal diseases.

Native shrubs for planting in Montague Township

Species		Height	Features	Habitat
Alternate-leaved dogwood	*Cornus alternifolia*	6m	branches in elegant horizontal tiers	moist soil, partial shade
Beaked hazel	*Corylus cornuta*	3m	flowers April/May	anywhere not wet
Bush honeysuckle	*Diervilla lonicera*	1m	clusters of yellow flowers, early summer	open areas/partial shade, dry soil
Canada plum	*Prunus nigra*	10m	fragrant flowers, April	open areas not wet
Chokecherry	*Prunus virginiana*	10m	flowers May/June	anywhere that is not wet
Elderberry	*Sambucus canadensis*	3m	flat-topped clusters of dark purple berries (edible)	sun to partial shade, moist soil
Fly honeysuckle	*Lonicera canadensis*	2m	pairs of yellow flowers, May/June	shade, moist soil
Hawthorn	*Crataegus chrysocarpa*	6m	flowers May/June	open areas not wet
High-bush cranberry	*Virburnum trilobum*	4m	clusters of showy white flowers June/July	open areas, moist soil
Mountain maple	*Acer spicatum*	5m	elongate clusters of yellowish green flowers	partial shade, wet-moist soil
Pin cherry	*Prunus pensylvanica*	12m	white flowers, May	open areas not wet
Prickly gooseberry	*Ribes cynosbati*	1m	fruits prickly, July	open areas not wet
Red osier	*Cornus stolonifera*	3m	stems reddish	moist to wet soil
Red-berried elderberry	*Sambucus pubens*	4m	clusters of bright red berries	sun to partial shade, moist soil
Round-leaved dogwood	*Cornus rugosa*	3m	flat-topped fruit clusters, August	open areas, not wet
Serviceberry/Juneberry/ Shadbush	*Amelanchier arborea*	10m	one of first shrubs to flower in spring	open areas not wet
Staghorn sumac	*Rhus typhina*	6m+	clusters of hairy red fruit and leaves scarlet in fall	open areas not wet, spreads easily
Striped maple	*Acer pensylvanicum*	10m	stems attractively striped	shady moist areas
Wild black currant	*Ribes americanum*	1m	no prickles, fruits July	partial shade, moist soil
Wild raisin	*Viburnum cassinoides*	5m	clusters of blue fruits	open areas, moist soil

Species list prepared for Montague Twp. Cathy Keddy, M.Sc

.**Appendix "D"**

Tree Selection in a Changing Climate

Between 1930 and 2010 southern Lanark County moved from a Plant Hardiness Zone of 4b to 5a, reflecting a gradual increase in winter temperatures. A new tree planted today may mature and age in climate conditions that are different than what is seen today. In southeastern Ontario, anticipated effects of a changing climate that affect plant and tree growth include:

- Increased frequency and severity of drought years.
- New and potentially hardier diseases and pests
- Generally longer growing season
- Average annual temperatures anticipated to increase by 2-3 degrees by 2050
- Similar precipitation over the year, with trends to wetter winters and drier summer.

In general, the projected climate change is expected to be faster than the ability for trees to adapt and migrate in Canada. As such, climate stressed tree species risk becoming maladapted, less productive and more vulnerable to insects and diseases.

In southeastern Ontario, climate change will affect different species differently. Consideration should be given to species that will be resilient to anticipated conditions.

Retreating species are those projected to be unsuitable for this region in the coming decades. Continuing to plant these species may be appropriate depending on project objectives, but foresters should be prepared for the potential of reduced growth, shorter lifespans and a lack of natural regeneration. Increased tending activities should help these species establish.

- White spruce (Picea glauca)
- Balsam fir (Abies balsamea)
- Eastern white cedar (Thuja occidentalis)
- Paper birch (Betula papyrifera)
- Tamarack (Larix laricina)
- Trembling aspen (Populus tremuloides)

Enduring species are currently common in this region and will continue to be suitable in the future. Southern seed sources will likely prove to be better adapted than native seed over longer time horizons.

- Black cherry (Prunus serotina)
- Maple (sugar, red, silver) (Acer saccharum, A. rubrum, A. saccharinum)
- Oak (red, white, bur) (Quercus rubra, Q. alba, Q. macrocarpa)
- White pine (Pinus strobus)

Aside from the species listed here, projections for thousands of other plant species are available through planthardiness.gc.ca. You can explore species-specific maps and models across multiple time periods and climate scenarios, and access detailed information on the modeling process.

Source on Species: Lake Simcoe Region Conservation Authority (2018): Adapting Forestry Programs for Climate Change.