



M-119 Tunnel of Trees GUIDEBOOK

**A Community Resource to
Protect and Preserve**



The Purpose of this Guidebook

The purpose of this Guidebook is to provide best management practices to residents, local governments, builders, and developers to help preserve the special sense of place that exists along the M-119 corridor.

Table of Contents

M-119 Tunnel of Trees Management Plan Update	Page 3
Corridor Features	Page 5
Protecting the Heritage Route Corridor	Page 6
Trees of the Heritage Route	Page 8
Roadway Safety and Etiquette	Page 9
Managing the Heritage Route Corridor	
• Landscape Management	Page 10
• Maintaining Views	Page 11
• Shoreline Protection, Steep Slope Protection, Additional Protection Practices	Page 12
Driveways and Access	Page 15
Signage	Page 15
Invasive Plants	Page 16
Lighting	Page 23
Resources Information	Page 16

The Committee receives on-going technical and administrative assistance from the Northwest Michigan Council of Governments with financial support from the Michigan Department of Transportation.

For more detailed information on the Heritage Route Committee materials, meetings minutes, and activities, please visit the heritage route website at www.nwm.org/m119.asp. Also, please feel free to send questions, comments, or suggestions to the M-119 Tunnel of Trees Scenic Heritage Route Committee c/o Patty O'Donnell at 231-929-5039, PO 506, Traverse City MI 49685-0506, pattyodonnell@nwm.cog.mi.us.²

2011

The M-119 Tunnel of Trees Management Plan

Mission Statement

Recognizing the unique value of M-119 and the area surrounding the roadway, the M-119 Heritage Route Management Plan will strive to protect, preserve, and enhance the natural, scenic, and cultural character of the M-119 Heritage Route.

Goals

The M-119 Tunnel of Trees Scenic Heritage Route was officially designated a Scenic Heritage Route by the State of Michigan in 2003.

- ⇒ To promote protection and preservation of the current state of the Corridor.
 - ⇒ To assess existing community plans and regulations to ensure effective implementation of the goals and projects listed in the Management Plan.
 - ⇒ To promote enhancement projects restoring character and encouraging the use of alternative routes.
 - ⇒ To unite the linear community through the planning process.
-

M-119 Tunnel of Trees Scenic Heritage Route Committee

Rob Deane, Cross Village Township: 616-456-8463

Naomi Singer, Cross Village Township: 526-6264

Henry Singer, Cross Village Township: 526-6264

Joe Engelhard, Readmond Township: 526-8191

Larry Wallen, Readmond Township: 526-8916

Dell Weitzel, Readmond Township: 526-7684

Bill Prall, Friendship Township: 526-2594

Eric Rasmussen, Friendship Township: 526-8675

Gary Thurston, Friendship Township: 231-242-0061

Darrell Amlin, West Traverse Township: 526-5895

Joey Arbaugh, West Traverse Township: 526-5359

Carolyn Sandford, West Traverse Township: 526-5895

Fred Hoffman, Emmet County Lakeshore Association, 526-6611

Catherine Reindel, Emmet County Lakeshore Association, 526-7589

George Reindel, Emmet County Lakeshore Association, 526-7589

Partners include the Michigan Department of Transportation, the Little Traverse Bay Bands of Odawa Indians, the Emmet County Planning and Zoning Office, and the Little Traverse Conservancy.

Corridor Management Plan Objectives and Actions

1. Promote Preservation and Conservation of the Tunnel of Trees for Balanced Growth and Development

- Voluntarily monitor and provide guidelines for future development
- Support enforcement of existing regulations
- Maintain the Tunnel of Trees by providing guidelines for land use
- Stay informed and educated
- Develop or expand partnerships
- Promote a variety of methods for conservation and preservation of land along the corridor
- Help identify sources of funding for preservation and conservation
- Promote the tenets of the Management Plan beyond its current boundaries
- Encourage community involvement in promoting responsible maintenance and development along the corridor
- Focus on communication

2. Balancing Roadside Safety with Aesthetics

- Communicate regularly with MDOT and other government agencies
- Promote the enforcement of existing regulations
- Review and coordinate M-119 corridor land use and roadway

3. Maintaining Steep Slope Integrity

- Continue to support the steep slope ordinance and support efforts to make the Emmet County Steep Slope Ordinance more effective
- Educate landowners, realtors, developers, and those conducting land transactions about Best Management Practices
- Continue to share observations regarding erosion issues with Emmet County staff

4. Prevent Intrusions to Scenic Character

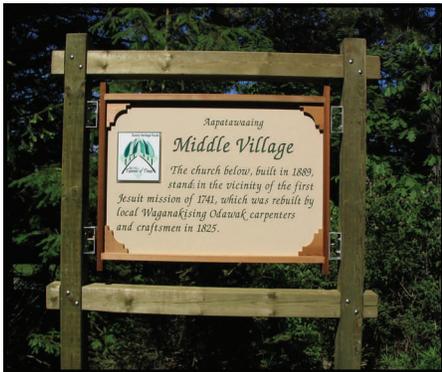
- Develop scenic, cultural, and historical signage initiatives that preserve the character and promote the use of natural or natural looking materials
- Encourage the use of natural or natural looking fencing and other structural materials
- Encourage Dark Skies/light pollution management policies for outdoor lighting
- Promote underground utilities
- Focus on communication

5. Promote Appropriate Use of the Corridor and Alternative Routes

- Support ongoing review of traffic patterns
- Support the creation of directional signage that designates C-77 as an alternative route
- Focus on Communication

Corridor Features

The M-119 Tunnel of Trees Scenic Heritage Route runs along the shoreline of Lake Michigan and is a 20 mile route from Harbor Springs to Cross Village. The road is narrow and winding and is characterized by its namesake “Tunnel of Trees”. Historically, this section of M-119 started out as the primary north/south trail for Native Americans, trappers, and traders and then for the settlers and loggers. Today, it serves the local residents and visitors.



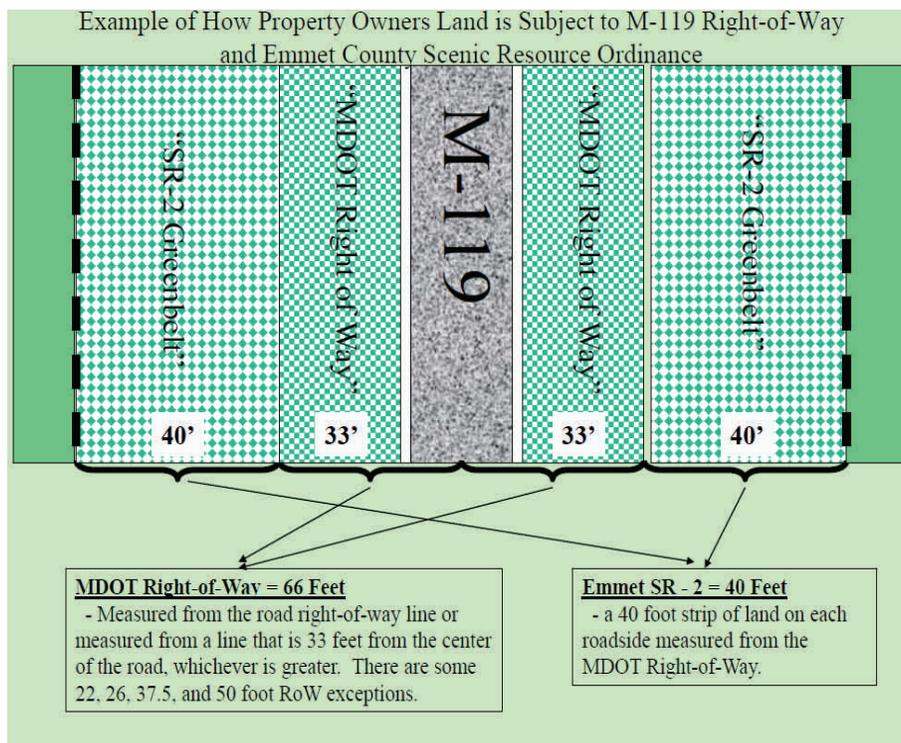
One component of the heritage route management plan and the update is an inventory of the unique features along the corridor. Water features, wetland areas, scenic views, historic and cultural resources, parks, churches, and other points of interest, as well as current land uses were compiled. Some of the noteworthy features along the route include:

- ◆ Angell Farm
- ◆ Old Brickyard
- ◆ Five Mile Creek/Schoolhouse
- ◆ L'Arbre Croche (Crooked Tree)
- ◆ Middle Village
- ◆ Devils' Elbow
- ◆ Horseshoe Bend
- ◆ The Council Tree area
- ◆ Good Hart
- ◆ Good Hart Store/Post Office
- ◆ St. Ignatius Church
- ◆ Cross Village
- ◆ Legs Inn



Protecting the Heritage Route Corridor

The Scenic Heritage Route is a right-of-way easement over privately owned property. The route has many features which contribute to the scenic character, such as narrow pavement width, embankments, road alignments which conform closely to natural topography, hedgerows, mature trees or forest along the edges of the roadway, and other features reflecting the surrounding landscape. Both the Michigan Department of Transportation and Emmet County have regulations to protect and preserve the character of the M-119 Scenic Heritage Route. The illustration below shows the M-119 roadway and the two strips of land areas on each side of the road with the regulations briefly described on the next page.



**Michigan Department of Transportation –
Doing something in MDOT right-of-way? Please contact
the MDOT Office at (989) 344-1802 prior to beginning work
and regarding any permits that may be necessary.**

The safety of both the motoring public and work crews within the right-of-way is a top priority for MDOT. Permit applicants are given MDOT guidelines to be followed for signing and barricading for construction, utility or other work-zones in the right-of-way. One exception to the permit rule is the installation of a mailbox along a state trunkline. This activity does not require a permit; however, the mailbox must meet the Postmaster General's criteria. If a driveway will access M-119, a driveway permit will be required. Upgrades to existing drives may require a permit. Tree trimming and removal, drainage, landscaping, grading, utilities and other similar activities may require a permit. MDOT website: http://www.michigan.gov/mdot/0,1607,7-151-9620_11057-62651--00.html.



**Emmet County Scenic Resource (SR) - Section 702
Required Conditions***

Every use in the SR Districts shall establish and maintain a forty (40) foot yard or strip measured from the road right-of-way line, or measured from a line that is thirty-three (33) feet from the road centerline, whichever is greater. Said yard or strip to be maintained in its natural tree and shrub condition. Trees and shrubs may be trimmed and/or pruned through the native strip for a view of the fronting waters and for access to a boat dock and/or a driveway entrance. Web Link (page 23 ordinance) - <http://apps1.emmetcounty.org/planzone/data/EntireOrdinance.pdf>. For detailed information, please contact the Emmet County Planning, Zoning, and Construction Resources at 231-348-1735.

* This ordinance does not pertain to West Traverse Township which has its own zoning.

The Trees of the Heritage Route

Tree Inventory 2007

The Committee had an inventory done of the tree species located within the M-119 Tunnel of Trees Scenic Heritage Route right-of-way. The following trees were noted: sugar maple, red oak, white pine, white birch, white cedar, eastern hemlock, white ash, aspen, red pine, willow, black cherry, American beech and black walnut, ironwood, various spruces, Scotch pine, American elm, balsam fir, and American basswood.

Tree Health Status 2010

A tree health status report was completed as an update to the 2007 Tree Inventory. The forester reported on the following:

- ⇒ The age of the forests along the Tunnel of Trees route would be generalized as middle-aged, 60-90 years old, and therefore of good vigor. As trees mature they will naturally have lower limbs die back and should be removed on a bi-annual basis.
- ⇒ There is a widespread presence of beech bark disease. This was observed in most stands of hardwood and will lead to widespread mortality of the species. Removal of infested trees within the right-of-way is recommended at the earliest opportunity. Preemptive removal of healthy appearing trees is not recommended, as some trees seem naturally tolerant, or at least not as susceptible as others and may very well survive.
- ⇒ Another issue is emerald ash borer (EAB) infestation. Ash trees with crown die-back were observed along the route, but the exact cause was not determined, though it may be assumed to be EAB. These trees should be included in the dying tree removal regime.
- ⇒ A couple of invasive exotic plant species were observed in the right-of-way: Autumn olive, a highly invasive shrub that is well established along the Route, and Scotch pine trees established in the right-of-way in the vicinity of 3487 M-119.

Power Line Corridors

To prevent potentially dangerous situations, Consumers Energy, the local electric power provider, trims trees and removes brush on a regular, rotating schedule. Consumer Power's "**Right Tree, Right Place**" document educates the homeowners about which native trees and shrubs to plant that would not interfere with power lines. Some species include: Arrow Wood; Common Juniper; Crabapple; Flowering Dogwood; Hawthorne; Red Osier Dogwood; Serviceberry; and Yew.

Roadway Safety and Etiquette

M-119's scenic "Tunnel of Trees" is enjoyed by many people. There are full time and seasonal residents, visitors and vacationers who all travel the corridor in automobiles, motorcycles, bicycles, or on foot to revel in its natural beauty. Some of the most treasured characteristics of the M-119 corridor are also the ones that create the most concern for safety among travelers. The curving and rolling nature of the roadway creates visual barriers and the narrow width requires sensitivity on the part of motorists, bicyclists, and pedestrians. With proper caution and consideration, safety hazards can be avoided with all the different users sharing the road.



If you travel M-119, please be considerate of those who live along the corridor by practicing safe, courteous travel behavior. "Sharing the road " will lead to a safer, more pleasant experience for everyone along the corridor.

Noise

This popular corridor is a quiet residential corridor and noise from motor vehicles disturbs its serene quality. Those traveling along the corridor are asked to respect the nature of the place by minimizing loud vehicle noise.

Protect the Beauty

Roadway users are also asked to keep the area clean because trash destroys the beauty and pollutes the environment. Take care to stow wrappers, cans, bottles, paper, and other waste until it can be disposed of properly.

For more information, please see the *Share the Road: Bike Etiquette and Common Sense for Travel Along the M-119 Tunnel of Trees* brochure at www.nwm.org/m119.asp under Public Education.

Landscape Management

The Committee recommends and promotes keeping the landscape natural as much as possible to maintain the rural character of this fragile and scenic area and the “Tunnel of Trees”. Suggested actions:

- Please retain “grand” (mature) trees that have value as majestic members of the M-119 Tunnel of Trees.
- Wood debris should be retained on site along roadsides to help control erosion and to be able to re-enter the food chain.
- Protect or plant native vegetation to create a buffer or screen that can be utilized for a variety of purposes: windbreaks in large open spaces or along the sides of structures receiving winter winds; to screen parking lots and incompatible land uses; and along drainage areas and surface water bodies for protection. Utilizing plantings with native species in areas visible from the road compliments the natural environment.
- During construction, put up temporary fencing, about 20 feet in diameter, around any trees so there are no damages to the root systems or the trees.
- Please do not plow snow across M-119 from private property such as parking lots and driveways. It is illegal to plow or dump snow on state and county roadways or rights-of-ways.

Context Sensitive Design

The Michigan Department of Transportation (MDOT) has integrated Context Sensitive Design into the agency’s projects. Context Sensitive Design is a community approach to designing and constructing transportation routes and corridors that includes the building of partnering relationships with the local communities, utilizing better communication, and working with image database programs. Transportation safety and mobility need to be balanced with the scenic, aesthetic, historic, environmental, and community values. The public needs to be involved early and continuously. Each project along the Heritage Route should take into account the constructed and natural environment of the area.

- Residential and commercial driveways
- Tree trimming
- Drainage
- Landscaping
- Grading
- Utilities
- Other similar uses

Maintaining Views and the Lake Michigan Bluff

Most people live or travel along M-119 because they want to enjoy the unmatched, scenic beauty of the corridor. There are some basic steps that community members can take to ensure that the character of the corridor is maintained while enjoying views from their property.

The bluff along Lake Michigan was formed by glacial deposits and is characterized by layers of sand and clay. The sand layers can become unstable when saturated with water and slump or slide down the bluff. Trees provide stability to the bluff with both their root system and the amount of water they absorb for normal growth. Removal of trees on the bluff is strongly discouraged, and the topping of a tree can create serious damage.

Along the corridor, the maintenance of ***“filtered views”*** is recommended, where trees are selectively removed as opposed to clearing all vegetation from the area. A carefully established filtered view has distinct advantages that include helping the home look in harmony with its surroundings; preservation of the corridor’s unified “tunnel of trees” feeling; the protection and preservation of habitat for wildlife; and maintaining the shoreline and bluff.



Recommendations for Responsible Filtered View Trimming

- Do not remove more than one-third of the limbs on any one tree.
- Do not remove more than one-third of the trees in any area.
- Do not remove the tops of trees.
- Try to not remove any trees on a bluff due to increasing major erosion.

Shoreline Protection

To protect Little Traverse Bay and Lake Michigan, a fifty-foot wide vegetation strip of native trees, shrubs, and/or plants should be preserved or planted to filter the sediment and pollution from the stormwater runoff of the roadway. These plantings also decrease erosion along the steep slopes along M-119. Public shoreline recreation opportunities are limited and shoreline views are increasingly restricted by extensive shoreline development.

Steep Slope Protection

The steep slopes of the Tunnel of Trees are a noteworthy feature. These slopes contribute to the dramatic views of Lake Michigan and are unique and vulnerable geologic characteristics that need protection. Some of the properties may be impacted by the Emmet County Steep Slopes Ordinance, a land use regulation that protects people and property from damage by defining appropriate and safe building and construction activities along the Lake Michigan shoreline bluff. Before any changes are made to a parcel, please contact the Emmet County Planning, Zoning and Construction Resources at 348-1735.



Additional Protection Practices

Green infrastructure is an adaptable term used to describe an array of products, technologies, and practices that use natural systems or engineered systems that mimic natural processes to enhance overall environmental quality and provide utility services.

Site Design Mapping

The natural, scenic, and historic features of the Heritage Route should be preserved in all construction plans. These features would include viewsheds, natural features such as shorelines, forests, and wetlands; cultural and historical features; and the rural and neighborhood character of the villages and townships.

Open Space Protection

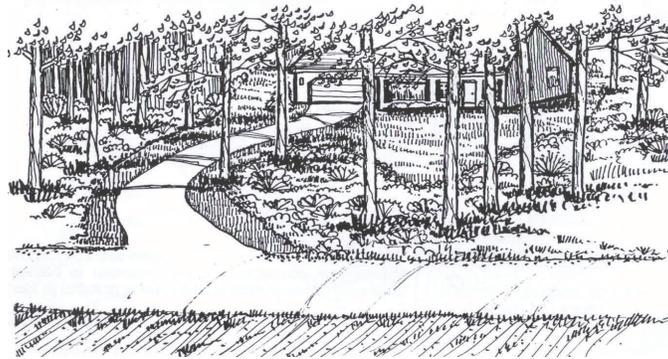
The clearing of woodlands and natural land can destroy the regional, rural landscape character and wildlife habitat. It can also increase development costs, long-term maintenance costs, heating and cooling costs, and stormwater runoff. Protecting open space includes clearing the least amount of vegetation necessary for a development and limiting land disturbance. This practice lowers the initial costs to develop, keeps maintenance costs down, and also keeps natural appearance/landscape.

- ◆ Plant native species of trees and plants following the construction.
- ◆ Identify and protect the most important forestland from incompatible use.
- ◆ Establish a balance between development and woodland protection that recognizes the short term and long term economic considerations for the owner and the region.

New Designs for Growth Guidelines

Promote Critical Design Practices that are environmentally sensitive, economically beneficial, and socially equitable which will protect the region's treasured natural resources.

- ◇ Site Setting: take into account the site's natural features.
- ◇ Natural Resources Protection: protect the natural resources and improve rural, suburban, and urban environments.
- ◇ Open Space: create and maintain usable open spaces such as parks, field, etc.
- ◇ Elements of Site Design: building placement and design, site access and parking, stormwater control, landscaping, signs and lighting.



Wetland Protection

The filling and destruction of wetlands and natural drainageways eliminates natural stormwater retention areas, increases reliance on costly built infrastructure, destroys open space and wildlife habitat, and increases sediment degradation of surface waters. Wetlands should be included in all project site plans as part of the natural system to lessen costs and flooding frequency. Wetlands are also groundwater recharge areas.



Low Impact Development

When development occurs in the community, hard surfaces such as pavement and roofs cause stormwater to flow more quickly to lakes and streams carrying pollutants with it. Low Impact Development (LID) is an approach to site design that helps protect the water resources by using techniques that absorb and filter stormwater.

Benefits of Low Impact Development:

- Decreases flooding and property damage
- Decreases heating, cooling, and watering costs
- Increases property values due to scenic open space and recreation areas
- Enhances aesthetics of the community

Examples of Low Impact Development Practices:

1. Rain gardens
2. Rain barrels
3. Vegetated Roofs
4. Plants native to Michigan
5. Pavement that absorbs water
6. Preserving open space



**Rain Garden Example
Rain Gardens of West MI**

Driveways and Access

Frontage roads, rear service drives, alleys, and shared driveways are examples of design alternatives that simplify the visual character, minimize conflicts and safety hazards, reduce curb cuts, and increase road carrying capacity by reducing the number of cars turning from the main road. For more information about driveways, please contact the Michigan Department of Transportation.



Signage

Reducing the size and number of signs along a corridor helps retain scenic character. Small, simple, readable signs that use primarily subdued colors and materials and utilize no external or internal illumination are recommended. Sign materials should reflect the regional landscape, architectural character, cultural, the historical perspective and styles.



Invasive Plants on the Move

Our natural heritage is under pressure from invasive plants that are not native to our area. The federal government defines an invasive species as “an alien species whose introduction does, or is likely to, cause economic or environmental harm or harm to human health”. Invasive plants infest approximately 5,000 new acres daily in the United States and the costs of preventing, monitoring, and controlling invasive species are huge, with the economic impact adding up to about \$137 billion per year.

Ironically, many invasive plants get their foothold through well-meaning gardeners who introduce these species to their gardens, and without natural controls, most have become invasive. They can be spread by wind, through deep-set runners, and by birds carrying their seeds.

Invasive Plants can Cause MAJOR Problems

- Native plant suppression or species elimination
- Problems for recreational opportunities
- Reduced wildlife grazing lands
- Degraded fish spawning beds and habitat
- Degraded water quality
- Increased soil erosion
- Decreased diversity of plants and animals
- High costs of prevention, control, and eradication
- Reduced crop yields
- Over consumption of water supplies by invasive plants
- Increased fire frequency due to decreased variety of plants

Phragmites

In northern Michigan, there are two varieties of Phragmites (*Phragmites australis*), a native variety and a non-native, invasive variety. The native is part of a well-balanced aquatic ecosystem and the non-native is an aggressive wetland invader. This invasive grows along the shorelines of water bodies or in water several feet deep. It is characterized by its towering height of up to 15 feet and its stiff wide leaves and hollow stem. Its feathery and drooping clusters of tiny flowers are purplish when flowering and turn whitish, grayish, or brownish in fruit.



Phragmites are spread by both rhizomes and seeds and eventually, become the sole dominant plant in many of these wetlands at the expense of native flora and animals dependent on these native habitats, alters hydrology, degrades wildlife habitat, and increases fire potential. The herbicide treatment of this invasive must be applied by a licensed arborist.

Purple Loosestrife

This species is a perennial herb 3 to 7 feet tall with a dense, bushy growth of 1 to 50 stems. Showy flowers vary from purple to magenta in numerous long spikes, and bloom from July to September.

Invades wetlands, shorelines, wet meadows, roadsides, ditches, and floodplains.

Spreads mainly by seed, but can also spread from root or stem segments.

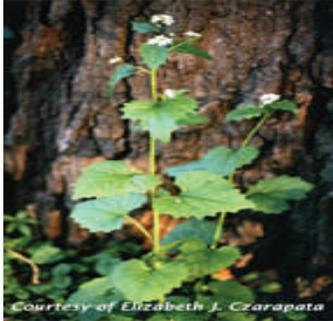
Control season is mid-July through mid-August.

Treat with the herbicide Rodeo, with a concentration of active ingredient of 10% in water.

Tear or cut off the flower cluster. If the plants are not beginning to make seed, the cluster can be discarded on the ground. If there is seed production, the cluster must be bagged and removed from the site. Brush herbicide on each stem from the top down to at least 3 feet.



Garlic Mustard



This species is a biennial plant that grows best in moderate to deep shade. Starting as a rosette form close to the ground in the first year, and second-year plants then flower in May or early June.

Invades forests and roadsides.

Spreads by human activity, as well as by animals.

Control small infestations by pulling second year plants and roots by hand when they have just started flowering. It is best to put all flowering plants in bags and remove them from the property. Large infestations are best controlled by spraying with the herbicide glyphosate (should be used at a concentration of 1-2%) in early spring before native flowering plants are growing. Garlic mustard control is a multi-year project due to the seed bank.



Spotted Knapweed

This species is a perennial that commonly grows 3 to 4 feet in height and has thistle-like, pinkish-purple flowers and a stout, elongated taproot.

Invades open habitats, native grasslands, pine areas, dunes, sandy ridges, roadsides, and pastures.

Spreads by seed.

Control is early detection and removal. Small populations can be removed by hand pulling while wearing rubber or leather gloves due to the release of a chemical that can cause cancer. Flowering plants should be bagged, removed and properly disposed. Large populations may be reduced by hot, prescribed burns followed by reseeding with native species. Several biological controls exist and have met with varying degrees of success. Picloram and clopyralid are the most commonly used and effective herbicides.



Leafy Spurge

This species is a deep-rooted perennial with distinct yellow-green blooms and flowers through the end of July.

Invades open habitats, prairies, pine areas, roadsides, and pastures.

Spreads by seeds that are dispersed by explosive ejection from the seed capsule as far as 15 feet. Also spreads by roots.

Control by hand pulling, digging, and tilling and removing the entire root system. Mowing prior to seeding can reduce seed production, but does not limit the spread of the roots. Herbicide applications can prevent spreading, but will likely recover within three or four years if no further treatments occur. Plateau® and fosamine are the most effective.



Autumn Olive



This species is a shrub or small tree with alternate, oval to lance shaped leaves that are untoothed. The underside of the dark green leaf is covered with silver-white scales. This shrub may grow to a height of 20 feet.

Invades disturbed areas, roadsides, pastures, grasslands, sparse woodlands, and fields in a wide range of soils.

Spreads through dispersal of the fruits with help from birds.

Control by hand pulling the seedlings when the soil is moist to insure removal of the root system. Glyphosate herbicide can be used for foliage and freshly cut stumps application.

Common Buckthorn

This species' identifier is an outer bark that is dark gray or brown and an inner bark that is brown, red, or orange when cut. There are separate male and female plants with the females producing copious amounts of deep purple berries.

Invades forests, pastures, riverways, and open areas.

Spreads by many bird species relishing the berries which contain a chemical that acts as a laxative.

Control with early identification, before seed production and remove by hand. Remove the berry-producing plants by cutting the plant just above the ground level and treat the cut stump with triclopyr immediately. Burning needs to be continued annually until native plants take hold.



James H. Miller, US Forest Service

Multiflora Rose

This species is a member of the rose family and is a dense spreading shrub with wide, arching canes and stiff curved thorns. Plants may reach a height of 15 feet. Flowering is in late spring with numerous white flowers.

Invades old fields, pastures, roadsides and forests.

Spreads through many species of birds and mammals that feed on the rose hips, dispersing the seeds. The canes are also capable of rooting when in contact with soil.



Control by complete removal of the plants. Fire can also limit its growth. Manual application of the herbicide glyphosate (10-20% active ingredient) on freshly cut stems between July and September or during dormancy.

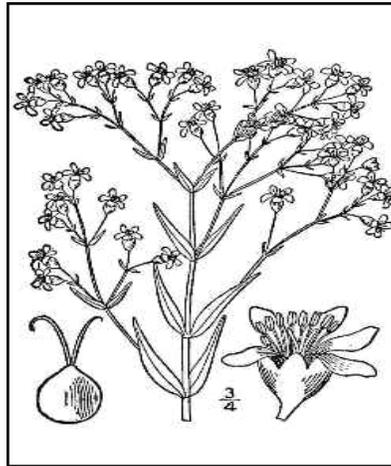
Baby's Breath

This species has small flowers that bloom in midsummer that gives it a very airy appearance. Used in flower arrangements live or dried.

Invades disturbed well drained soils, especially sand dunes. Once established, it is very hard to eradicate or control.

Spreads by seed. Sleeping Bear Dunes has had a problem with Baby's Breath for many years.

Control by digging out the complete plant for small areas. For large infestations, chemical methods are required. Do not plant in gardens. Please read the "wildflower" seed packets for contents before planting.



Bush Honeysuckles

Bush honeysuckles are upright shrubs ranging from a few feet to 15 feet tall. Fragrant tubular flowers are produced, followed later by red fruits. The native honeysuckles are easily distinguished from the bush honeysuckles because the natives are mostly woody vines.



Invades abandoned fields, forest edges, roadsides, and other open upland habitats.

Spreads by seeds with help from birds.

Control must be both mechanical and chemical methods by cutting all the stems of a plant as close to the ground as possible and treating each stump with a 20% solution of glyphosate. Winter is an excellent time to cut, and glyphosate works quite well then. For the first few years after removal of honeysuckle from an area, annual burning is recommended. For large areas, eradication of bush honeysuckle should not begin until an approved burn plan has been developed.

What Can You Do to Prevent Invasive Plants

1. Avoid disturbing natural areas, including the clearing of native vegetation.
2. Remove known invasive plants from your property.
3. Be an informed gardener and check if plants are invasive before you purchase and plant them.
4. Educate friends, neighbors, and local nurseries about problems caused by invasive plants.
5. Avoid spreading invasive plants you may come in contact with while enjoying outdoor activities by removing seeds and plant fragments from clothing and equipment before leaving an area.
6. Keep vehicles out of patches of known invasive plants. Drive on established roads. Remove clinging weeds before leaving an area.
7. Keep pets and other animals out of the known patches of invasive plants.
8. Check your watercraft and trailer for clinging aquatic weeds.
9. Never take plants from a wild area for transplanting or ornamental purposes!
10. Please protect and restore native plants:
 - Native plants are best suited for soil and light conditions, and rainfall amounts in the region for your property
 - These plants can require less maintenance
 - They have the best chance of survival
 - Protect natural habitats and the diversity of plants first
 - Please salvage native plants before development whenever possible
 - Restore natural habitats that have been changed or damaged

Lighting

In Northern Michigan, the starry nights are breathtaking. The dark sky allows us to see and enjoy phenomena such as the Aurora Borealis (northern lights), the rising and setting of the moon, moon shadows, constellations, meteors or shooting stars, and the Milky Way. When planning and installing outdoor lighting, please use these guidelines:

- Light the ground, not the sky. Security lights should have a shield to reduce glare, eliminate upward and outward (sides) light, and eliminate the “trespass” of light off of the exact place where it is needed.
- Place fixtures only where they are really needed.
- Use bulbs of appropriate wattage (saves money).
- Use heat, sound, and movement triggered lights instead of lights that are left on all night (saves money).
- Use lights on the side of buildings that point down to light behind landscaping, not outward from the building.

Emmet County Outdoor Lighting Forum Statement

To research and disseminate information on good outdoor lighting practices and to promote lighting that is efficient, offers safety to the public, improves community appearance and protects the night sky environment.

www.co.emmet.mi.us/planzone/olfpln.htm
or www.darksky.org



Planning and Zoning

Emmet County Planning, Zoning, Soil Erosion, Critical Dunes Office

3434 M-119 Suite E
Harbor Springs MI 49740
231-348-1735
www.co.emmet.mi.us

West Traverse Township

8001 M-119; PO Box 353
Harbor Springs MI 49740
231-526-7361
www.westtraversetownship.com

Friendship Township

3018 Beacon Hill Road
Harbor Springs MI 49740
231-526-8955

Readmond Township

6008 Wormwood Lane
Harbor Springs MI 49740
231-526-9601

Cross Village Township

5954 Wadsworth Avenue
Cross Village MI 49723
231-242-0182

Little Traverse Bay Bands of Odawa Indians

7500 Odawa Circle
Harbor Springs MI 49740
231-242-0347
www.ltbbodawa-nsn.gov

Wetlands Permits

MI Department of Natural Resources and Environment

P.O. Box 667; Gaylord MI 49735
989-705-3450
www.michigan.gov/dnre

U.S Army Corp. of Engineers

(Connected to the Great Lakes and
Waterways) 906-635-3461
www.usace.army.mil

Right-of-Way Permits and Access

Michigan Department of Transportation

1680 Hartwick Pines Road
Grayling MI 49738
989-344-1802
<http://www.michigan.gov/mdot>

Emmet County Road Commission

2265 East Hathaway Road
Harbor Springs MI 49740
989-347-8142

Additional Resources

MDOT Heritage Route Program

(Lansing) (517) 335-2934
www.michigan.gov/mdot

New Designs for Growth Guidebook

NW MI Council of Governments

www.newdesignsforgrowth.com

Emmet County Lakeshore Association

PO Box 277. Harbor Springs MI 49740
www.harborinc.org/ecla_2.asp

Little Traverse Conservancy

3264 Powell Road
Harbor Springs MI 49740
231-347-0991
www.landtrust.org

Tip of the Mitt Watershed Council

426 Bay Street, Petoskey MI 49770
231-347-1181
www.watershedcouncil.org

Harbor Area Regional Board of Resources, Inc.

231-526-5060
www.harborinc.org

Harbor Springs Area Historical Society

231-526-9771

Harbor Springs Chamber of Commerce

231-526-7999
www.harborspringschamber.com