

# Thumb Land Conservancy

## 2018 Annual Report



Port Huron State Game Area, Garlic Mustard Pull, 2018 May 26



## Thumb Land Conservancy

4975 Maple Valley Road, Marlette, Michigan 48453  
810-346-2584 ♦ [mail@ThumbLand.org](mailto:mail@ThumbLand.org) ♦ [www.ThumbLand.org](http://www.ThumbLand.org)



# Thumb Land Conservancy

4975 Maple Valley Road, Marlette, Michigan 48453  
810-346-2584 ♦ mail@ThumbLand.org ♦ www.ThumbLand.org

## Thumb Land Conservancy 2018 Annual Report

2019 February 05

2018 was a busy year for the Thumb Land Conservancy, focused on stewardship, education, and grant application writing. We continue stewardship on the Deerfield Wind Energy Preserve in Huron County for Algonquin Power Company, in addition to stewardship on our three TLC nature sanctuaries, and in the Port Huron State Game Area. We are gradually cleaning-up and restoring the historic North Street property in partnership with the Clyde Historical Society.

We have increased public awareness and outreach efforts through our continued participation in the Saint Clair County Earth Fair, Painted Trillium and Thumb natural areas presentations, distribution of the TLC brochure and TLC land protection guide, updates to the TLC web page, and various events. In July, we held our first annual TLC yard sale at the Yale Bologna Festival.

In early 2018, the TLC began drafting grant applications for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County. We have also had discussions with potential project partners and funders. If successful, the additional lands and establishment of the Southern Lake Huron Coastal Park will be a tremendous public asset for the Blue Water Area.

William Collins  
Executive Director



## Thumb Land Conservancy

4975 Maple Valley Road, Marlette, Michigan 48453  
810-346-2584 ♦ mail@ThumbLand.org ♦ www.ThumbLand.org

### Thumb Land Conservancy 2018 Annual Report

#### 2018 Year-In-Review

The Thumb Land Conservancy focused on stewardship, education, and grant application writing in 2018. Following is a summary of monthly activities.

##### January

- Completed and distributed the TLC 2017 Annual Report.
- Completed and submitted Michigan Department of Environmental Quality monitoring and stewardship reports for the Dead End Woods Sanctuary and Peltier Beach Ridge Sanctuary in Fort Gratiot, Saint Clair County.
- Completed and submitted the Michigan Department of Environmental Quality 2017 monitoring and stewardship report for the Deerfield Preserve in Huron Township, Huron County.
- Assisted the Port Austin Bible Campus / Michigan House of Hope of Port Austin, Michigan in obtaining firewood in return for their stewardship work for the TLC in 2017.

##### February

- Drafted project plans and grant application materials for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County.
- Assisted the Port Austin Bible Campus / Michigan House of Hope of Port Austin, Michigan in obtaining firewood in return for their stewardship work for the TLC in 2017.

##### March

- Held the first quarter executive board meeting at the home of Dorothy Craig in Fort Gratiot Township, Saint Clair County.
- Volunteers cut invasive Japanese Barberry and Multiflora Rose on the 12-acre Deerfield Preserve in Huron Township, Huron County, west of Port Hope.
- Drafted project plans and grant application materials for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County. Contacted potential project partners and funders.

##### April

- Prepared presentation on Michigan Endangered Painted Trillium for the Saint Clair County Earth Fair.
- Participated in the 2-day Saint Clair County Earth Fair at the Goodells County Park with partner organization Clyde Historical Society.
- Completed project plans and grant application materials for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County. Contacted potential project partners and funders.

#### May

- Pulled invasive Garlic Mustard at the 17-acre Dead End Woods Sanctuary in Fort Gratiot, Saint Clair County.
- Pulled invasive Garlic Mustard at the Port Huron State Game Area in Clyde Township, Saint Clair County.
- The Port Huron Times Herald featured our May 26 Port Huron State Game Area Garlic Mustard pull: <https://www.thetimesherald.com/story/news/local/2018/05/26/volunteers-yank-invasive-weed/647418002/>
- Completed grant applications for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County. Contacted potential project partners and funders.

#### June

- Held the second quarter executive board meeting at the home of Terry Gill in Greenwood Township, Saint Clair County.
- Cut and burned invasive Japanese Barberry and Multiflora Rose on the 12-acre Deerfield Preserve in Huron Township, Huron County, west of Port Hope.
- Pulled invasive Garlic Mustard at the 17-acre Dead End Woods Sanctuary in Fort Gratiot, Saint Clair County.
- Completed grant applications for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County. Contacted potential project partners and funders.

#### July

- Held the first annual Thumb Land Conservancy Yard Sale at the Yale Bologna Festival, City of Yale, Saint Clair County.
- Conducted monitoring and vegetative sampling on the 12-acre Deerfield Preserve in Huron Township, Huron County, west of Port Hope.
- Cut invasive Japanese Barberry and Multiflora Rose on the 12-acre Deerfield Preserve in Huron Township, Huron County, west of Port Hope.
- Completed grant applications for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County. Contacted potential project partners and funders.

#### August

- Coordinated purchase offers for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County. Contacted potential project partners and funders.

#### September

- Held the third quarter executive board meeting at the home of Dorothy Craig in Fort Gratiot Township, Saint Clair County.
- Cut invasive Japanese Barberry and Multiflora Rose on the 12-acre Deerfield Preserve in Huron Township, Huron County, west of Port Hope.
- Conducted monitoring and vegetative sampling on the 12-acre Deerfield Preserve in Huron Township, Huron County, west of Port Hope.
- Cleaned and repaired the historic North Street rail station, post office, and general store in Clyde Township, Saint Clair County.
- Coordinated plan for GIS mapping project of Thumb natural areas.

#### October

- Cleaned and repaired the historic North Street rail station, post office, and general store in Clyde Township, Saint Clair County.
- Completed baseline monitoring and drafted agreements for proposed Harsens Island preserve donation, Saint Clair County.
- Completed grant applications for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County. Contacted potential project partners and funders. Coordinated purchase offers.

#### November

- Completed grant applications for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County. Coordinated purchase offers.

#### December

- Drafted the Michigan Department of Environmental Quality 2018 monitoring and stewardship report for the Deerfield Preserve in Huron Township, Huron County.
- Completed grant applications for the proposed Southern Lake Huron Coastal Park land acquisitions in Burtchville Township, Saint Clair County.

## **Southern Lake Huron Coastal Park Burtchville and Fort Gratiot Townships, Saint Clair County**

In early 2018, the TLC began renewed efforts to acquire key parcels needed to complete a 4.5-mile coastal park along Lake Huron, connecting Port Huron to Lakeport State Park. The proposed Southern Lake Huron Coastal Park (SLHCP) will eventually protect most of the remaining beach ridge and swale complex along the eastern shoreline of Michigan's Thumb region. This important coastal forest habitat supports rare species found in few other regions and is vital for migratory birds that move and nest along Lake Huron. Upon opening to public access, the SLHCP is likely to become a regional destination for birders, naturalists, and other visitors. It is a natural greenway connecting Port Huron with shoreline communities into Sanilac County, well-suited for a recreational trail with interpretive signage.

The beach ridge and swale landscape complex is a very unique formation of parallel sand ridges and muck wetlands. The series of sand ridges were deposited from about 4,500 years ago as high post-glacial lake levels receded as the Great Lakes outlet shifted from the Des Plaines River outlet to the Mississippi River at what would be Chicago, to the new Saint Clair River outlet at what would be Port Huron. The Saint Clair River down-cut rapidly which caused the post-glacial lake water to drop about 30 feet. At the same time, the earth's crust rose, having been depressed by the weight of glacial ice during the last stages of the Wisconsin glacial advance. The earth's crust is still rising slightly from the ancient depression of ice. The continued rise of the land and lowering of the Great Lakes has left a series of dry upland sand ridges and mucky wetland troughs or swales between. This beach ridge and swale landscape provides not only a unique natural community, but a record of Michigan's post-glacial past.

The community is usually referred to as "wooded dune and swale complex". However, "beach ridge and swale complex" is a more descriptive phrase for the landscape of the eastern Thumb of Michigan. The ridges were shaped primarily by water. As with all of the ridges around the Great Lakes, the sand was first deposited as beaches that gradually rose above the lake influence. Wind was a secondary influence, the non-forested shoreward ridges becoming dunes. The ridges along the southwestern shore of Lake Huron were probably less dune-like because prevailing winds are from the west and would have been buffered by adjoining forest to the west.



The beach ridge and swale complex provides critical shoreline habitat for uncommon and rare plant and animal species found in few other parts of Michigan. Uncommon species include Purple-flowering Raspberry, Yellow Lady-slipper orchid, Pink Lady-slipper orchid, Eastern Hog-nosed Snake, and Blue-spotted Salamander, as well as a great abundance of migratory birds. Based on MNFI records, there are approximately 30 Endangered, Threatened, or Special Concern species that could occur in the beach ridge and swale community of Saint Clair County.



Of all species, Purple-flowering Raspberry - *Rubus odoratus* is the most emblematic of the community. In Saint Clair County, it is known only from the beach ridges along Lake Huron and one preserve on ancient alluvial sand ridges along the Saint Clair River. In Michigan, original populations of Purple-flowering Raspberry are thought to be limited to only seven coastal counties. Purple-flowering Raspberry produces large flowers and fruit, very similar to Thimbleberry of Michigan's Upper Peninsula.



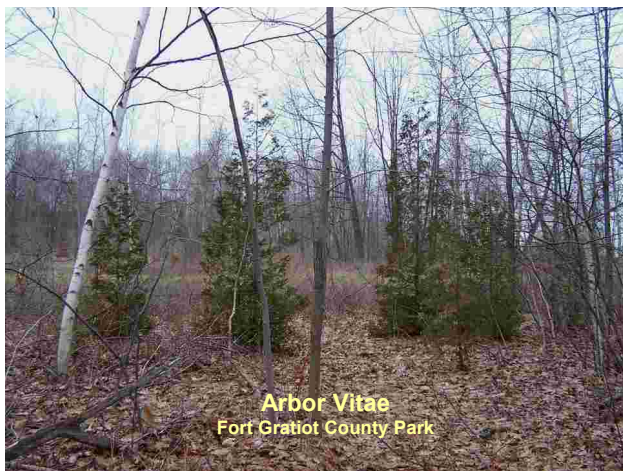
Yellow Lady-slipper - *Cypripedium parviflorum* and Pink Lady-slipper – *Cypripedium acaule* are described as common orchids in Michigan. Orchids, however, are generally uncommon and quite limited to specific habitats. Yellow Lady-slipper and Pink Lady-slipper orchids are found in the beach ridge and swale complex of Saint Clair County, but in few other locations.



The Eastern Hog-nosed Snake - *Heterodon platyrhinos* is an uncommon snake in Michigan, found almost exclusively in semi-open sand ridges of the complex in Saint Clair County. While more common in the southeast and southern plains of the United States, the Eastern Hog-nosed Snake is considered to be at moderate risk of extirpation throughout the Great Lakes region, Ontario, and much of New England.

The Blue-spotted Salamander - *Ambystoma laterale* ranges across the northeastern United States and adjacent Canada to the James Bay. The salamander is found primarily in moist deciduous forests and swamp woodlands, especially with vernal pools. The Blue-spotted Salamander is described as fairly common statewide, but seems to be particularly associated with the beach ridge and swale complex in Saint Clair County.

Northern White-cedar or Arbor Vitae – *Thuja occidentalis* is not rare, but it is characteristic of



the beach ridge and swale complex in Saint Clair County, and occurs in few other areas of southeast Michigan and the Thumb. Arbor Vitae is remnant of the original cedar swamp that covered much of the landscape a few hundred years ago. The regeneration of Arbor Vitae is now severely limited due to grazing by Eastern White-tailed Deer.

The coastal forest is vital for migratory birds that move and nest along the shoreline of Lake Huron. Recent species observations provided by the local Blue Water Audubon Society for the beach ridge and swale habitat of Saint Clair County include American Redstart, Bald Eagle (Michigan Special Concern), Barred Owl, Bay-breasted Warbler, Black-and-white Warbler, Blackburnian Warbler, Blackpoll Warbler, Black-throated Blue Warbler, Black-throated Green Warbler, Blue-gray Gnatcatcher, Blue-headed Vireo, Blue-winged Warbler, Boreal Owl, Canada Warbler, Cape May Warbler, Cerulean Warbler (Michigan Threatened), Chestnut-sided Warbler, Common Nighthawk (Michigan Special Concern), Common Yellowthroat, Connecticut Warbler, Cooper's Hawk, Eastern Towhee, Eastern Wood-Pewee, Golden-crowned Kinglet, Golden-winged Warbler, Gray-cheeked Thrush, Hairy Woodpecker, Hermit Thrush, Hooded Warbler (Michigan Special Concern), Indigo Bunting, Kentucky Warbler, Least Flycatcher, Louisiana Waterthrush (Michigan Threatened), Magnolia Warbler, Merlin (Michigan Threatened), Mourning Warbler, Nashville Warbler, Northern Goshawk (Michigan Special Concern), Northern Parula, Northern Saw-Whet Owl, Olive-sided Flycatcher, Ovenbird, Palm Warbler, Philadelphia Vireo, Pileated Woodpecker, Pine Grosbeak, Pine Siskin, Pine Warbler, Red-bellied Woodpecker, Red-breasted Nuthatch, Red-eyed Vireo, Red-shouldered Hawk (Michigan Threatened), Rose-breasted Grosbeak, Ruby-crowned Kinglet, Scarlet Tanager, Sharp-shinned Hawk, Swainson's Thrush, Tennessee Warbler, Tufted

Titmouse, Veery, Whip-poor-will (Michigan Special Concern), White-breasted Nuthatch, White-winged Crossbill, Wilson's Warbler, Wood Thrush, Yellow Warbler, Yellow-bellied Sapsucker, Yellow-billed Cuckoo, Yellow-rumped Warbler, and Yellow-throated Vireo.

The beach ridge and swale landscape complex is very limited geographically, originally covering only about 0.7% of Saint Clair County, and even less of the Thumb region as a whole. Today, significantly less of this unique shoreline community remains intact, due largely to construction of State Highway M-25 and subsequent development along this corridor. What remains of the landscape in Fort Gratiot and Burtchville is the only significant occurrence from Ohio up to the tip of the Thumb where there is a similar formation at Port Crescent and Sleeper State Parks and along parts of Saginaw Bay.

The beach ridge and swale complex is located north of Port Huron, where new development has concentrated along the M-25 corridor to the north. Expansion east is limited by Lake Huron and the border with Canada, and the land south of Port Huron is largely developed, leaving west and north for new development. The most imminent and devastating threat to the beach ridge and swale complex in Saint Clair County is development, or land clearing and grading as speculative preparation for development. Some landowners have cleared large areas of forest with the misguided intent of drying-up wetlands. Others have graded upland sand ridges into the adjacent wetland swales.

Being a linear landscape, the coastal beach ridge and swale forest is naturally suited as a greenway corridor. A proposed walking and biking trail would traverse the entire park from Port Huron north to Lakeport State Park, providing an excellent opportunity for interpretive signage describing the landscape, geology, and natural community. We believe the park would be a significant destination for birders as the coastal forest is a major corridor for migratory birds moving up and down along Lake Huron. When completed and with some promotion, this coastal park could attract birders on a level similar to Point Pelee National Park in Ontario.

The TLC is currently focused on acquiring three key properties that would become part of the SLHCP. The Bidwell Trust property includes a 41.5-acre parcel and a 1-acre parcel west of state highway M-25 and north of Metcalf Road. The Weber property includes a 23.35-acre parcel and a 5.5-acre parcel, both adjacent to the north side of the Bidwell Trust property. The Bidwell Trust and Weber parcels are some of the best remaining examples of the beach ridge and swale complex community south of Saginaw Bay. The Sheldon Beach property is one of the few larger areas of beach ridge and swale landscape remaining on the east side of M-25. The Sheldon Beach property is located directly east of the Bidwell Trust property and includes the 20.6-acre Agel parcel north of Metcalf Road, and the 3.4-acre Sheldon parcel adjacent to the south end of the Agel parcel. In total, the TLC is seeking to acquire about 95 acres of the beach ridge and swale complex.

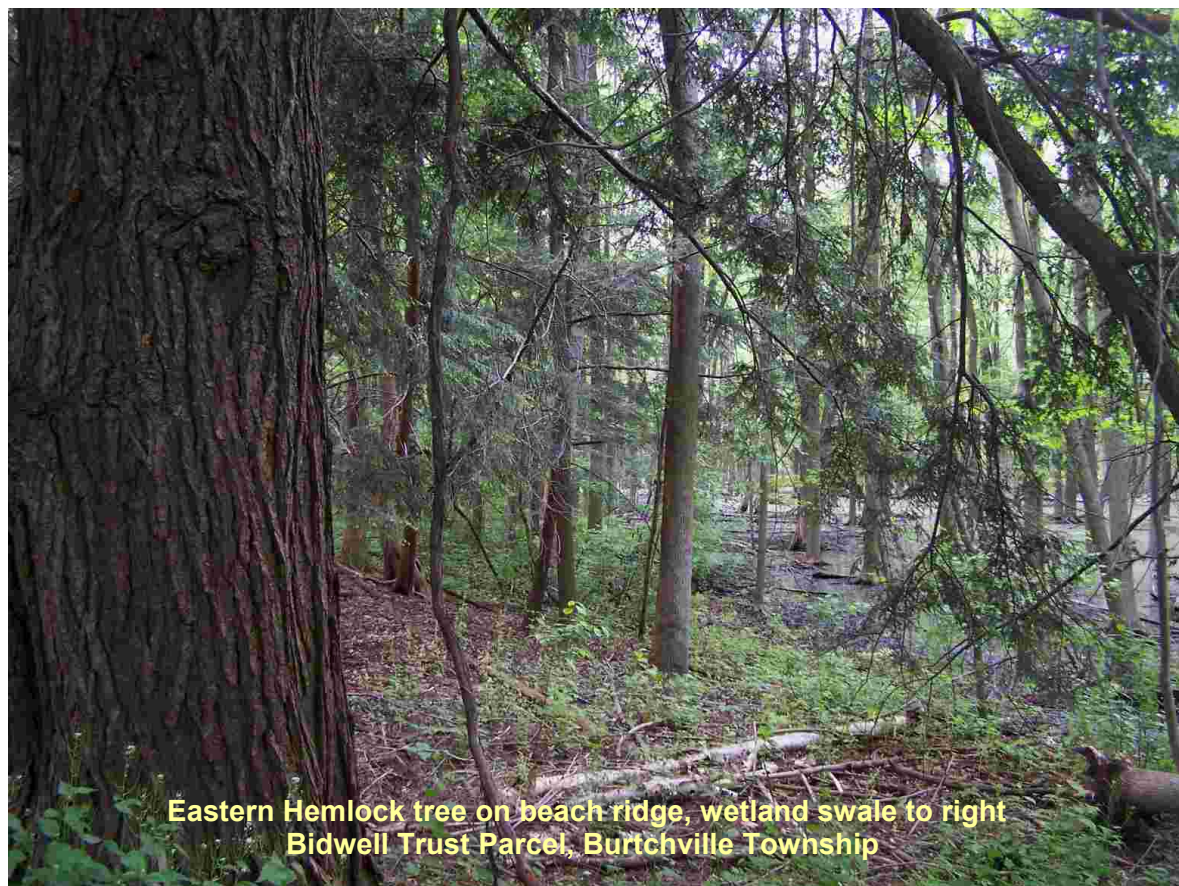
Clearings and fills not only destroy the immediate impact area, but degrade the beach ridge and swale complex as a whole by fragmenting the forest, altering the hydrology, and disrupting ecological functions of the community inherent in its natural linear connectivity. such as a migratory bird corridor. The largest relatively intact portion of the complex in Saint Clair County is now limited to an approximately 4-mile long strip of forest tracts averaging only about one-quarter mile wide. It is critical to protect and restore what remains before it becomes less of a coastal ecosystem and more a patchwork of unsustainable remnants.

The TLC has pursued protection of the beach ridge and swale complex for the 10 years of its existence. TLC involvement began with the Weber property, then owned by Wolford Land Company, soon after our formation in 2008. Our staff had discussions with the owner and the TLC began preparations for fundraising to purchase the 29-acre parcel. However, unresolved family matters precluded the owner from following through on further negotiations. These matters apparently remained unresolved until the Wolford Land Company parcel was put on the market in early 2018 and sold a few months later. The Bidwell Trust property was pursued by the Michigan Nature Association back in the late 1980's, but again, family matters prevented the anticipated acquisition.





**Wetland swale, Bidwell Trust Parcel, Burtchville Township**



**Eastern Hemlock tree on beach ridge, wetland swale to right  
Bidwell Trust Parcel, Burtchville Township**



An increasing threat to the entire beach ridge and swale complex is sand mining. Trucking costs will always make local sand sources more desirable to contractors. Statewide, existing aggregate and sand reserves in southeast Michigan have been projected to be depleted in about 13 years according to a 2016 study by the Michigan Department of Transportation (*Michigan Aggregates Market Study, Phase I Report*, October 3, 2016, FMI Corporation). This will place even more sand mining pressure on the beach ridge and swale landscape in Saint Clair County. Other significant ongoing threats to the beach ridge and swale complex include invasive plant species expansion, overgrazing by Eastern White-tailed Deer, loss of forest canopy due to the Emerald Ash Borer, continued degradation of the plant and animal community due to decreased forest cover, and incursions by off-road vehicles.

## **2018 Saint Clair County Earth Fair Goodells County Park, Wales Township, Saint Clair County**

The TLC again participated in the Saint Clair County Earth Fair on April 27 and April 28. Thanks to TLC board members Kay Cumbow and Dan Rhein for representing us at our table and for their displays. Thanks also to Fred Fuller for playing the part of famous Port Huron botanist of a century ago, Charles K. Dodge. The TLC was happy to again have the company of our partner organization at the adjacent table, the Clyde Historical Society ([facebook.com/groups/1481890455361159/](https://www.facebook.com/groups/1481890455361159/)).

This Earth Fair, TLC board member, Fred Fuller, played the part of Charles Keene Dodge. Last Earth Fair, our long-time friend and retired teacher, Al Lewandowski, was first to play the part. Dodge was a botanist and attorney from Port Huron in the late 1800's and early 1900's. He collected extensively throughout our region and published *Flora of St. Clair County, Michigan and the Western Part of Lambton County, Ontario*, the *Flora of the County* section of *The History of St. Clair County* by William Jenks, and many other works. Dodge advocated for nature protection in our region and appears to be the first to propose a large preserve in that part of the Black River valley that eventually became the Port Huron State Game Area. He was also apparently the first botanist to document Painted Trillium in Michigan. More information about Dodge is available at the following web link: [http://www.huronecologic.com/thumb\\_habitats062004.htm](http://www.huronecologic.com/thumb_habitats062004.htm)



Charles K. Dodge in 1917.



Michigan Endangered Painted Trillium in Kimball Township.



Fred Fuller as Port Huron botanist Charles K. Dodge. Fred did a great job, as did Al Lewandowski last year. Who's next?



To the left is TLC board member Dan Rhein and his carving of a Pileated Woodpecker. It appears either the woodpecker thinks Dan is a dead tree or he has bugs in his pocket. Being a very generous person, Dan later gave this carving to the Clyde Historical Society as a reminder of all the Pileated Woodpeckers that can be found out in the Port Huron State Game Area in Clyde Township.

The TLC was asked to give a presentation about Michigan Endangered Painted Trillium at the Earth Fair this year. TLC Executive Director, William Collins, created the presentation and Dan Rhein presented it. Bill has discovered about half of the known populations of Painted Trillium in Saint Clair County, the only county which it is now known to occur in all of Michigan. Dan Rhein is also very familiar with the species and the northern forest habitat. Painted Trillium populations are concentrated west of Port Huron, in Port Huron, Kimball, and Clyde Townships. A population was known from Fort Gratiot Township, and the species may extend into Kenockee, Wales, and Saint Clair Townships. If any species would be symbolic of Saint Clair County, a very good candidate would be Painted Trillium.



## Painted Trillium Presentation



001 – Photo by Bill Collins

- Port Huron area covered by northern forest of Red Maple, Paper Birch, and White Pine
- Especially Kimball, Port Huron, and Clyde Townships
- Also St. Clair and Fort Gratiot Townships



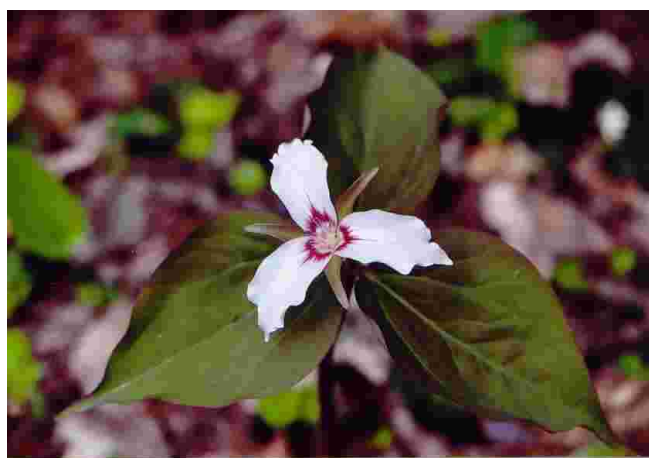
003 – Photo by Bill Collins

- Notice birch and pine driving on 69 and 94
- Photo on 69 at Taylor Road in Kimball Township



002 – Photo by Bill Collins

- Birch grows on moist sand deposited by post-glacial lake waters thousands of years ago



004 - Photo by Laurie Dennis

- Northern forest around Port Huron only place in Michigan where Painted Trillium found
- One population in Sanilac County destroyed years ago
- Photo by Laurie Dennis in PHSGA, Clyde Township south of Rynn Road





005 - Photo by Laurie Dennis

- Painted Trillium – *Trillium undulatum* is Michigan Endangered Species
- Close-up photo by Laurie Dennis in PHSGA



007 - University of Michigan Herbarium, Michigan Flora Online (A. Strouse)

- White Trillium
- Old flower petals turn violet usually by late May
- When Painted Trillium is in full bloom



006 – University of Michigan Herbarium, Michigan Flora Online (B. Ball)

- Don't mistake other trillium species for Painted Trillium
- White Trillium – *Trillium grandiflorum*
- Most common trillium in the Great Lakes region
- Habitat in mature undisturbed oak-hickory and beech-maple forest



008 - University of Michigan Herbarium, Michigan Flora Online (L. N. May)

- White Trillium
- Phytoplasma bacteria infection causes deformities in all trillium
- Green stripes common in Port Huron State Game Area
- Other deformities include all green petals, yellow petals, no petals, clustered petals like roses, small leaves, no leaves, 4 leaves and many others



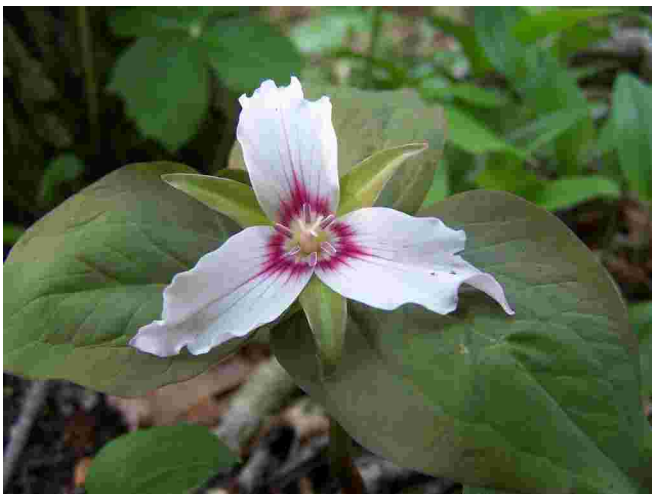
009 - University of Michigan Herbarium, Michigan Flora Online (A. Strouse)

- Red Trillium – *Trillium erectum*
- Second most common trillium species in Great Lakes region
- Habitat in mature undisturbed moist forests similar to Painted Trillium



011 – United States Department of Agriculture

- Saint Clair County an isolated outpost for Painted Trillium on western edge of range
- Old Berrien County record (dot on map in SW Michigan) likely an herbarium mistake



010 – Photo by Bill Collins

- Close-up of Painted Trillium
- Plant does not emerge until mid-May, nearly 1 month after White and Red Trillium
- Best recognized by magenta chevron radiating from each petal base
- Petal margins wavy, or undulate, thus species name “undulatum”



012 - Southern Highlands Reserve

- Primary range in Appalachian Mountains at about 5,000 feet in rhododendron and mountain laurel thickets and Red Spruce groves
- Painted Trillium not common anywhere
- Photo of Painted Trillium area at Southern Highlands Reserve in western North Carolina





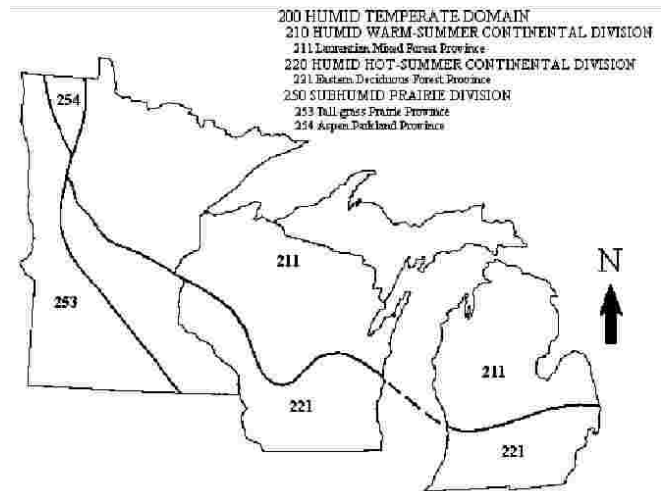
013 – Photo by Bill Collins

- In Saint Clair County, Painted Trillium found only in northern forest on moist acidic sands
- After last glacier, Painted Trillium migration apparently blocked by alkaline clay and loam soils west and north of Port Huron area



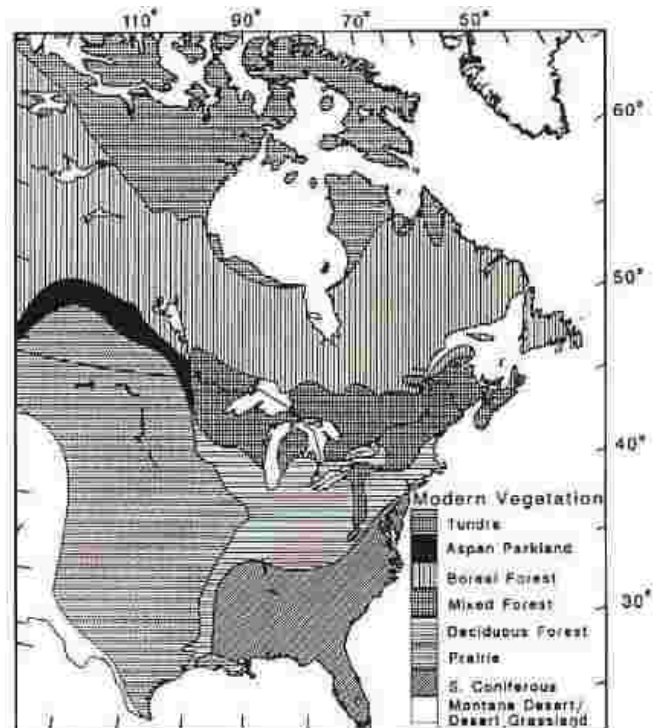
014 – Photo by Bill Collins

- Northern forest or “North Woods” stretches from Minnesota through New England, southern Ontario, southern Quebec, to Newfoundland
- Also known as “mixed forest”, mix of broadleaf and conifer trees
- Red Maple, Paper Birch, Sugar Maple, Red Oak, White Pine, Hemlock



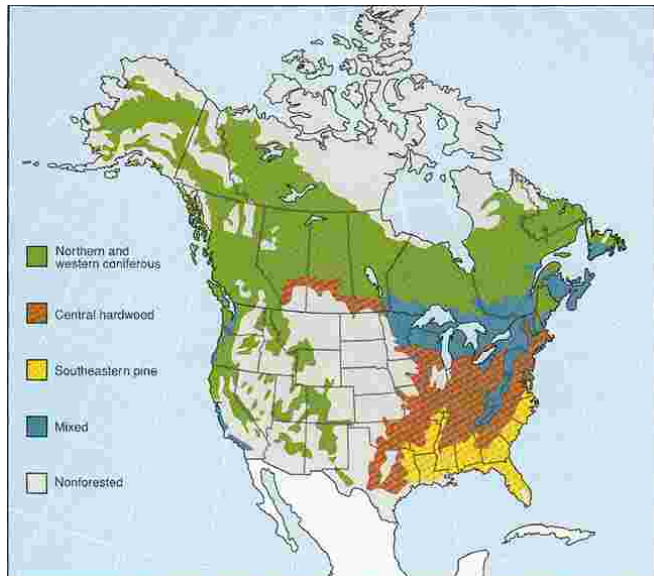
015 - Map of Ecoregions of North America, Bailey and Cushwa, 1981

- Northern forest occurs north of the “tension zone” or “transition zone”
- Northern vegetation north of transition zone, southern vegetation south ... basically



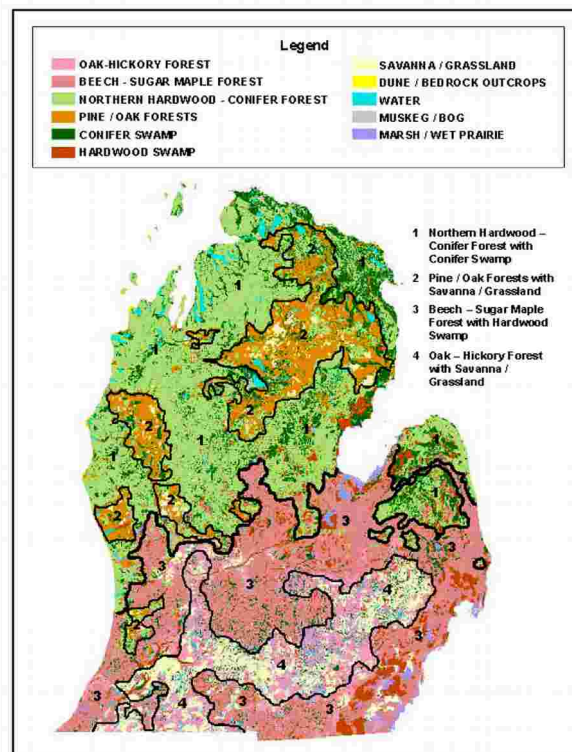
016 - Michigan State University, Department of Geography

- Transition zone variable, up to 100 miles wide in some areas
- Extends from Muskegon area to Saginaw Bay and across the Thumb



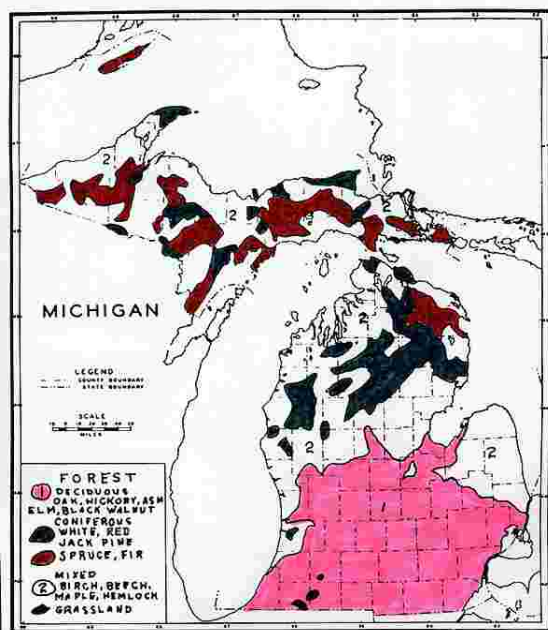
017 - Michigan State University, Department of Geography

- Conifer trees (pine, spruce, fir, arborvitae, tamarack) major forest species north of transition zone, with broad-leaved hardwood trees
- Conifers mostly absent south of transition zone
- Climate and soils north of transition zone favors northern vegetation, and south favors southern vegetation



019 – Michigan Natural Features Inventory

- Northern flora extends further south along Lake Michigan and Lake Huron due to cooler growing season near lakes
- Lakes warm up slower than land, maintain cooler summers
- Sandy soils in Thumb and Port Huron area favor northern vegetation
- Natural fires prior to European settlement a factor



018 – Michigan State University, Department of Geography

- Not an exact transition zone boundary, probably shifting
- Regardless, occurrence of northern plant communities south of Saginaw Bay is unusual



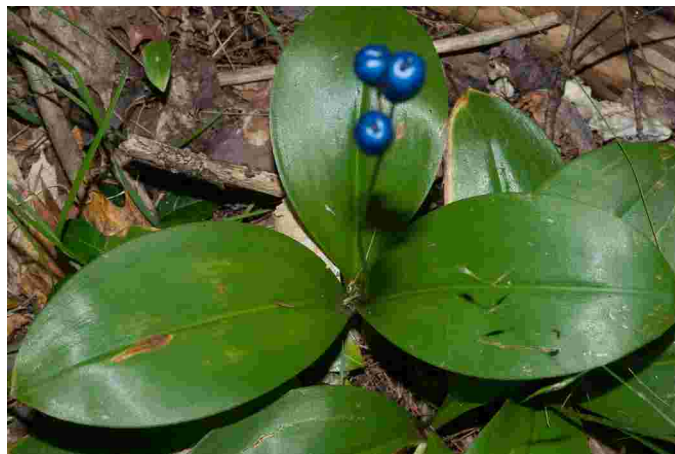
020 – Photo by Bill Collins

- Other plant species typical of northern forest
- Wintergreen - *Gaultheria procumbens*





021 - United States Department of Agriculture  
• Bunchberry - *Cornus canadensis*



023 - United States Department of Agriculture  
• Bluebead-lily – *Clintonia borealis*



022 – Photo by Fred Fuller  
• Bunchberry - *Cornus canadensis*  
• Photo by Fred Fuller, woods north of Krafft Road in Fort Gratiot currently being cleared  
• Only Painted Trillium population in Fort Gratiot was found here



024 - United States Department of Agriculture  
• Starflower - *Trientalis borealis*





025 – Photo by Bill Collins

- Gay-wings - *Polygala paucifolia*



027 – Photo by Bill Collins

- Ground-pine – *Dendrolycopodium obscurum*



026 – Photo by Bill Collins

- Ground-cedar – *Diphasiastrum digitatum*



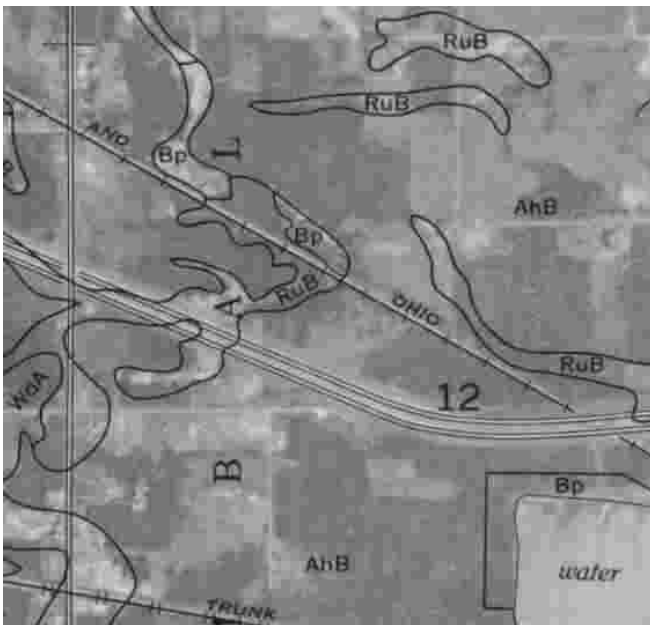
028 – Photo by Bill Collins

- Painted Trillium associated with tip-up mounds
- Large fallen trees over centuries, mounds and pits
- Trees prone to wind-throw with shallow roots in on wet sands



029 – Photo by Bill Collins

- Plant species diversity maximized by range of soil moisture, from top of mound to pit bottom



030 - United States Department of Agriculture

- Painted Trillium found along fine sand ridges adjacent to lower and wetter sandy soils
- Soil survey map of Rousseau fine sand ridges (RuB) in Kimball Township
- Sand first deposited by post-glacial lake waters, then ridges wind-blown as dunes



031 – State of Michigan

- Painted Trillium first recorded in Saint Clair County around 1900 by Charles K. Dodge
- Botanist, City Attorney, City Controller, Customs Agent for Port Huron
- Dodge suggested preservation of Black River valley, now PHSGA



032 – Photo by Bill Collins

- Dodge's house still at northeast corner of Gratiot and Garfield in Port Huron





033 – Photo by Bill Collins

- Saint Clair County, Painted Trillium emerges mid-May, almost 1 month after other trilliums
- Leaves and flower fully formed upon emergence
- Bloom 2 or 3 days from emergence
- Remain in-flower only about 1 week, then petals dry up
- Cooler temperatures, flowers remain maybe 2 weeks



035 – Photo by Bill Collins

- Also identified by leaf stems (petiole-like leaf bracts) ranging from  $\frac{1}{4}$  to 1 inch long
- Leaves of White and Red Trillium are stemless (sessile)



034 – Photo by Bill Collins

- Best recognized by magenta chevron radiating from each petal base
- Petal margins wavy, or undulate, thus species name "undulatum"



036 – Photo by Bill Collins

- Deep reddish or bronze color of newly emerged leaves due to anthocyanins
- Protects from freezing, ultraviolet light over-exposure, and may aid photosynthesis
- Late emergence in May, quick bloom, and anthocyanins suggest Painted Trillium adapted for quick pollination during uncertain spring weather of northern and high-altitude regions





037 – Photo by Bill Collins

- Bright red seed capsule in late July and early August
- Notice long leaf stems
- Some red remains in leaves



039 – Photo by Bill Collins

- Clear-cut north of Lapeer Road at Hueling Drive
- Only a few Painted Trillium found along the edge of the uncut woods, behind trees or under downed trees



038 – Photo by Bill Collins

- Few remaining populations of Painted Trillium being destroyed by development
- This is a clear-cut on the north side of Lapeer Road at Hueling Drive in Port Huron Township
- Tree stumps not removed and land not graded, so Painted Trillium may return



040 – Map by Bill Collins

- MNA Sharon Rose Leonatti Memorial Nature Sanctuary, Kimball
- Had about 100 plants in 2001, declined to few plants
- Drain Commissioner to add 30-acre Marzolf Preserve (in yellow) as mitigation for Stocks Creek Drain project



041 – Photo from Leonatti family

- Sharon Rose Leonatti, young woman hit by car in 2001 while fundraising door-to-door for Clean Water Action on Range Road, right next to the preserves



042 – Photo by Bill Collins

- Addition of Marzolf property will protect a high quality northern forest area



043 – Map by Bill Collins

- Other Protected Painted Trillium:
- MNA / Detroit Audubon Jasper Woods, Kimball (many plants but declining)
- MNA Ray Memorial Preserve, Clyde (few plants)
- PHSGA, Clyde (many plants but declining)
- PHSGA, Kimball (many plants but declining)
- Kimball Township Hall park (few plants)
- Wadhams to Avoca Trail park, Kimball (few plants)
- Others very small populations unlikely to survive
- 8 or less known Saint Clair County populations sustainable in the long-term
- Thousands of Painted Trillium plants and hundreds of acres of habitat in Saint Clair County destroyed by development in past 20 years
- All trillium being destroyed by White-tailed Deer grazing
- Painted Trillium probably especially vulnerable to climate change



## Dead End Woods Sanctuary Fort Gratiot Township, Saint Clair County

The TLC conducted our annual Garlic Mustard pulls in the Dead End Woods Sanctuary on May 12 and again on June 06. This was our ninth year of pulling, and the woods is looking much better where we have concentrated our efforts along the south property line. We have finally been able to shift our work further east and north where the sanctuary still needs a lot of work. Jimmy Rankin's Meat Market on Lapeer Road in Port Huron Township (JimRankinMeats.com) once again provided hotdogs. TLC board member, Dorothy Craig, again made her beautiful backyard and deck available for our lunch cookout.



Garlic Mustard – *Alliaria petiolata* removal area near south sanctuary line on May 12.



Yellow Trout-lily – *Erythronium americanum* and Wild Geranium – *Geranium maculatum* .



Red Trillium – *Trillium erectum* .



Spikenard – *Aralia racemosa* just emerging.





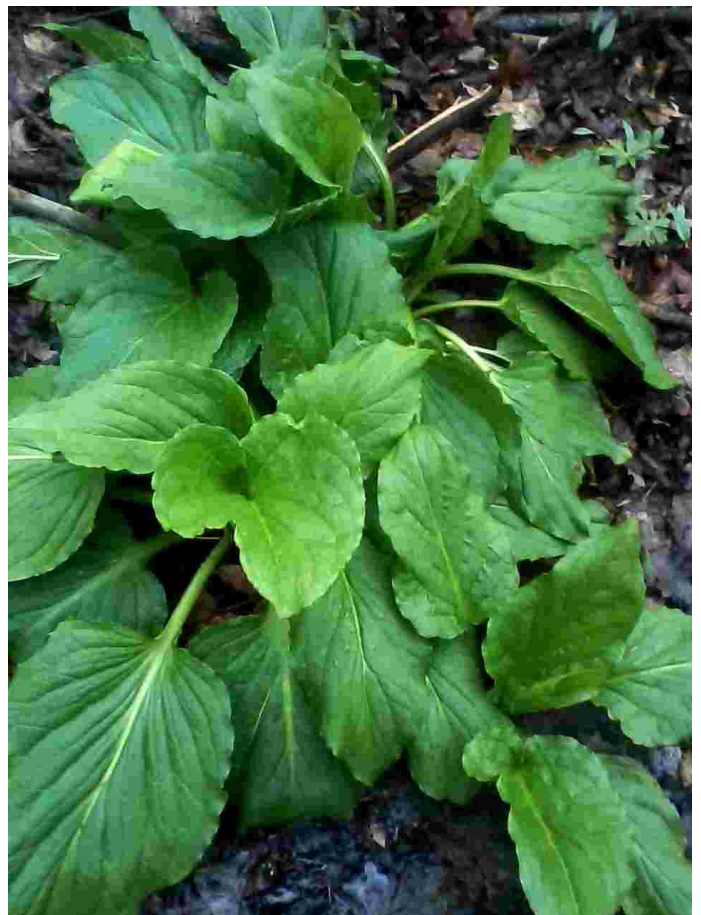
Swamp forest.



Tussock Sedge - *Carex stricta* hummocks.



Marsh-marigold – *Caltha palustris*.



Skunk-cabbage – *Symplocarpus foetidus*.



Yellow Birch – *Betula alleghaniensis* and Spicebush  
– *Lindera benzoin*.





Garlic Mustard pile near south sanctuary line on June 06.



Basswood – *Tilia americana*.



Christmas Fern – *Polystichum acrostichoides*.



Sassafras – *Sassafras albidum* .

## Port Huron State Game Area Initiative Clyde Township, Saint Clair County

The TLC conducted our second annual Garlic Mustard pull in the Port Huron State Game Area on May 26. We started this in 2017 at the urging of local botanist John Fody. Besides improving the native plant community, it is a nice opportunity to enjoy the beautiful forest of the Black River valley. We again met at the Ford Road gate, just southeast of Ruby and headed northeast to the same work area as last spring, along the forested slopes of the Black River.

Saint Clair County Pheasants Forever ([pheasantsforeverstclaircounty.com](http://pheasantsforeverstclaircounty.com)) helped again this year with bottled water, supplies, and transport. Jimmy Rankin's Meat Market on Lapeer Road in Port Huron Township ([jimrankinmeats.com](http://jimrankinmeats.com)) donated hotdogs for lunch again this year also. Thanks especially to Jim Bearss of the Clyde Historical Society and Pheasants Forever and Connie Bates of the Clyde Historical Society.

Bob Gross of the Port Huron Times Herald even showed up and featured our work in a May 26 article:  
<https://www.thetimesherald.com/story/news/local/2018/05/26/volunteers-yank-invasive-weed/647418002/>





Jim Bearss and Connie Bates of the Clyde Historical Society at our May 26 Port Huron State Game Area Garlic Mustard pull.



Part of our May 26 Garlic Mustard removal area in the Port Huron State Game Area.

## **12.35-Acre Deerfield Wind Energy Preserve Huron Township, Huron County, Michigan**

After hand-cutting about 2 acres of invasive Japanese Barberry on the Deerfield Preserve last summer and fall, it was time for burning the new shoots. We got to it on June 02 and 03 and made great progress thanks to our new propane weed torches. They are very effective tools for invasive weed control. The 3-inch flame head on each torch allows good coverage with a flame that can be adjusted in length and intensity. It can be difficult to lug a full 20-gallon propane tank through the woods, but it gets easier as the propane is used up. A full tank lasts for about 6 hours of continuous burning. A nice benefit is that the tank builds up a layer of frost caused by the cooling effect of the propane discharge, so when you get too hot and sweaty, just hug the tank. Refreshing beverages could be mounted on the tank as well. We have roughly 70% of the new barberry shoots burned in the main occurrence area. We are well on our way to eliminating barberry on the Deerfield Preserve.



Burning a typical clump of new Japanese Barberry shoots.



There were many Red Trillium under the barberry hiding from deer. A torch allows selective control.



To some extent, the barberry has protected native forest vegetation underneath from being grazed by deer. Is it a mistake to eliminate the barberry? We don't think so. The trillium probably wouldn't last that much longer under the dense cover, and left unchecked, a large part of the forest would soon be over-run by barberry. The real problem is not enough forest and too many deer.

In late 2016, the TLC contracted with Algonquin Power Company of Oakville, Ontario, Canada to provide stewardship of their 12.35-acre Deerfield Wind Energy Preserve, about 4 miles west of Port Hope. The Deerfield Wind Energy Preserve was placed under a State conservation easement as mitigation for wetland impacts resulting from the nearby Deerfield Wind Energy turbine project. 1.235 acre of State-regulated forested wetland was permanently converted to open wetland for the purpose of clearing a 60-foot wide right-of-way for an electrical transmission line. The Michigan Department of Environmental Quality allows preservation of existing wetland, at a 10 to 1 ratio, as mitigation for permitted wetland impacts. As with the TLC Dead End Woods and Peltier Beach Ridge Sanctuaries in Fort Gratiot Township in Saint Clair County, the Deerfield Wind Energy Preserve was placed under a State conservation easement as mitigation for permitted wetland impacts. The MDEQ now requires long-term stewardship on all mitigation sites, usually provided by land conservancies like the TLC.

Most of the Deerfield Wind Energy Preserve is southern swamp forest with species trending somewhat toward a northern community. Dominant vegetation includes Silver Maple, Black Ash saplings and seedlings, Sensitive Fern, Spinulose Woodfern, Wood Nettle, Clearweed, Lake Sedge, and other sedges. Small upland areas are dominated by Red Maple, Wild Black Cherry, American Basswood, and, unfortunately, invasive Japanese Barberry. Uncommon native plant species include Foamflower, Swamp White Oak, Turtlehead, Woodreed Grass, Spicebush, Cardinal Flower, Round-leaved Pyrola, and Red Trillium. The preserve is part of one of the larger forest fragments remaining in the Thumb, almost continuous along tributaries of Willow Creek to Lake Huron. As such, it is not only important for the watershed, but as habitat for migratory birds. While on the site in late June, the TLC encountered several woodland bird species, including Wood Thrush, Veery, Eastern Wood-pewee, Evening Grosbeak, many American Redstart warblers, Common Yellowthroat warbler, Yellow Warbler, Black-capped Chickadee, Downy Woodpecker, and Catbird.

## **7.8-Acre Bob Putze Conservation Easement Clyde Township, Saint Clair County**

The TLC conducted our first annual inspection of the Bob Putze conservation easement near Ruby in Saint Clair County. Bob's land adjoins the Port Huron State Game Area along Abbottsford Road; a very nice northern forest community with lots of Eastern White Pine, and tall Red Pines that Bob planted in 1964. The ground-level vegetation is diverse, of good native quality, with species of cool sandy soils in the Port Huron area including three species of clubmoss, Wintergreen, Low Blueberry, Canada Mayflower, Michigan Holly, and others. It is potential habitat for Michigan Endangered Painted Trillium which is known from sites within a mile.

It is always a pleasure to visit with Bob. He is a very conscientious and reverent man who loves God's creation. He bought the land in 1964, feeling an overwhelming spiritual connection to it. Bob cares for all of the animals and has wanted to ensure his land remains natural after he is gone. The TLC

conservation easement provides the legal basis for protection in perpetuity, or for as long as the legality of conservation easements is recognized.



Bob Putze standing by one of the Red Pines he planted in 1964.

## Thumb Land Conservancy Yard Sale Yale Bologna Festival

The TLC held our first annual yard sale at the Yale Bologna Festival on July 27 through 29. Thanks to TLC board member Fred Fuller for donations and lending us his yard, and to Fred's son, Will Fuller, for helping. A special thanks to Terry and Marvin Gill, the Gill family, and Ameriscapes Landscaping in Yale for their help and generous donations. Thanks to Dan Rhein for donating some of his impressive paintings. Thanks also to Kay Cumbow, Cheryl Collins, Traci Brown, and Tiffany Reagin for donations and help. Thanks to Jim Bearss of the Clyde Historical Society and Pheasants Forever, and Peter Eldracher, who rode his bike a few miles, for visiting. With everyone's help, the TLC raised nearly \$500 to replenish our general fund. We will do it again next year, so if you have any items to donate, please contact us.



TLC sale tents in Fred Fuller's front yard.



TLC Secretary and Treasurer Terry Gill.

## North Street Post Office, General Store, and Railroad Station Clyde Township, Saint Clair County

The TLC continued clean-up and restoration of the historic North Street post office, rail station and general store in September and October. We appreciated everyone's help, including Connie Bates of the Clyde Historical Society, Bill Atkinson, Thumb Stewardship Organizer for the Michigan Nature Association, TLC Member Al Lewandowski, TLC Board Member Kay Cumbow, and TLC President Cheryl Collins.



TLC Member Al Lewandowski working on the south side.



Left to right: TLC Board Member Kay Cumbow, Member Al Lewandowski, and President Cheryl Collins.



## Three New Preserves in Saint Clair County

After six long years, three new preserves were finally established in 2018 by the Saint Clair County Drain Commissioner as mitigation for permitted wetland impacts for the Stocks Creek Drain Project in Kimball Township. As of November, the conservation easements were approved by the Michigan Department of Environmental Quality and recorded at the Saint Clair County Register of Deeds. Formal protection of these sites was a long time coming, dating back to 2012. The three new preserves are 70 acres in total, containing about 36 acres of wetland preserved as mitigation for about 4.5 acres of impact to very low quality wetlands in the Stocks Creek Drain Project, much of it consisting of ditches and areas dredged years ago. TLC Executive Director, William Collins, worked as a private wetland consultant to the Drain Commissioner on this project, advising on wetland impacts and coordinating the mitigation agreement with the MDEQ. While not TLC preserves, one is adjacent to our Peltier Beach Ridge Sanctuary, another adjacent to a Michigan Nature Association sanctuary that we have been involved with, and all three positively impact future prospects for preservation in the area.

The 30-acre Marzolf Preserve is located north of Lapeer Road and west of Range Road in Kimball Township, adjacent to the south side of the 10-acre Sharon Rose Leonatti Memorial Sanctuary, owned by the Michigan Nature Association. The addition of the Marzolf Preserve has effectively created a 40-acre preserve containing a high-quality complex of northern upland and southern swamp forest, complete with ancient tip-up mounds, Michigan Endangered Painted Trillium, and other significant species. Walking through this preserve is about as close as you can get to the primeval forest that covered the Port Huron area before European settlement.



The 20-acre Shorewood Forrest Preserve is located at the southeast corner of Parker Road and Brace Road in Fort Gratiot Township, the north end of an 80-acre parcel. The remainder of this parcel and another 80-acre parcel along the west side of the Shorewood Forrest subdivision are to be preserved as wetland mitigation for future projects. The Shorewood Forrest Preserve is just a small portion of the unique beach ridge and swale complex, a series of parallel sand ridges and muck wetlands covering an approximately mile-wide swath along Lake Huron from Fort Gratiot into Sanilac County. The landscape began

forming about 4,500 years ago as the high water of post-glacial Lake Nipissing receded due to the rapid down-cutting of the new Saint Clair River. At the same time, the earth's crust rose, having been depressed by the weight of ice during the last glacial advance, and is still rising slightly. The continued rise of the land and lowering of the Great Lakes left a series of dry upland sand ridges and mucky wetland troughs or swales between. The beach ridge and swale complex provides critical shoreline habitat for uncommon and rare plant and animal species found in few other parts of Michigan, including Purple-flowering Raspberry, Yellow Lady-slipper orchid, Pink Lady-slipper orchid, Eastern Hog-nosed Snake, and Blue-spotted Salamander, as well as a great abundance of migratory birds that move and nest along the coastline.





Above: Two 80-acre Shorewood Forrest parcels outlined in yellow. Other conservation easements outlined in blue (Lake Huron Woods Presbyterian Village at lower right). North 80-acre parcel with wetland shown at right.

Right: 20-acre Shorewood Forrest Preserve outlined in yellow. Wetland in blue.



The 20-acre Water Works Preserve is located east of the Detroit Water intake plant, south of Metcalf Road and north of Brace Road in Fort Gratiot Township. The Water Works Preserve is also part of the beach ridge and swale complex along Lake Huron, and is adjacent to the south end of the 11.5-acre TLC Peltier Beach Ridge Sanctuary, effectively creating a 31-acre preserve in that area. While more degraded than the Shorewood Forrest Preserve, the Water Works Preserve also contains uncommon species like Purple-flowering Raspberry, Yellow Lady-slipper orchid, Eastern Hog-nosed Snake, and Blue-spotted Salamander, and equally important for migratory birds. The preserve also contains a portion of the large sand ridge that marks

the west edge of this landscape in Saint Clair County, extensively mined for sand decades ago. This is the same huge sand ridge that extends through Lakeside Cemetery and all the way to the Blue Water Bridges in Port Huron.



## TLC Board of Directors

### **Cheryl Collins, President**

Cheryl Collins of Brown City - Marlette formed the Thumb Land Conservancy in 2008. She has been at the forefront of natural area protection efforts in the region for over 20 years. Cheryl served on the board of directors of the Michigan Nature Association from 2003 through 2008, and co-founded the Macomb Land Conservancy in 2000 which merged with Oakland Land Conservancy to become Six Rivers Land Conservancy. In 2001 and 2002, she conducted a fundraising campaign as a volunteer on behalf of the Michigan Nature Association to purchase the Sharon Rose Leonatti Memorial Nature Sanctuary in Kimball Township, Saint Clair County, 9 acres with one of Michigan's largest remaining populations of State Endangered Painted Trillium. Through grants and individual donations, she raised \$57,000 in less than two years in her spare time. With the Michigan Nature Association, she developed funding sources resulting in grants of nearly \$500,000 for a statewide land acquisition campaign. Cheryl and husband, Bill Collins, worked together on many projects for Huron Ecologic, LLC since 1998. Cheryl served as Project Coordinator, assisting community groups in protecting local natural areas across Michigan. She prepared, organized, and presented exhibits and testimony for three Michigan Department of Environmental Quality Contested Case Hearings and two Michigan Environmental Protection Act suits involving State and federally regulated wetland and other natural features. She provided information regarding the Michigan wetland regulatory program and wetland violation files to the Michigan Environmental Council and U.S. Environmental Protection Agency. From 1996 through 1998, Cheryl was Assistant Drain Commissioner for Saint Clair County, working with Drain Commissioner Fred Fuller, who promoted natural watershed management and river restoration. In 2006, she was a Project Assistant for the Sanilac County Economic Development Corporation. She obtained a grant to construct a rain garden in Lexington and worked with the Huron County Economic Development Corporation on a Michigan Department of Transportation plan to identify significant heritage highway features along M-25. From 2006 through 2009, she was the Chairperson of the Sanilac County Brownfield Redevelopment Authority. She ran for Sanilac County Drain Commissioner in 2008, receiving 38% of the vote as a Democrat in a solidly Republican county. Cheryl currently works as a drain inspector and assists with drain maintenance projects for the Saint Clair County Drain Commissioner.

### **Terry Gill - Treasurer and Secretary**

Terry Gill of Greenwood was Supervisor of Greenwood Township in Saint Clair County from 2004 through 2016. Terry is a strong advocate for land preservation with over 20 years of volunteer experience in non-profit organizations. She served on several boards in Saint Clair County, including the Water Quality Board, Farm Land Preservation Board, and Tri-Hospital EMS Board of Directors. For over 10 years, Terry coordinated the Mill Creek Volunteer Monitoring Project, an aquatic macroinvertebrate sampling program to assess and monitor the water quality of the Mill Creek, a major tributary of the Black River. She obtained multiple grants to produce and submit an annual Mill Creek monitoring report to the Michigan Department of Environmental Quality. Terry served as President of the Blue Water League of Women Voters and was the Natural Resources Chair for the Michigan League of Women Voters based in Lansing. As Natural Resources Chair, she represented the Michigan League of Women Voters on the board of the Michigan Environmental Council and obtained a grant from the Frey Foundation to produce and distribute a brochure entitled, "*Keeping This Land Ours*", a citizen guide to protecting natural areas.

### **Kay Cumbow - Director**

Kay Cumbow of the Brown City area is a long-time environmental advocate. She is a director of Citizens for Alternatives to Chemical Contamination, a statewide organization working to protect the health of our communities and the Great Lakes. She also serves as a director of the Great Lakes Environmental Alliance, a grassroots organization based in Port Huron working to safeguard the environmental health of the Great Lakes Basin through education and community outreach. Kay was an active participant for several years in the Mill Creek Volunteer Monitoring Project, an aquatic macroinvertebrate sampling program to assess and monitor the water quality of the Mill Creek in Saint Clair County. Kay has an Associate of Arts degree from Kalamazoo Valley Community College and an Associate of Science degree from Mott Community College. She worked for many years as a licensed certified respiratory technician, and is now happily retired.

### **Dorothy Craig - Director**

Dorothy Craig lives near the TLC Dead End Woods Sanctuary in Fort Gratiot Township and joined the TLC board in 2013. Dorothy has cared for animals her whole life and loves nature. Dorothy has encouraged and supported the work of the TLC since its formation in 2008.

### **Dr. Scott Ferguson - Director**

Doctor Scott Ferguson grew up near the TLC Dead End Woods Sanctuary in Fort Gratiot Township and joined the TLC board in 2010. Doctor Ferguson has been in full-time dental practice since 1988, the year he earned his Doctorate of Dental Surgery from the University of Detroit. He is a member of the Thumb District Dental Society, the Michigan Dental Association, the American Dental Association, and the Port Huron Study Club, part of a nationwide network of affiliates under the Seattle Study Club. Doctor Ferguson has completed advanced training through the Misch Institute for Implant Training and is a Fellow in the International Congress of Oral Implantology. A Port Huron native and active supporter of many local associations, Scott lives in North Street with his son, Gabriel and daughter, Maya.

### **Daniel Rhein - Director**

Dan Rhein of Port Huron grew up in China Township in Saint Clair County. He is a naturalist, wildlife expert, and a self-taught botanist possessing thorough knowledge of many obscure plant species, especially grasses and shrubs. Dan graduated from Michigan State University with a Bachelor of Science degree in Fisheries and Wildlife. For years, Dan has volunteered his time to provide nature education programs for the Blue Water Council Boy Scouts of America and local school children. Dan has long worked to promote natural areas in the Thumb, especially lakeplain prairie, wetlands, and aquatic habitats. He was a member of the Thumb Bioregional Alliance in the early 1990's, which advocated for the protection of land along the Black River near the Port Huron State Game Area, and the Minden Bog in Sanilac County. He has led several tours through the Minden Bog, being quite familiar with the unique bog vegetation. Dan taught an edible plants course for Willow Winds school of traditional skills and crafts near Mikado, Michigan. Dan is a very talented painter and has exhibited his work at Studio 1219 in Port Huron. He works for the Saint Clair County Drain Commissioner as a drain inspector and project supervisor.



### **Chris Walker - Director**

Chris Walker grew up on a small farm near Croswell, where his parents instilled in him a near-reverent appreciation for the land and its natural inhabitants. Chris is currently an Assistant Professor in the Communication Department at North Dakota State University. He earned a Master of Fine Arts in Cinema and Photography from Southern Illinois University and a Bachelor of Applied Arts in Journalism from Central Michigan University. As a photography professor, he has fulfilled full-time teaching and research appointments at Auburn University, Auburn, Alabama; Southern Indiana University, Evansville; and Loyola University Maryland in Baltimore. He has worked for several newspapers, including the Toledo Blade, where he and two coworkers earned a finalist spot in the Pulitzers, and has been published worldwide in numerous magazines, books, and journals. For 7 years, he was the Photography Columnist for Camping Life magazine. Chris is a naturalist and has a life-long interest in ecology, particularly through bird biology and stock nature photography. He was a Neotropical Migratory Research Technician for 2 years at Black Swamp Bird Observatory in Oak Harbor, Ohio. Chris is an artist and journalist with deep concerns for social anthropology and our ever-changing environment.

### **Fred Fuller - Director**

Fred Fuller grew up in Yale, Michigan and has lived most of his life there, serving as Mayor of the City of Yale in 1990, 1991, and 1996. He earned a Bachelor of Arts from Albion College in English Literature and spent a semester in New York City working as an editorial assistant at The Paris Review literary magazine edited by George Plimpton. He has held a life-long interest in old cultures of the British Isles and has written several magazine articles on that subject. He was employed as a Field Director with the Michigan Nature Association in 1992 and 1993, exploring potential new preserve lands and helping edit the MNA's sanctuary guidebook. Fred co-founded the Thumb Bioregional Alliance in 1993, an association of environmentalists and others concerned about ecology and the quality of life in the Thumb region. He also co-founded the Mill Creek Coalition, the Black River Watershed Group and the Friends of Beards Hills, to help preserve important ecosystems in the Thumb. Fred served as the Saint Clair County Drain Commissioner from 1997 through 2008. As Drain Commissioner, he opposed the proposed full-scale dredging of Mill Creek, a major tributary of the Black River, and he helped negotiate a compromise restoration of the creek. He enacted the first storm water rules for Saint Clair County, initiated an illicit discharge elimination program on county drains, required wetland clearance for new development sites, and helped pioneer preservation of high-quality wetlands as mitigation for Michigan Department of Environmental Quality permits in Saint Clair County. Since 2009, Fred has been employed with Huron Consultants, LLC of Port Huron and Lapeer, Michigan, where he is currently the Water Resources Manager.

## **TLC Staff**

### **William Collins - Executive Director**

Bill Collins of Brown City - Marlette is a naturalist and botanist who grew up in the Port Huron area. He was a nature instructor at Silver Trails Scout Reservation summer camps from 1978 through 1986. He has an Associate of Science degree from Saint Clair County Community College and graduated from Michigan State University in 1987 with a dual Bachelors of Science degree in Botany and Natural Resources Development while also following the engineering program. From 1984 through 1986 he was a Program Assistant with the Michigan Chapter of The Nature Conservancy in East Lansing, and later worked on various contract projects for the Michigan Department of Natural Resources Wildlife Division. He is a Life Member of the Michigan Nature Association and explored natural areas for MNA in 1988 through 1990. Bill has worked as a professional wetland consultant and ecologist since 1990, employed 8 years as a botanist and project manager with SSOE, Inc., a large architectural and engineering firm in Troy, Michigan, and since 1998 with his own consulting firm, Huron Ecologic, LLC. In his capacity as a private consultant, he has encouraged and helped local governments and individuals preserve high quality natural areas. Bill and his wife, Cheryl, have been very active in promoting the protection of natural areas and rare species throughout the region, including Michigan Endangered Painted Trillium, a rare woodland wildflower that is now known only from Saint Clair County in all of Michigan.

## **TLC Service Providers**

### **TLC Legal Counsel**

Attorney Timothy J. Lozen  
Law Offices of Timothy J. Lozen, P.C.  
511 Fort Street, Suite 402  
Port Huron, Michigan 48060  
810-987-3970  
LozenLaw.com

### **TLC Financial Institution**

Eastern Michigan Bank  
65 North Howard Avenue  
Croswell, Michigan 48422  
810-679-2500  
EasternMichiganBank.com

### **TLC Liability Insurance**

Conserv-A-Nation Insurance Program  
Underwritten by Chubb Group of Insurance Companies  
Alliant Insurance Services, Inc.  
Franey Muha Commercial Group  
4530 Walney Road, Suite 200  
Chantilly, Virginia 20151  
703-397-0977  
AlliantInsurance.com

### **TLC Accountant**

Cathy Rovano  
5626 Ortman Drive  
Sterling Heights, Michigan 48314  
586-945-1950

### **TLC Web Site Host - ThumbLand.org**

Jeff Ronan  
WebArticulate  
4200 Atkins Road  
Port Huron, Michigan 48060  
810-334-4119  
Innovation@WebArticulate.com  
WebArticulate.com



# **TLC Corporation**

## **TLC Web Site**

ThumbLand.org

## **TLC Contacts**

mailing address:

Thumb Land Conservancy  
4975 Maple Valley Road  
Marlette, Michigan 48453 USA

phone and fax: 810-346-2584

e-mail: mail@ThumbLand.org

## **TLC Incorporation Documents**

IRS Employer Identification Number: 41-2247569

IRS Employer Identification Number Assigned: 2007 August 13

Michigan Corporation Identification Number: 70398K

Michigan Articles Of Incorporation Filed: 2008 October 29

Michigan Articles Of Incorporation Effective Date Of Approval: 2008 October 29

IRS Effective Date Of Tax Exemption: 2008 October 29

IRS 501(c)(3) Tax Exempt Status Confirmed: 2009 February 26

Michigan Corporate Entity Documents:

[https://cofs.lara.state.mi.us/CorpWeb/CorpSearch/CorpSummary.aspx?  
ID=800918673&SEARCH\\_TYPE=1](https://cofs.lara.state.mi.us/CorpWeb/CorpSearch/CorpSummary.aspx?ID=800918673&SEARCH_TYPE=1)

IRS Search for Charities, Online Version of Publication 78:

[https://apps.irs.gov/app/eos/pub78Search.do?ein1=41-  
2247569&names=&city=&state=All...&country=US&deductibility=all&dispatchMethod=searchCharities&  
submitName=Search](https://apps.irs.gov/app/eos/pub78Search.do?ein1=41-2247569&names=&city=&state=All...&country=US&deductibility=all&dispatchMethod=searchCharities&submitName=Search)

## **TLC Memberships and Affiliations**

Heart of the Lakes

102 North Walnut

Post Office Box 1128

Bay City, Michigan 48706

989-292-3582

<http://www.heartofthelakes.org/>

<https://directory.heartofthelakes.org/organizations/thumb-land-conservancy>

Clyde Historical Society

7293 Beard Road

Clyde Michigan 48049

810-824-0726

<https://www.facebook.com/groups/1481890455361159/about/>

## TLC Balance Sheet

### Thumb Land Conservancy Balance Sheet 2018 December 31

#### ASSETS

##### Current Assets

Checking/Savings Eastern Michigan Bank	\$ 6,147.03
---	-------------

Total Checking/Savings	\$ <u>6,147.03</u>
------------------------	--------------------

Total Current Assets	\$ <u>6,147.03</u>
----------------------	--------------------

##### Fixed Assets

Land	
Gerrits Sanctuary	\$48,972.00
North Street Property	\$ 9,500.00

Total Fixed Assets	\$ <u>58,472.00</u>
--------------------	---------------------

<b>TOTAL ASSETS</b>	<b>\$<u>64,619.03</u></b>
---------------------	---------------------------

#### LIABILITIES & EQUITY

##### Equity

Opening Balance Equity	\$64,619.03
------------------------	-------------

Total Equity	\$ <u>64,619.03</u>
--------------	---------------------

<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>\$<u>64,619.03</u></b>
---------------------------------------	---------------------------



## TLC 2018 US Tax Return

Form 990-N

**Electronic Notice (e-Postcard)**

OMB No. 1545-2085

Department of the Treasury  
Internal Revenue Service

for Tax-Exempt Organization not Required to File Form 990 or 990-EZ

2018

Open to Public Inspection

**A** For the 2018 Calendar year, or tax year beginning 2018-01-01 and ending 2018-12-31

**B** Check if available:

☐ Terminated for Business

☒ Gross receipts are normally \$50,000 or less

**C** Name of Organization: THUMB LAND CONSERVANCY

4975 Maple Valley Road

Marlette, MI, US, 48453

**D** Employee Identification

Number 41-2247569

**E** Website:

ThumbLand.org

**F** Name of Principal Officer: Cheryl Collins

4975 Maple Valley Road

Marlette, MI, US, 48453

**Privacy Act and Paperwork Reduction Act Notice:** We ask for the information on this form to carry out the Internal Revenue laws of the United States. You are required to give us the information. We need it to ensure that you are complying with these laws.

The organization is not required to provide information requested on a form that is subject to the Paperwork Reduction Act unless the form displays a valid OMB control number. Books or records relating to a form or its instructions must be retained as long as their contents may become material in the administration of any Internal Revenue law. The rules governing the confidentiality of the Form 990-N is covered in code section 6104.

The time needed to complete and file this form and related schedules will vary depending on the individual circumstances. The estimated average times is 15 minutes.

**Note:** This image is provided for your records only. Do Not mail this page to the IRS. The IRS will not accept this filing via paper. You must file your Form 990-N (e-Postcard) electronically.

## TLC Properties

### Dead End Woods Sanctuary

17.6 Acres, Fort Gratiot Township, Saint Clair County

Acquisition Date: 2008 December 30

North Parcel 74-20-030-2009-000: Beginning North 660.34 Feet From The East Quarter Corner, Thence N89°37'00"W 229.00 Feet; Thence S00°00'00"E 130.17 Feet; Thence N89°37'00"W 189.00 Feet; Thence S00°00'00"E 200.00 Feet; Thence N89°37'00"W 920.79 Feet; Thence N00°00'00"E 330.18 Feet; Thence S89°37'00"E 691.79 Feet; Thence N00°00'00"E 70.00 Feet; Thence S89°37'00"E 647.00 Feet; Thence S00°00'00"E 70.00 Feet To Beginning. Section 30, Town 7 North, Range 17 East, 8.59 Acres.

South Parcel 74-20-030-2012-000: Part Of The Northeast Quarter Of Section 30, Town 7 North, Range 17 East, Fort Gratiot Township, St. Clair County, Michigan; Described As Commencing At The East Quarter Corner Of Said Section; Thence N00°00'00"E 97.00 Feet Along The East Section Line To The Point Of Beginning; Thence N89°44'42"W 225.00 Feet; Thence S00°00'00"E 97.00 Feet; Thence N89°44'42"W 537.54 Feet Along The North Line Of Spruce Village; Thence N89°47'58"W 575.76 Feet Along The North Line Of Ferguson Heights; Thence N00°02'55"E 320.95 Feet Along The East Line Of Angus Campbell Number One; Thence N00°07'02"E 12.77 Feet Along The East Line Of Plat Number 5 Of The Old Farm Subdivision; Thence S89°37'00"E 1113.04 Feet; Thence S00°00'00"W 130.78 Feet; Thence S89°17'00"E 225.00 Feet; Thence S00°00'00"W 101.08 Feet To The Point Of Beginning. Containing 9.01 Acres.

The Dead End Woods Sanctuary was the first preserve acquired by the TLC, in December 2008. The woods is known locally as the "dead end woods" because it is located and accessed at the dead end of Wilson Drive in Fort Gratiot Township. The preserve is located between Wilson Drive and Blueberry lane to the south, State Road to the east, and Old Farm subdivision to the north.



The 17.6-acre Dead End Woods Sanctuary contains about 11.6 acres of swamp forest wetland, part of the headwaters of the Gossman Drain which flows east and south to the Black River. Both the wetland and the upland on the sanctuary were preserved as partial mitigation for wetland impacts permitted by the Michigan Department of Environmental Quality for the 2008 Bunce Creek and Huffman Drain project of Saint Clair County Drain Commissioner, Fred Fuller. The Dead End Woods Sanctuary is protected by a conservation easement held by the State of Michigan. As mitigation options for the drain project were being considered, the owner of one of the Dead End Woods parcels offered to sell the land to the Drain Commissioner at a reasonable price. The MDEQ confirmed the presence of a large amount of wetland on the property and



determined that it is part of a high quality plant community. The adjacent parcel was then purchased to provide the necessary wetland mitigation for the drain project. To satisfy MDEQ requirements for long-term monitoring and stewardship of the wetland, ownership of the two Dead End Woods parcels was transferred to the TLC, relieving the Drain Commissioner from further responsibility for this land. In accepting ownership of the property, the TLC agreed to be responsible for submittal of an approved management plan to the MDEQ, annual monitoring of the conservation easement, long-term stewardship, and submittal of annual monitoring reports to the MDEQ.

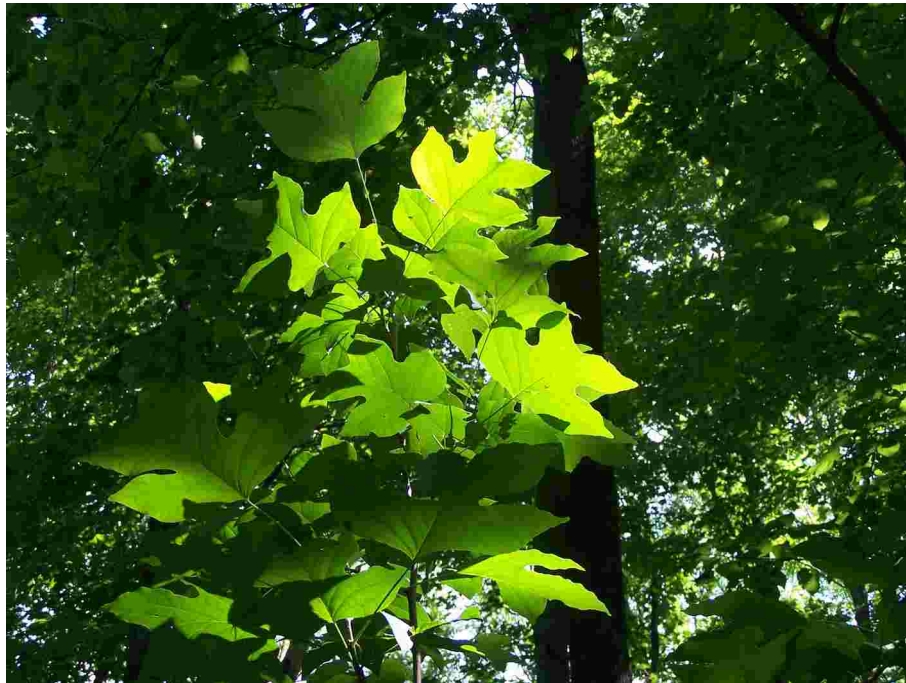


Forest of the Dead End Woods Sanctuary.



Swamp wetland in the Dead End Woods Sanctuary.

The Dead End Woods is a highly diverse forest community of southern swamp and mesic upland on Wainola-Deford fine sands deposited on the glacial lakeplain. The swamp is dominated by Silver Maple and Red Maple hybrids, Green Ash (all large ash trees now dead due to the Emerald Ash Borer), American Hornbeam, Spicebush, Sensitive Fern, Royal Fern, Jack-in-the-pulpit, and Marsh-marigold. The upland is dominated by Red Maple, Red Oak, Sassafras, Black Cherry, Witch-hazel, Mayapple, Wild Geranium, and Yellow Trout-lily. At 44.5, the Floristic Quality Index calculated for Dead End Woods is one of the highest in the area and indicates a natural area of statewide significance. The higher quality or interesting species include Maidenhair Fern, Spikenard, Richweed, American Hazelnut, Black Ash, Butternut, Spicebush, Tuliptree, Cardinal Flower, Indian Pipe, Black Gum, Sycamore, Christmas Fern, Broad-leaved Goldenrod, Foamflower, and Eastern Hemlock.



Tuliptree sapling in the Dead End Woods Sanctuary.



Spikenard in the Dead End Woods Sanctuary.



A 1937 aerial photograph shows most of the Dead End Woods forest cover was intact, probably because the land was simply too wet to farm. As a result, many species are relict from before European settlement. In 1997 and 1998, the previous owners selectively cut large trees throughout the forest, which drew protests from neighbors who thought the site was being prepared for residential development. Despite this cutting and heavy soil disturbance, the forest vegetation remained intact. While the opened canopy supported the invasion of Garlic Mustard, it also favored uncommon species like Tuliptree, American Hazelnut, and Spikenard.

Uncommon animal species observed on the Dead End Woods Sanctuary include Flying Squirrels, Barred Owls, Pileated Woodpeckers, Wood Ducks, Spring Peeper frogs, Wood Frogs, and Red-backed Salamanders. Aquatic macroinvertebrates observed in the wetter portions of the swamp include caddisfly larvae, fairy shrimp, crayfish, pond snails, clam shrimp, water striders, and various protozoa, all generally indicating high water quality.

Entrance to the Dead End Woods Sanctuary is from at the dead end of Wilson Drive and also a shared driveway at 3745 State Road, between the 4<sup>th</sup> and 5<sup>th</sup> houses north of Blueberry Lane. Visitors must be careful not to block driveways or the fire hydrant at the end of Wilson Drive.

## Gerrits Sanctuary

**38.5 Acres, Ira Township, Saint Clair County**

**Acquisition Date: 2009 July 16**

Parcel 74-23-007-1003-000: The Northwesternly 38.5 Acres Of The Southwesterly ½ Of The Northeasterly ½ Of Private Claim 627. Section 7, Town 3 North, Range 15 East. 38.5 Acres.

On July 16, 2009, the TLC acquired its second nature preserve, the Gerrits Sanctuary, a generous donation from Lois Gerrits, wife of the late Dr. James F. Gerrits. The closing was held at the Law Offices of Timothy J. Lozen, with attorney Anna Kovar <http://www.lozenlaw.com/> and TLC executive board members William Collins and Terry Gill present. Ullenbruch Flowers and Gifts of Port Huron <http://www.ullenbruchflower.com/> kindly donated a bouquet of flowers to express our appreciation to Mrs. Gerrits.

Dr. James Gerrits was well known in Saint Clair County. He was co-pilot of a bomber in World War II, and later a fighter and test pilot. Because of his war experiences, he became an outspoken critic of war. He and Lois twice voluntarily went to Vietnam in the 1960's, sponsored by the U.S. Department of State and Catholic Church, to provide civilian medical care to the people of both South and North Vietnam. Lois shared several stories about those times after our closing.



*In Memory of  
Lois Marie Gerrits  
Sept. 5, 1927 ~ March 28, 2016*

### *Afterglow*

I'd like the memory of me to be a  
happy one, I'd like to leave an  
afterglow of smiles when life is  
done. I'd like to leave an echo  
whispering softly down the ways, Of  
happy times and laughing times and  
bright and sunny days.  
I'd like the tears of those who grieve,  
to dry before the sun Of happy  
memories that I leave When life is  
done.



Gerrits siblings at the 2011 November 26 sanctuary dedication.



The Gerrits Sanctuary is 38.5 acres located along the east boundary of the City of New Baltimore, only about  $\frac{3}{4}$  mile north of Anchor Bay and Lake Saint Clair. The southern half of the sanctuary is a complex of mature mesic and swamp forest. The north half is old-field and the Crapaud Creek Drain runs through the north end of the preserve. Years ago, the property was part of the Gerrits family farm.



Upland and swamp forest on the Gerrits Sanctuary.



The forest on the Gerrits Sanctuary is an impressive mix of southern swamp and mesic upland containing plant populations relict from centuries ago. Dominant vegetation in the extensive wetlands includes Silver Maple, Green Ash (all large trees dead due to the Emerald Ash Borer), Eastern Cottonwood, American Elm, Cinnamon Fern, and various sedges. The upland forest is a mature and species-rich southern forest community of American Beech, Sugar Maple, Red Oak, White Oak, Black Cherry, American Basswood, Tuliptree, Yellow Birch, Mayapple, White Trillium, Wild Geranium, Canada Mayflower, Spinulose Woodfern, Jack-in-the-pulpit, Solomon's-seal, Yellow Trout-lily, and Spring Beauty among many other forest herbs. Along the southwestern boundary of the sanctuary, the vegetation on moist sand tip-up mounds is distinctly northern with clubmosses, Wild Sarsaparilla, Starflower, and Goldthread. Some areas look surprisingly like habitat for Michigan Endangered Painted Trillium – *Trillium undulatum*, currently known only from the Port Huron area.



Upland forest with large Black Cherry, American Beech, and Sugar Maple on the Gerrits Sanctuary.

The Gerrits Sanctuary is part of one of the largest and least fragmented forest tracts remaining along the Great Lakes coastline from Ohio north through the Algonac area. The larger forest is nearly 300 acres, of which the Gerrits Sanctuary includes only about 20 acres of that forest, or about 7% of it. At the southern limit of the forest along M-29, it is within 1,000 feet of Anchor Bay. Near-shore natural areas are critical for migratory birds and insects that move along the Great Lakes. The Gerrits Sanctuary provides habitat both for migratory woodland birds and for migratory insects, like butterflies, in the old-field on the north half of the preserve.

Official entrance to the Gerrits Sanctuary is from near the end of Sienna Oaks Drive to the north. With permission from park management, the sanctuary may also be accessed through The Shores at Anchor Bay modular park along the east and south boundaries:

<https://www.facebook.com/TheShoresAtAnchorBay/>



Birthday nature walk for Lois and James Gerrits' granddaughter, Rose, on 2014 May 18.

## **Peltier Beach Ridge Sanctuary**

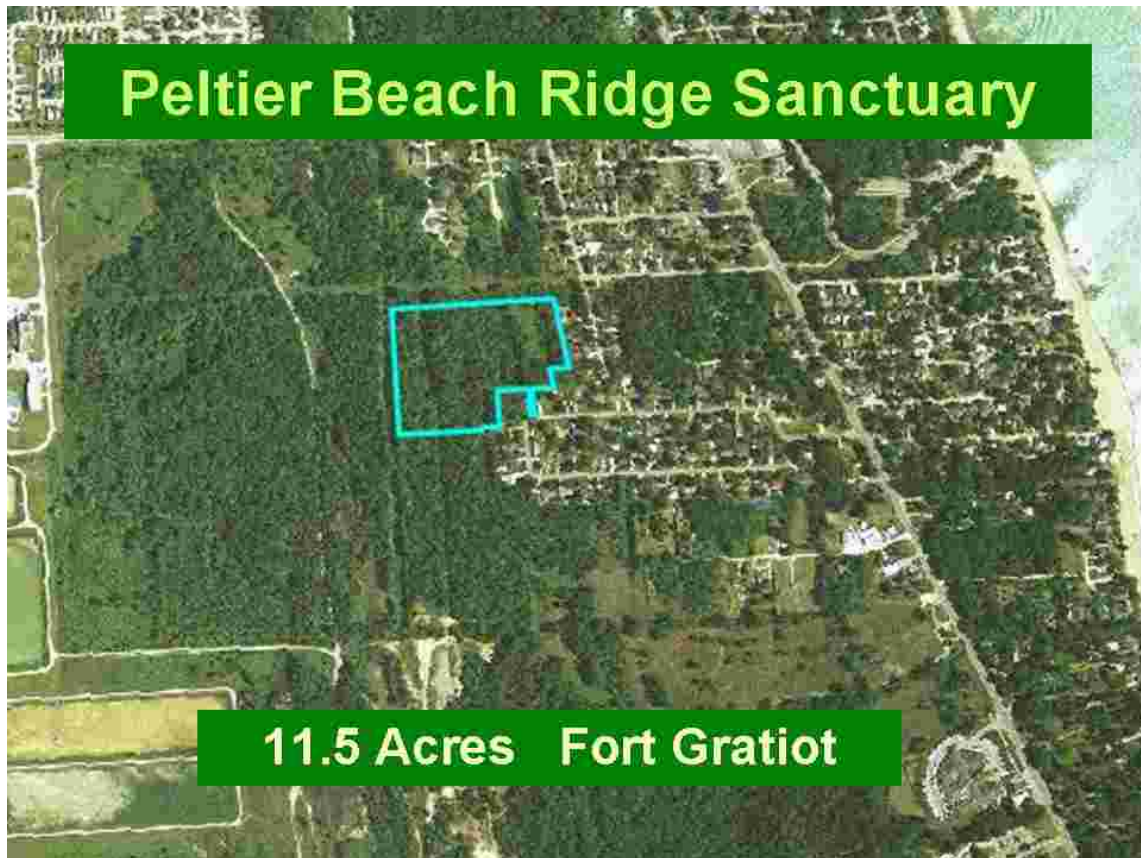
**11.5 Acres, Fort Gratiot Township, Saint Clair County**

**Acquisition Date: 2010 June 28**

Parcel 74-20-004-1058-000: A parcel of land being a part of the Northwest  $\frac{1}{4}$  of Fractional Section 4 and the Northeast  $\frac{1}{4}$  of Fractional Section 5, T7N, R17E, Fort Gratiot Township, St. Clair County, Michigan and described as: Commencing at the East  $\frac{1}{4}$  corner of said Fractional Section 5; thence N.  $89^{\circ} 38' 30''$  W. 656.67 feet along the East and West  $\frac{1}{4}$  line of said Fractional Section 5; thence N.  $00^{\circ} 12' 07''$  E. 1145.13 feet to the point of beginning of this description; thence continuing N.  $00^{\circ} 12' 07''$  E. 648.12 feet; thence N.  $89^{\circ} 59' 07''$  E. 853.62 feet; thence S.  $09^{\circ} 03' 53''$  E. 363.81 feet; thence N.  $89^{\circ} 15' 00''$  W. 101.00 feet; thence S.  $09^{\circ} 03' 53''$  E. 101.00 feet; thence N.  $89^{\circ} 15' 00''$  W. 299.26 feet; thence S.  $00^{\circ} 07' 00''$  E. 200.50 feet; thence N.  $89^{\circ} 15' 00''$  W. 82.00 feet; thence S.  $00^{\circ} 07' 00''$  E. 1.00 feet; thence N.  $89^{\circ} 15' 00''$  W. 447.36 feet to the point of beginning of this description. Said parcel contains 11.47 acres, more or less.

On June 28, 2010, the TLC received its third nature preserve, the 11.5-acre Peltier Beach Ridge Sanctuary in Fort Gratiot Township, Saint Clair County. The parcel was given to the TLC by Ray and Nancy Peltier to satisfy State of Michigan requirements, then briefly administered through the Michigan Department of Natural Resources and Environment, for the long-term protection of 6.3 acres of wetland on the property, preserved as mitigation for 0.63 acre of wetland to be impacted by an expansion of the Hamzavi Dermatology office in Fort Gratiot: <https://www.hamzaviderm.com/>. The Peltier's worked out a deal with Dr. Syed Hamzavi to preserve the wetland and adjoining upland on their property as mitigation for the Hamzavi Dermatology project. As with our first preserve, the Dead End Woods Sanctuary in Fort Gratiot, the Peltier Beach Ridge Sanctuary is protected by a State of Michigan conservation easement. In accepting ownership of the mitigation property, the TLC agreed to be responsible for submittal of an approved management plan, annual monitoring of the conservation easement, long-term stewardship, and submittal of annual monitoring reports to the MDNRE, now the Michigan Department of Environmental Quality again.





The Peltier Beach Ridge Sanctuary is located a few hundred feet south of the end of West Montevista Drive, south of Metcalf Road, and along the east side of the Detroit Water Board property. The intake pipes from Lake Huron for the Detroit Water facility are very near the north property line. Also just north is the Galbraith Plant Preserve owned by the Michigan Nature Association, and four small lots north of the MNA preserve, owned by the Saint Clair County Drain Commissioner to be preserved as wetland mitigation for a future project. Although some people use the Detroit Water line property to enter the sanctuary from East Montevista Drive, the actual entrance is from North Shoreview Drive, just east of the intersection with San Juan Drive.

The Peltier Beach Ridge Sanctuary is a small part of a much larger and ecologically unique beach ridge and swale landscape formed thousands of years ago along portions of the early Great Lakes shoreline as water levels dropped, rose again, and then dropped to modern levels after the last glacial period. The beach ridge and swale landscape in this part of the Thumb is a long, narrow formation within about 1 mile of the Lake Huron shoreline, extending from Port Huron into Sanilac County. The landscape began forming about 11,500 years ago as the last stages of the Wisconsin glacier melted back and early Lake Huron was about 30 feet higher than today. About 1,500 years later, the melting glacier uncovered a new outlet from the Georgian Bay and the water dropped over 400 feet. The massive weight of glacial ice depressed the earth's crust for thousands of years, but as it melted, the crust slowly rose and continues today. By 4,500 years ago, the drainage outlet from Georgian Bay raised such that early Lake Huron filled to the Lake Nipissing stage and back to the old shoreline of 7,000 years previous. Great Lakes drainage was gradually limited to the Mississippi River through the old Chicago outlet, and then to the current Saint Clair River outlet, which rapidly down-cut and lowered the Great Lakes to modern levels, leaving a series of beach ridges as the water dropped.



Beach ridge and swale landscape in Fort Gratiot and Burtchville Townships.

In the southern Thumb, the beach ridge and swale landscape is restricted to a narrow strip along Lake Huron in Saint Clair County, in Fort Gratiot and Burtchville Townships, and some small patchy occurrences in Sanilac County. The landscape is much more extensive in Huron and Tuscola Counties along the Saginaw Bay, especially near Port Crescent State Park. In Saint Clair County, it originally covered less than 1% of the total land area, and has since been significantly reduced by commercial and residential development. The landscape consists of a series of upland sand ridges and mucky wetland troughs or swales between. In Saint Clair County, the sand ridges average about 40 to 50 feet wide and 3 to 4 feet above the adjoining swales. The swales are usually about as wide as the ridges, but some are a few hundred feet wide. The largest and oldest beach ridge runs continuously along the western limit of the landscape, furthest inland from Lake Huron. This ridge was over 500 feet wide across most of its extent and may have been over 30 feet high in some areas. Although much of it has been mined out, this big sand ridge is still largely intact through Lakeside Cemetery and into Port Huron near the Blue Water Bridges where it is about 15 feet higher than adjoining land. Centuries ago, this ridge served as a burial ground for Native American inhabitants whose burial mounds have been found near Port Huron. The beach ridge and swale landscape provides not only unique habitat, but also a unique record of Michigan's post-glacial past.

Most of the Peltier Beach Ridge Sanctuary is forested, except a large trail that runs through the western part of the preserve, and portions of the sand ridges to the east. Like most of the landscape, the wetland swales are covered by Silver Maple, Green Ash and Black Ash, the larger ash trees now all dead due to the Emerald Ash Borer, Eastern Cottonwood, and American Elm. The upland beach ridges are covered largely by Black Cherry, Bigtooth Aspen, and American Basswood, with scattered Black Oak and a few Arbor Vitae. The lower ridge bases are lined with Paper Birch and covered by an unusual concentration of Alternate-leaved Dogwood.

Much of the beach ridge and swale landscape in Saint Clair County was impacted years ago by logging, clearing, draining, livestock grazing, and sand mining. Because the surrounding forest as a whole has either been degraded or eliminated, subsequent forest species recruitment has been severely diminished, which has limited the return of many forest plants and therefore, the recovery of a mature forest community. The dominance of invasive species like Tartarian Honeysuckle, Common Privet, and Garlic Mustard has further displaced mature forest species.





Beach ridge left and wetland swale right.

Despite so many impacts, the landscape still contains high quality habitat with several unique species. Like other parts of the landscape, a few sand ridges on the Peltier Beach Ridge Sanctuary contain small patches of Purple-flowering Raspberry, the Lower Peninsula's equivalent of the Upper Peninsula's Thimbleberry, with large flowers and large raspberry fruits that actually fit over a finger like a thimble. Purple-flowering Raspberry is thought to be native to only seven shoreline counties in Michigan. The species is so restricted to this habitat in Saint Clair County that it's symbolic of it.



Purple-flowering Raspberry near the Peltier Beach Ridge Sanctuary.

Yellow Lady's-slipper orchid grows in a variety of habitats, but in Saint Clair County is largely restricted to the moist ridge bases and mucky swales of this landscape. Several Yellow Lady's-slipper orchids have been found on the Peltier Beach Ridge Sanctuary.



Yellow Lady's-slipper orchid near the Peltier Beach Ridge Sanctuary.

The Eastern Hog-nosed Snake is a special reptilian inhabitant that has been found just a few hundred feet south of the Peltier Beach Ridge Sanctuary. They prefer the more open sand of dunes and disturbed ground such as along the south end of the sanctuary. When aggravated, the snakes flatten their necks like a cobra, and then sometimes roll over and play dead with their mouths hanging open. They can look imposing, but are harmless. The Eastern Hog-nosed Snake is more common in the southern plains and southeastern US, but is considered to be at some risk of extirpation in the Great Lakes region, Ontario, and New England.



Eastern Hog-nosed Snake just south of the Peltier Beach Ridge Sanctuary.



One of the most critical functions of this coastal forest habitat is the support it provides to an abundance of migratory birds as they move north and south along the Lake Huron shoreline. The spring and summer breeding bird population is very abundant and diverse in this area, especially the forest warblers. Several species of warblers have been identified on the Peltier Beach Ridge Sanctuary.



American Redstart warbler just south of the Peltier Beach Ridge Sanctuary.

The Peltier Beach Ridge Sanctuary is a high quality wetland and upland complex with a unique geologic history, unique plant and animal community, significant Great Lakes coastal habitat, good restoration potential, and a great addition to the TLC preserve lands. The beach ridge and swale landscape is a high priority for the TLC and we continue working to promote preservation of this area.

## **North Street Station**

**5220 North Road, North Street, Michigan**  
**0.5 Acre, Clyde Township, Saint Clair County**  
**Acquisition Date: 2016 August 02**

Parcel 74-15-012-3006-000: All that part of the North  $\frac{1}{2}$  of the Northwest  $\frac{1}{4}$  of the Southeast  $\frac{1}{4}$  lying south of the Pere Marquette Railroad right-of-way and containing 0.5 acre in Section 12, T7N R16E

On August 2, 2016, the TLC purchased the old general store, post office, and rail station in North Street through the Saint Clair County tax auction. This historic structure would have been demolished if not acquired by a preservation group. The North Street station is one of only two remaining stations between Port Huron and Croswell along the old Port Huron and Northwestern Railway which opened in 1879. The main line ran from Port Huron to Saginaw, with branches to Sandusky, Port Hope, and Port Austin. The line became part of the Pere Marquette Railroad in 1889. The main structure on the North Street site probably dates back to at least 1889, but was later partially modified in the mid 1940's to serve as a residence.

The TLC is partnering with the Clyde Historical Society to protect the structure and fundraise for restoration. We are currently restoring the exterior and plan to install signs describing the history of the site. Eventually, we would like to restore the interior, display related historical artifacts, and open it for meetings and public events.



South side of the North Street Station during roof repair in the spring of 2017. The large window was installed and other modifications were made in the mid 1940's to upgrade the structure as a residence.



The North Street Station circa 1930 showing the north side, facing the railroad tracks. A proprietor of the general store and post office stands in front, with a dog on the porch behind.



The North Street Station circa mid 1930's showing the south side from North Road. The lower room to the east was added to the original structure.



A drawing of the North Street Station as it appeared circa 1900 showing the north side and adjacent railroad. A mail pouch is hanging at the lower left. A horse is shown to the far right on North Road.



Left: A portion of an 1899 map showing the Pere Marquette Railroad line from Port Huron through North Street and beyond.



## TLC Conservation Easements

### Bob Putze Preserve

The Bob Putze Preserve is the first residential landowner conservation easement agreement for the TLC. The conservation easement adjoins the Port Huron State Game Area along the west side of Abbottsford Road; a very nice northern forest community with lots of Eastern White Pine, and tall Red Pines that Bob Putze planted in 1964. Edge species like Big-tooth Aspen and planted spruce are gradually dying off in the increasing shade, while shade-tolerant American Beech and Sugar Maple are colonizing the understory, a natural process known as forest succession which leads to a mature native forest community. The ground-level vegetation is diverse and of good native quality with the usual species of cool sandy soils in the Port Huron area including at least three species of clubmoss, a distant cousin of ferns, along with Canada Mayflower, Wintergreen, and Low Sweet Blueberry. A small area of wetland is covered by Royal Fern with Michigan Holly shrubs. Bob Putze's forest is potential habitat for Michigan Endangered Painted Trillium, a rare species now known only from Saint Clair in all of Michigan, and occurring within a mile of Bob's land.

Bob Putze is a very conscientious and reverent man who loves God's creation and cares for every animal that ventures onto his land. Bob feeds them all, including deer, turkeys, rabbits, raccoons, opossums, and stray cats. Even Pileated Woodpeckers come to his suet feeder, and Flying Squirrels live in a nest box by his driveway. Bob has always felt a spiritual connection to his land. For years, he wanted to ensure that the woods would remain natural and undeveloped after he is gone. The conservation easement signed with the Thumb Land Conservancy in March of 2017 provides the legal basis for that protection in perpetuity.



The Bob Putze Preserve conservation easement site.





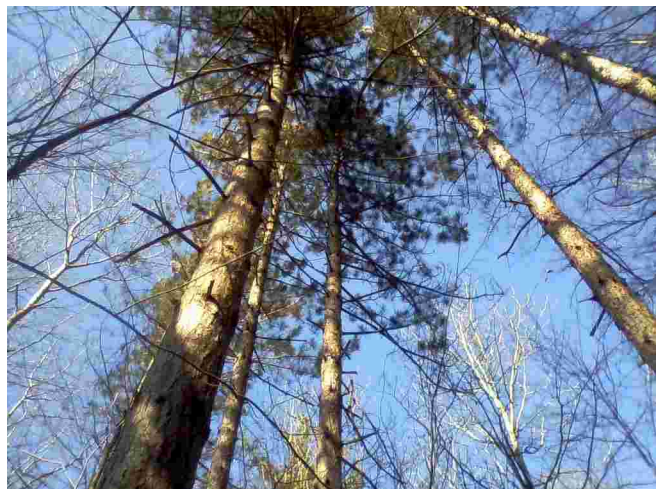
Canada Mayflower, Ground-cedar (clubmoss), and Red Maple seedling.



Typical forest understory.



Typical forest understory.



Overstory of planted Red Pine.



Typical forest understory.



One of Bob's signs.



The Bob Putze Preserve is characteristic of the drier and more northerly forest remaining in the region. In the Port Huron area, northern forest complex is a second-growth woodland complex of mesic to dry-mesic northern forest, dry-mesic southern forest, hardwood-conifer swamp, and southern hardwood swamp on sandy soils extending across large parts of Kimball, Clyde, and Port Huron Townships. The vegetation of this complex is a unique blend of northern and southern flora, skewed largely toward northern species. This generally northern community complex covers a broad and flat landscape of coarse to fine sands deposited across the glacial lakeplain, the dominant cover being swamp forest. Smaller upland sand ridges are typically scattered throughout the complex, deposited in glacial drainageways or as glacial lake beaches and inland dunes.

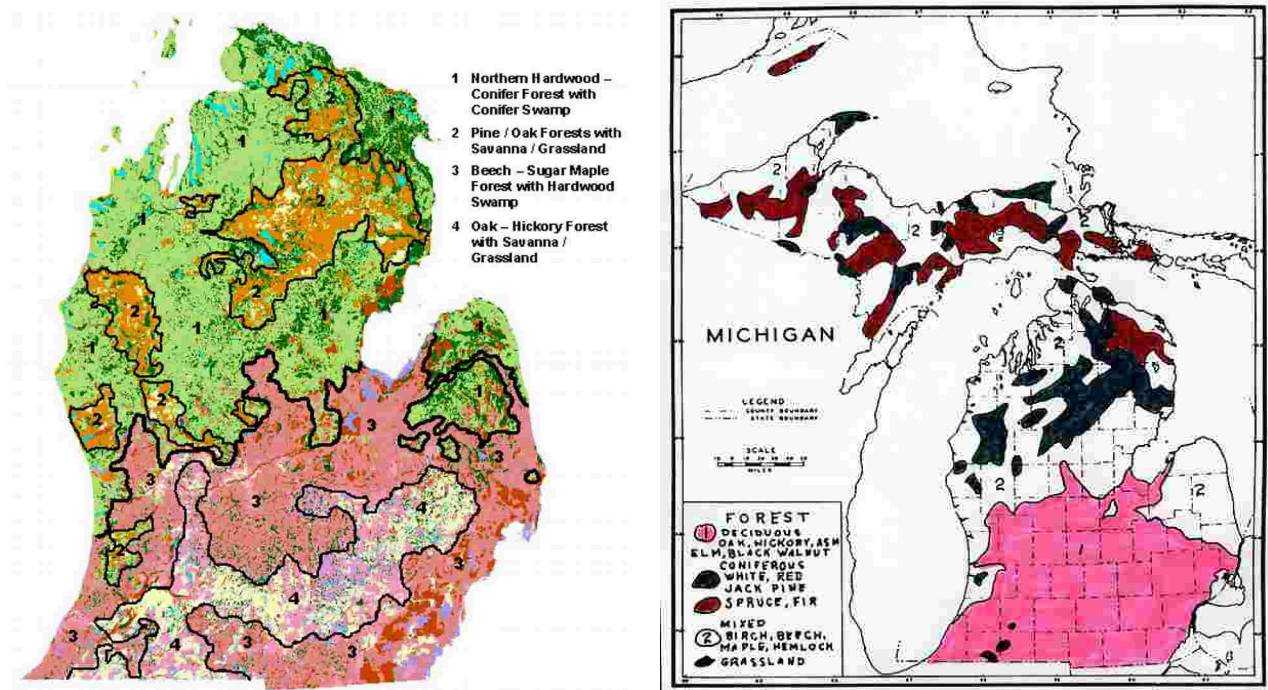


Bob Putze standing by one of the Red Pines he planted in 1964.



Bob Putze and Michigan Holly he transplanted to his yard.

Northern forest communities occur almost exclusively north of the “tension zone” or “transition zone”, a rough division of northern and southern flora in the northeastern United States, extending from Maine through Minnesota and dividing the lower peninsula of Michigan roughly in half. North of the transition zone, conifer trees are a major component of the forest along with broad-leaved hardwood trees. South of the transition zone, conifers are largely absent. The combination of climate and soils north of the transition zone favors northern vegetation, and south of the zone favors southern vegetation. In Michigan, the transition zone is broad, roughly 100 miles wide in some areas, running from near Muskegon on Lake Michigan, to the Saginaw Bay and across the northern tip of the Thumb. Some consider the transition zone to extend down through the lower part of the Thumb, but most restrict it to northern Huron County. Although there is some disagreement as to the precise location and extent of the transition zone, it is certain that many northern plant species reach their southern range limit there, and conversely, many southern plant species reach their northern limits. Regardless, the occurrence of large northern plant communities south of Saginaw Bay is unusual. The primary factor in the southern extension of northern flora in the Thumb is the cooler growing season near Lake Huron. Northern vegetation extends down from Huron County in a narrow coastal zone through Sanilac County, spreading out to the south and west over the low, flat, wet sands of Saint Clair County on the glacial lakeplain.. Other factors include extensive sand soils, a generally high water table perched above a shallow layer of lakeplain clay, and the historic influence of fire.



Northern and southern floristic zones in Michigan.

Several rare or uncommon plant species occur almost exclusively in this northern forest complex in Saint Clair County. The complex contains all of the currently known and extant populations of Michigan Endangered Painted Trillium – *Trillium undulatum* in Michigan. Michigan Threatened Northern Prostrate Clubmoss - *Lycopodiella margueritae* was recorded from the area in 2002 but now its occurrence is apparently questionable due to a recent change in the taxonomic status of the species. Other uncommon plants that may be found in the complex include Creeping Rattlesnake Plantain - *Goodyera repens*, Downy Rattlesnake Plantain - *Goodyera pubescens*, Tesselated Rattlesnake Plantain - *Goodyera tessellata*, Trailing-arbutus - *Epigaea repens*, Pink Lady-slipper orchid - *Cypripedium acaule*, and Showy Orchis - *Galearis spectabilis*.



## TLC Stewardship Sites

### **12.35-Acre Deerfield Wind Energy Preserve Huron Township, Huron County, Michigan 2016 to present**

In late 2016, the TLC contracted with Algonquin Power Company of Oakville, Ontario, Canada to provide stewardship of their 12.35-acre Deerfield Wind Energy Preserve, about 4 miles west of Port Hope. The Deerfield Wind Energy Preserve was placed under a State conservation easement as mitigation for wetland impacts resulting from the nearby Deerfield Wind Energy turbine project. 1.235 acre of State-regulated forested wetland was permanently converted to open wetland for the purpose of clearing a 60-foot wide right-of-way for an electrical transmission line. The Michigan Department of Environmental Quality allows preservation of existing wetland, at a 10 to 1 ratio, as mitigation for permitted wetland impacts. As with the TLC Dead End Woods and Peltier Beach Ridge Sanctuaries in Fort Gratiot Township in Saint Clair County, the Deerfield Wind Energy preserve was placed under a State conservation easement as mitigation for permitted wetland impacts. The MDEQ now requires long-term stewardship on all mitigation sites, usually provided by land conservancies like the TLC.



Deerfield Wind Energy Preserve, shown in yellow boundaries.

Most of the Deerfield Wind Energy Preserve is southern swamp forest with species trending somewhat toward a northern community. Dominant vegetation includes Silver Maple, Black Ash saplings and seedlings, Sensitive Fern, Spinulose Woodfern, Wood Nettle, Clearweed, Lake Sedge, and other sedges. Small upland areas are dominated by Red Maple, Wild Black Cherry, American Basswood, and, unfortunately, Japanese Barberry. Uncommon native plant species include Foamflower, Swamp White Oak, Turtlehead, Woodreed Grass, Spicebush, Cardinal Flower, Round-leaved Pyrola, and Red Trillium. The preserve is part of one of the larger forest fragments remaining in the Thumb, almost continuous along tributaries of Willow Creek to Lake Huron. As such, it is not only important for the watershed, but as habitat for migratory birds. Those observed on the preserve include Wood Thrush, Veery, Eastern Wood-pewee, Evening Grosbeak, many American Redstart warblers, Common Yellowthroat warbler, Yellow Warbler, Black-capped Chickadee, Downy Woodpecker, and Catbird.



Swamp forest on the Deerfield Wind Energy Preserve, showing Pileated Woodpecker excavations on the dead tree at the right.

The most immediate stewardship issue on the Deerfield Wind Energy Preserve was determined to be a dense growth of invasive Japanese Barberry along roughly 600 feet of the east preserve boundary, extending about 100 feet west into the forest before decreasing to a few scattered shrubs. The barberry growth apparently exploded in the past few years as a result of forest clearing on the adjacent parcel east to expand a hay field. The clearing greatly increased the amount of light exposure in the remaining forest, shifting edge forest conditions at least another 100 feet west into the preserve.

The TLC proceeded with extensive manual clearing of the barberry in the fall of 2017, as opposed to herbicide application, after determining that native forest plants under and around the barberry would likely be eliminated by herbicide. These species include Foamflower, Turtlehead, Red Trillium, Round-leaved Pyrola, and Canada Mayflower. Deer ticks are known to concentrate in barberry, much of it head-high on the preserve, which could present a risk of Lyme Disease to stewards cutting or digging barberry in the summer. To minimize Lyme Disease risk and destruction of native woodland herbs, the TLC has limited most of our work to the fall, winter, and early spring. Starting in early September



of 2016, the TLC began cutting barberry shrubs with hand loppers and a gas-powered weed whacker fitted with a 4-point steel brush blade. Over one acre of barberry has been cut along the east side of the preserve. In the early spring of 2018, the TLC will start burning the cut barberry stems with a large propane torch. Repeated for a few years, most of the barberry should eventually be killed. Others will be manually pulled or dug from the ground.



View south of Japanese Barberry along the east preserve boundary.

As with other stewardship sites, the TLC conducts species inventories, detailed measurements of vegetation in sampling plots across the preserve, general observation, and extensive photographic documentation as part of the annual monitoring required by the MDEQ. The TLC inspects all preserves annually to monitor conditions and identify potential stewardship issues. A detailed monitoring report is submitted to the MDEQ by the end of January each year.

### **18.5-Acre Super Kmart / Sam's Club Preserve Port Huron Township, Saint Clair County 2016 to present**

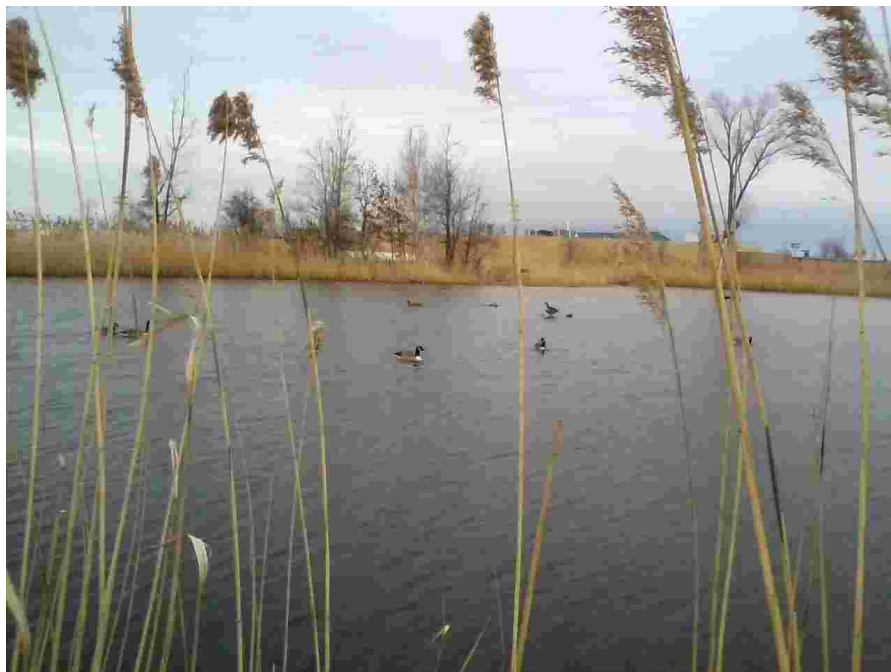
Starting in early 2016, the TLC has been assisting Port Huron Township in Saint Clair County with management of wetland and forest around the vacant Super Kmart and Sam's Club at the northeast corner of I-69 and 32<sup>nd</sup> Street. Wetland was constructed north and east of the stores, and natural swamp forest preserved, as mitigation for a wetland permit issued by the Michigan Department of Environmental quality back in 1992. In total, about 18.5 acres of wetland and forested upland is protected by a State of Michigan conservation easement. Management of the area has been lacking for years and became even more critical when the Super Kmart closed a few years ago.

TLC member and friend, Port Huron Township Fire Chief Craig Miller, has been a continued advocate for the preserve while working for a compromise allowing the Township better management of the area for public safety. In late 2016, County Sheriff deputies moved an encampment of about 15 young men living in tents and other shelters on the preserve to adequate housing elsewhere. They not only caused a lot of destruction on the preserve for years, but produced drugs and engaged in theft of local stores and customers. Relocating these men was key to gaining control of the preserve.



Super Kmart and Sam's Club preserves (areas 1, 2, and 3) in Port Huron Township.

The constructed wetland on the Super Kmart and Sam's Club preserve leaves a lot to be desired, being almost completely dominated by invasive Reed – *Phragmites australis*. The most striking part of the constructed wetland is a large pond east of the stores that is utilized by an abundance of waterfowl. In contrast, a large part of the preserve consists of the original native forest community with uncommon species like Blue-bead Lily, Fringed Polygala, Michigan Holly, Black Chokeberry, and a Scarlet Oak x Pin Oak hybrid particular to the Port Huron area. The TLC produced a detailed management plan for the preserve which has helped gain approval for management actions from the MDEQ while taking the sensitive natural features into consideration.



Canada Geese in the pond east of the stores, showing also the dominance of invasive Reed.





Invasive Reed along drive northwest of stores.



Litter north of stores before March 2016 clean-up.



Native forested wetland north of the stores. Despite surrounding impact, still a nice natural area.

In March and December of 2016, the TLC assisted a County community service crew with clean-ups, removing litter and materials left on the site by the young men that lived on the preserve. During unseasonably warm weather on February 26, the TLC assisted the Port Huron Township Fire Department in an attempt to burn the invasive Reed in the wetland east of the stores. Unfortunately, the air temperature was too low to sustain a good burn. However, based on a recent discussion with the Township Supervisor, another controlled burn should be attempted in the early spring of 2018 and the TLC will continue to assist the Township as we are able.

## **51-Acre Michigan Road Preserve Port Huron Township, Saint Clair County, Michigan 2011 to 2015**

From 2011 through 2015, the TLC contracted with the Saint Clair County Drain Commissioner, Saint Clair County Road Commission and Pro-Tel Development to provide five years of annual monitoring and stewardship required by the Michigan Department of Environmental Quality as a condition of two wetland permits issued to the SCCRC and Pro-Tel Development. The SCCRC permit authorized impact of 0.57 acre of emergent marsh and 0.14 acre of shrub swamp wetland for the removal of the old Michigan Road crossing of the North Branch of Bunce Creek, and replacement of the crossing structure with a new bridge over the Canadian National Railway in Port Huron Township. The Pro-Tel Development permit authorized impact of 2.85 acres of wetland and relocation of 950 linear feet of the Read Drain for the purpose of commercial development at the southeast corner of Wadhams Road and Griswold Road in Kimball Township. In total, the MDEQ required preservation of 31.08 acres of existing natural wetland as mitigation for the permitted impacts. The SCCRC and Pro-Tel Development provided the required preservation on two adjacent parcels totaling just over 51 acres and the SCCDC subsequently accepted ownership of the land.



The TLC inspected the conservation easement site annually for five years, documented site conditions, identified management concerns, and performed stewardship activities according to the requirements of the MDEQ permits and management plans produced by the TLC. Annual monitoring and stewardship reports included detailed vegetation data from sampling plots, descriptions of ecological conditions, vegetative development, human and natural disturbance, litter and refuse dumping, invasive species control results, controlled burn effects, native plantings, ecological enhancement, easement sign conditions, potential safety hazards, adjoining land use, a summary of annual management and maintenance activities, and extensive on-site photographs. Monitoring reports also included comparisons of current site conditions to those of previous years, descriptions of changes observed, and evaluation of the effectiveness of long-term management actions.



The Michigan Road Preserve is just 51 acres of a much larger northern woodland complex on upland sand ridges and lower wetland east of Michigan Road, north of Dove Road and along the south side of the Canadian National Railroad. Sand ridges are relatively broad, a few hundred feet in width, appearing to be Rousseau fine sands. Adjacent lower and wetter soils are Wainola-Deford fine sands. Most of the preserve is typical of relatively young woodland in the Port Huron area, recovering over the past 70 to 90 years after much of the area was cleared for timber. The forest community is composed of northern species like Red Maple, Paper Birch, Wintergreen, Bracken Fern, Wild Sarsaparilla, and Canada Mayflower mixed with southern species like Black Oak and Smooth Highbush Blueberry. The central and eastern portions of the Michigan Road Preserve are covered by disturbed northern shrub swamp dominated by Tag Alder, Black Chokeberry, and Glossy Buckthorn, with Narrow-leaved Cat-tail and Reed in the lowest and more open areas.



Typical wetland and upland complex on the Michigan Road Preserve, showing tip-up mounds.

Despite clearing decades ago, the Michigan Road Preserve has retained many species characteristic of the vegetation that existed before European settlement. The composition of the forest community on the preserve, like much of the forest in the Port Huron area, is a diverse blend of northern and southern flora, being located at a southern extension of Michigan's Transition or Tension Zone along the Lake Huron coast, with a moderated climate.

The habitat across much of the upland portions of the Michigan Road Preserve appears well suited for Michigan Endangered Painted Trillium - *Trillium undulatum* known to occur on other sites nearby. Painted Trillium is one of nearly 40 species of trillium native to North America, about 10 of which are found in Michigan. Saint Clair County is an isolated outpost for Painted Trillium on the western edge of its range in North America, reflecting the Blue Water Area's unique natural history. Its primary range is the Appalachian Mountains at higher elevations on organic soils, in rhododendron and Mountain Laurel thickets or Red Spruce groves, but nowhere is the species considered common. In Saint Clair County, Painted Trillium is recorded only from mesic northern forest, on moist sands. Its occurrence strongly coincides with the interface of Rousseau fine sand or Chelsea-Croswell sand ridges and the lower and wetter Wainola-Deford fine sands, such as on the Michigan Road Preserve. Plants are often found along the base of sand ridges, near wetland. Painted Trillium also shows a strong affinity for distinct and dense tip-up mounds like those on the Michigan Road Preserve. Painted Trillium was first documented in Saint Clair County around 1900 by botanist, attorney, and city controller of Port Huron, Charles K. Dodge.



Atop a large sand ridge in northeast of the Michigan Road Preserve.



Royal Fern and Tag Alder (stem left) on the west edge of the shrub swamp.

A few small patches of Marsh Saint John's-wort - *Triadenum fraseri* occur in the shrub swamp in the central part of the preserve. This is a northern species not often encountered in Saint Clair County,



but more common in northern Michigan. Marsh Saint John's-wort is indicative of wet sandy soils, occurring in alder thickets, such as the Michigan Road Preserve, but also bogs and sedge meadows, suggesting it may be remnant of a more open, fire-maintained community.

Three invasive weeds are a management concern on the preserve, including Reed - *Phragmites australis*, Glossy Buckthorn – *Frangula alnus*, and Narrow-leaved Cat-tail - *Typha angustifolia*. Reed is limited to the open shrub swamp areas in the central and eastern parts of the preserve where it is mingled with Glossy Buckthorn, Black Chokeberry, and Tag Alder. Narrow-leaved Cat-tail covers far less area and is very limited, in only the few open patches in the north-central part of the preserve. Neither Reed nor Narrow-leaved cat-tail are spreading as they already occupy the full extent of open habitat on the preserve. Glossy Buckthorn, however, while fairly widespread across the open shrub swamp, is still spreading in the swamp forest. It is a co-dominant species of the forest understory across about a third of the preserve and is, by far, the greatest management concern.



Tangle of Black Chokeberry, Glossy Buckthorn, and Reed that dominates much of the shrub swamp on the preserve.

There appear to be few direct, recent human impacts on the Michigan Road Preserve. There are no trails on the preserve, being fairly well isolated by the North Branch of the Bunce Creek to the southwest, the Canadian National Railway to the north, and extensive forest to the east and south. Because wetland is so extensive in this area, there are few nearby residences, which is probably another factor in the lack of disturbance. Apparently for the same reasons, there is little refuse.

In the fall of 2011, land adjoining the west side of the preserve was completely cleared for the railroad crossing construction authorized by the same MDEQ permit that the Michigan Road Preserve provides wetland mitigation for. In response to the increased light, Glossy Buckthorn density and growth exploded along the west boundary of the preserve.

The adjacent forest clearing caused further degradation through yet more deforestation and by extending edge effects at least another 100 feet into the preserve. Forest quality is very dependent on maintaining large, unfragmented tracts that are less susceptible to invasion of edge and weed

species. Large unfragmented forests are better able to maintain interior forest species, remnants of prehistoric populations that thrived prior to European settlement 150 to 200 years ago. The loss of adjacent forest made the preserve that much more unsustainable in the long term. With less forest, full sunlight extends further into the remaining forest, favoring weedy edge species over the remnant native flora. Wind-throw of mature trees from prevailing west winds will extend further into the preserve. Interior forest birds such as Wood Thrush are particularly vulnerable to nest invasion and territorial displacement by Cowbirds and other birds of open habitat and edge woodlands.

The TLC conducted several management activities on the Michigan Road Preserve to control invasive Glossy Buckthorn and to improve the native flora by reintroduction of a natural fire regime that characterized this type of forest community prior to European settlement. With the assistance of the Port Huron Township Fire Department, the TLC conducted two small controlled burns on 2014 April 12. Subsequent inspections of the preserve indicated that the burning was moderately effective in eliminating Glossy Buckthorn seedlings. Based on this, the TLC conducted a much larger burn on the preserve the following spring, on 2015 May 01. The burn was conducted without the PHTFD, but with new TLC intern, Alex Roland, from Saint Clair County Community College, her friend, Brook, and a few TLC board members. The natural fuel load (leaves and twigs) was greater and weather conditions were much more favorable that day to sustaining a good burn. The results of the burn were evaluated later in August, with the assistance of TLC interns Alex Roland, Jeff Hansen, and Nicole Barth, all students at SC4. An additional decrease in Glossy Buckthorn was observed, but with a significant increase in Black Cherry seedlings. Whether most of these seedlings would survive and eventually dominate the forest understory was uncertain. This could be a negative effect of burning, as well as our inability to burn Glossy Buckthorn in the lower and wetter portions of the wetland. A positive effect however, appeared to be increased density of fire-tolerant northern plant species, such as Bunchberry and Gay-wings, which would originally have likely been a larger component of the forest community before European settlement.



Port Huron Township Fire Department assisting with controlled burn on 2014 April 12.

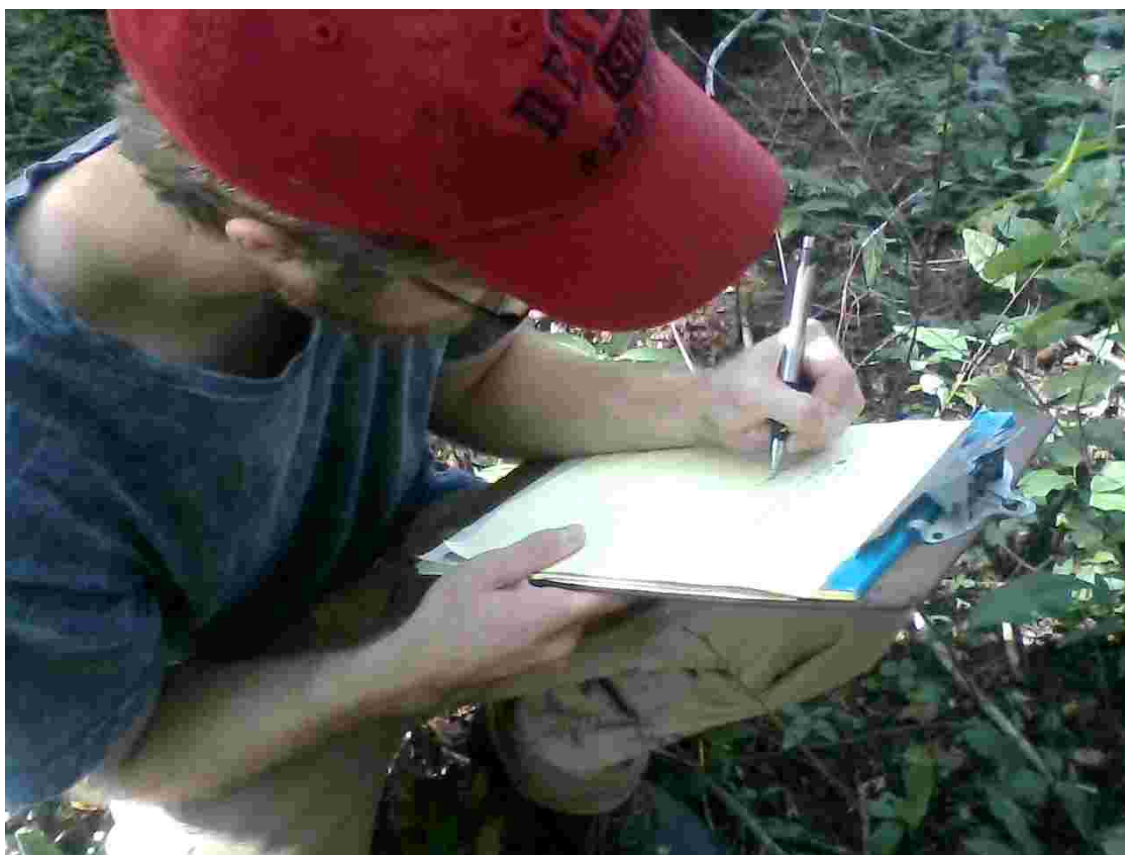




Left to right, TLC President Cheryl Collins, TLC Stewardship Intern Alex Roland and her friend Brook at our 2015 May 01 burn.



Weather conditions and fuel load were very good for our 2015 May 01 burn.



TLC Intern Jeff Hansen collecting vegetation data during 2015 August 12 monitoring.



Bunchberry and Gay-wings in burned area.



## TLC Mission

# TLC Territory

The Thumb Land Conservancy is working to preserve natural areas in the Thumb of Michigan, a post-glacial landscape where northern forest blends with central hardwoods, bordered by Lake Huron, the Saginaw Bay, the Saint Clair River, and Lake Saint Clair. The mission territory of the TLC is Saint Clair, Sanilac, Huron, Tuscola, Lapeer, and Macomb Counties, but we can also work in adjacent areas as opportunities arise. The TLC will seek to work with local partners where our service territory overlaps that of other conservancies and similar organizations.



## TLC Purpose and History

The Thumb Land Conservancy was formed in 2008 to provide an organization dedicated to filling the gap of nature preservation in Michigan's Thumb. Although much attention has been given to a few areas near Lake Saint Clair, the Thumb has been largely ignored. In recent years, we are happy to see that some new lands have been preserved, but so much remains unprotected.

There is a popular misconception that little is worth saving north of Detroit because of urban development and agriculture. While much of the landscape has been drastically altered, many high quality natural areas remain. A few places are nearly pristine, resembling conditions that existed before European settlement about 200 years ago.

The extensive destruction of natural areas in the Thumb makes preservation even more critical. Small, degraded fragments can be restored and expanded, and often serve as isolated havens for rare plant species. We believe all natural landscapes are important locally because they reflect a unique combination of history and features particular to that location. Many benefits of nature are obtained and enjoyed only locally. We believe it is especially important for children to have natural areas nearby where they can play, grow, and learn.

We have not forgotten what it's like to see a treasured woods in a neighborhood cut down, or wetlands carved up for more development. The TLC wants to work with any concerned individual before these places are lost.

The TLC is carrying on a legacy in the Thumb. In 1952, Macomb and Saint Clair Counties were the birthplace of what became the Michigan Nature Association, the first statewide land preservation group in Michigan. The MNA was led for many years by the late Bertha Daubendiek of Kenockee Township in Saint Clair County, and is one of a very few organizations that has protected land in the interior of the Thumb, with 18 sanctuaries here. Most of our board members personally knew MNA cofounder Bertha Daubendiek. Some are MNA members and did volunteer work for MNA. TLC President, Cheryl Collins, served on the MNA board from 2003 through 2008.



1970 - The MNA board goes statewide at the office of attorney Frank Giambrone in Mount Clemens. Not exactly a radical looking bunch, but dedicated visionaries. Left to right, front: Bertha Daubendiek, Thelma Sonnenberg, Marie Moran Peter, Julius C. Peter, back: Frank Giambrone, Rita Juckett, and Richard W. Holzman. Photo by Ralph Polovich.

TLC board members have been involved with environmental issues and natural area protection in the Thumb for many years. From 1989 through 2006, as members of the Mill Creek Coalition, we helped protect the Mill Creek, a major tributary of the Black River, from an 18-mile dredging and channelization project. In the 1990's, as members of the Thumb Bioregional Alliance, we opposed development of the roughly 800-acre Wingford Estate along the Black River in the middle of the Port Huron State Game Area, and supported the State of Michigan in protecting the Minden Bog, the upper headwaters of the Black River in Sanilac County, from an expansion of peat mining. Most of the TLC board members were involved in the Painted Trillium Tours in Saint Clair County from 2001 through 2004 and worked to acquire the MNA Sharon Rose Leonatti Memorial Nature Sanctuary in Kimball Township. Bill and Cheryl Collins co-founded the Macomb Land Conservancy in 2000, which merged with the Oakland Land Conservancy to become Six Rivers Land Conservancy. They monitored Michigan Threatened Pitcher's Thistle in Huron County in the late 1990's. As Huron Ecologic since 1998, Bill and Cheryl have defended natural areas across the Thumb on behalf of several citizen groups through the enforcement of State and federal environmental regulations.

In most cases, land that we fought to protect never became available for acquisition. However, we sometimes got to a point where we needed the help of a land conservancy. Lack of a conservancy dedicated to the Thumb proved to be a problem. While a few conservancies based outside the region could acquire land in our area, we have found a general lack of interest as they pursue acquisitions elsewhere. For some time, a local conservancy claimed to exist but never materialized. Finally in late 2007, with the potential of a land donation approaching, we decided it was time to form the TLC. Articles of Incorporation were filed with Michigan in October 2008 and the IRS confirmed the tax exempt status of the TLC in February 2009. Since late December 2008, the TLC has acquired three sanctuaries in Saint Clair County through donation.



# **Thumb Land Conservancy IRS Tax Exempt Confirmation**

INTERNAL REVENUE SERVICE  
P. O. BOX 2508  
CINCINNATI, OH 45201

DEPARTMENT OF THE TREASURY

Date: **FEB 26 2009**

THUMB LAND CONSERVANCY  
4975 MAPLE VALLEY RD  
MARLETTE, MI 48453-8348

Employer Identification Number:  
41-2247569  
DLN:  
17053358350038  
Contact Person:  
DEL TRIMBLE ID# 31309  
Contact Telephone Number:  
(877) 829-5500  
Accounting Period Ending:  
December 31  
Public Charity Status:  
170(b)(1)(A)(vi)  
Form 990 Required:  
Yes  
Effective Date of Exemption:  
October 29, 2008  
Contribution Deductibility:  
Yes  
Addendum Applies:  
No

Dear Applicant:

We are pleased to inform you that upon review of your application for tax exempt status we have determined that you are exempt from Federal income tax under section 501(c)(3) of the Internal Revenue Code. Contributions to you are deductible under section 170 of the Code. You are also qualified to receive tax deductible bequests, devises, transfers or gifts under section 2055, 2106 or 2522 of the Code. Because this letter could help resolve any questions regarding your exempt status, you should keep it in your permanent records.

Organizations exempt under section 501(c)(3) of the Code are further classified as either public charities or private foundations. We determined that you are a public charity under the Code section(s) listed in the heading of this letter.

Please see enclosed Publication 4221-PC, Compliance Guide for 501(c)(3) Public Charities, for some helpful information about your responsibilities as an exempt organization.

Letter 947 (DO/CG)



-2-

THUMB LAND CONSERVANCY

Sincerely,

A handwritten signature in dark ink, appearing to read "Robert Choi". The signature is fluid and cursive, with the first name "Robert" and last name "Choi" clearly distinguishable.

Robert Choi  
Director, Exempt Organizations  
Rulings and Agreements

Enclosures: Publication 4221-PC

Letter 947 (DO/CG)

# **Thumb Land Conservancy Articles of Incorporation**



**MICHIGAN DEPARTMENT OF LABOR & ECONOMIC GROWTH  
BUREAU OF COMMERCIAL SERVICES**

Date Received

(FOR BUREAU USE ONLY)

OCT 29 2008

Tran Info: 14361429-1 10/24/08

Chk#: 0199 Amt: \$20.00

ID: CHERYL COLLINS

This document is effective on the date filed, unless a subsequent effective date within 90 days after received date is stated in the document.

Administrator

BUREAU OF COMMERCIAL SERVICES

Name

Cheryl Collins

Address

4975 Maple Valley road

City

Marlette

State

Michigan

Zip Code

48453

EFFECTIVE DATE:

Document will be returned to the name and address you enter above.  
If left blank document will be mailed to the registered office.

**70398K****ARTICLES OF INCORPORATION****For use by Domestic Nonprofit Corporations**

(Please read information and instructions on the last page)

Pursuant to the provisions of Act 162, Public Acts of 1982, the undersigned corporation executes the following Articles:

**ARTICLE I**

The name of the corporation is:

Thumb Land Conservancy

**ARTICLE II**

The purpose or purposes for which the corporation is organized are:

To implement educational programs of natural history and conservation; Acquire, protect, and maintain natural areas and examples of flora and fauna in the Thumb region of Michigan and adjacent areas; and conduct activities as permitted by the Michigan Nonprofit Corporation Act

**ARTICLE III**

1. The corporation is organized upon a Nonstock basis,  
(Stock or Nonstock)

2. If organized on a stock basis, the total number of shares which the corporation has authority to issue is

\_\_\_\_\_. If the shares are, or are to be, divided into classes, the designation of each class, the number of shares in each class, and the relative rights, preferences and limitations of the shares of each class are as follows:

PK

page 1

**ARTICLE III (cont.)**

3. a. If organized on a nonstock basis, the description and value of its real property assets are: (if none, insert "none")  
none
- b. The description and value of its personal property assets are: (if none, insert "none")  
none
- c. The corporation is to be financed under the following general plan:  
grants, fundraising, donations, contributions, and gifts from the general public
- d. The corporation is organized on a Directorship basis.  
(Membership or Directorship)

**ARTICLE IV**

1. The address of the registered office is:  
4975 Maple Valley Road Marlette, Michigan 48453  
(StreetAddress) (City) (ZIP Code)
2. The mailing address of the registered office, if different than above:  
\_\_\_\_\_, Michigan \_\_\_\_\_  
(Street Address or P.O. Box) (City) (ZIP Code)
3. The name of the resident agent at the registered office is:  
Cheryl Collins

**ARTICLE V**

The name(s) and address(es) of the incorporator(s) is (are) as follows:

Name	Residence or Business Address
William Collins	4975 Maple Valley Road, Marlette, MI 48453
Terry Gill	8168 N. Bricker Road, Greenwood, MI 48006
Traci Brown	1707 Whipple Street, Port Huron, MI 48060
Dan Rhein	1327 20th Street, Port Huron, MI 48060



Use space below for additional Articles or for continuation of previous Articles. Please identify any Article being continued or added. Attach additional pages if needed.

#### ARTICLE VI - EXEMPTION REQUIREMENTS

At all times the following shall operate as conditions restricting the operations and activities of the corporation:

1. No part of the net earnings of the organization shall inure to the benefit of, or be distributable to its members, trustees, officers, or other private persons, except that organization shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purpose set forth in the purpose clause hereof.
2. No substantial part of the activities of the corporation shall constitute the carrying on of propaganda or otherwise attempting to influence legislation, or any initiative or referendum before the public, and the corporation shall not participate in, or intervene in (including by publication or distribution of statements), any political campaign on behalf of, or in opposition to, any candidate for public office.
3. Notwithstanding any other provisions of this document, the organization shall not carry on any other activities not permitted to be carried on by an organization exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code or corresponding section of any future tax code, or by an organization, contributions to which are deductible under section 170(c)(2) of the Internal Revenue code, or corresponding section of any future tax code.

#### ARTICLE VII - BOARD OF DIRECTORS

The management of the affairs of the corporation shall be vested in a board of directors, as defined by the corporation's bylaws. No director shall have any right, title, or interest in or to any property of the corporation. the number of directors constituting the initial board of directors is four (4); their names and addresses are as follow:

William Collins, 4975 Maple Valley Road, Marlette, MI 48453  
Terry Gill, 8168 N. Bricker road, Greenwood, MI 48006  
Traci Brown, 1707 Whipple Street, Port Huron, MI 48060  
Daniel Rhein, 1327 20th Street, Port Huron, MI 48060

I, (We), the incorporator(s) sign my (our) name(s) this 18th day of September, 2008.

Traci Brown

Terry A. Diez

William C. Collins

Daniel G Rhein

CONTINUATION SHEET

ARTICLE VII — BOARD OF DIRECTORS, continued

Members of the initial board of directors shall serve until the first annual meeting, at which their successors will be duly elected and qualified, or removed as provided in the bylaws.

ARTICLE VIII — PERSONAL LIABILITY

No member, officer, or director of this corporation shall be personally liable for the debts or obligations of this corporation of any nature whatsoever, nor shall any of the property of the members, officers, or directors be subject to the payment of the debts or obligations of this corporation.

ARTICLE IX - DURATION/DISSOLUTION

The duration of the corporate existence shall be perpetual until dissolution. Upon the dissolution of the organization, assets of the corporation shall be distributed for one or more exempt purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code, or corresponding section of any future federal tax code, or shall be distributed to the federal government, or to a state or local government, for a public purpose.

ARTICLE X - INCORPORATORS In witness whereof, we, the undersigned, have hereunto subscribed our names for the purpose of forming the corporation under the laws of the State of Michigan and certify we executed these Articles of Incorporation this September 18 of 2008.

Trace Brown  
Signature (Incorporator 1)  
1707 Whipple Port Huron, MI 48060  
Address, City, State, Zipcode

Terry A. Gile  
Signature (Incorporator 2)  
8168 Bricker Rd Greenwood, MI 48006  
Address, City, State, Zipcode

William C. Collins  
Signature (Incorporator 3)  
4975 Maple Valley Road, Marlette, Michigan 48453  
Address, City, State, Zipcode

Daniel & Rhein 1327 20th St Port Huron, MI 48060  
Signature (Incorporator 4)  
Address, City, State, Zipcode



# **Thumb Land Conservancy Bylaws**

# **BYLAWS OF THUMB LAND CONSERVANCY**

## **ARTICLE 1 - NAME**

Section 1: The name of the organization shall be Thumb Land Conservancy. It shall be a nonprofit organization incorporated under the laws of the State of Michigan.

## **ARTICLE 2 - PURPOSE**

Section 1: Thumb Land Conservancy is organized exclusively for charitable, scientific and education purposes that will benefit the citizens of the State of Michigan. These purposes include:  
To preserve natural areas through negotiation, acquisition, obtaining conservation easements and/or securing development rights;  
To educate the public on the importance of maintaining natural areas for environmental protection, wildlife habitat, and for enhancing the quality of life of area residents;  
And, overall, to promote, preserve, and maintain our resources for the benefit of present and future generations.

## **ARTICLE 3 - MEMBERSHIP**

Section 1: Membership shall consist of the Board of Directors

Section 2: The Board shall have the authority to establish and define nonvoting categories of membership.

## **ARTICLE 4 - BOARD OF DIRECTORS**

Section 1: The Board is responsible for the overall policy, direction of the association property and business of this non-profit charitable corporation shall be managed by the Board of Directors. The Board may have up to seven members but not fewer than four. The Board receives no compensation other than reasonable expenses.

Section 2: Two founding members shall serve a one-year term and two founding members shall serve two-year terms. Thereafter, terms of office shall be for two-years.

Section 3: If for any reason the position of any Director becomes vacant, nominations for new members may be received from present Board members by the Secretary two weeks in advance of a Board meeting. These nominations shall be sent out to Board members with the regular Board meeting announcement, to be voted upon at the next Board meeting. These vacancies will be filled only to the end of the particular Board member's term.

Section 4: During the last quarter of each fiscal year of the corporation, the Board of Directors shall elect Directors to replace those whose terms will expire at the end of the fiscal year. This election shall take place during an annual meeting of the Board of Directors, called in accordance with the provisions of these bylaws.



Section 5: **Election Procedures**

New directors shall be elected by a majority of directors present at such meeting, provided there is a quorum. Directors so elected shall serve a term beginning on the first day of the next fiscal year.

Section 6: **Quorum**

For the purpose of doing business, a quorum shall constitute a majority of Board members.

Section 7: **Meetings, Special Meetings and Notice**

The Board shall meet at least quarterly, at an agreed upon time and place. An official Board meeting requires that each Board member have either written notice at least 10 days in advance unless it is a Special Meeting. Directors may participate in an official meeting by conference call if they are not able to attend in person.

Special Meetings may be called by either the President or three Board members.

Any action by the Directors may be taken without a meeting if all directors thereto give consent and filed by the Secretary in the permanent record of the Board. Verbal consent or electronic mail shall be considered a valid form of written consent for this purpose. Such consent must be reaffirmed at the next meeting of the Board.

The Annual meeting shall be held in the second quarter of the fiscal year at a time and place determined by the Board.

Section 8: **Resignation, Termination, and Absences of Director**

Resignation from the Board must be in writing and received by the secretary. A Director may be dismissed from office by the Board of Directors if three consecutive Board meetings are missed without due cause. The removal of a Director requires a three-fourths vote of the remaining Directors.

## **ARTICLE 5 - DUTIES OF DIRECTORS**

Section 1: **Officers and Duties**

Officers shall be elected annually by the Board of Directors and shall include President, Vice-President, Secretary and Treasurer. All officers shall have a vote on the Board of Directors.

Section 2: **President**

The President shall preside at meetings, work with committees, coordinate strategies of action for the Board to consider, set the agenda for the next board meeting, and represent the Conservancy at public functions, land negotiations, etcetera unless otherwise delegated.

Section 3: **Vice President**

The Vice-President shall assist in the duties of the President and preside in his/her absence.

Section 4: **Secretary**

The Secretary shall be responsible for keeping of records of Board actions, including overseeing the taking of minutes at all Board meetings, sending out meeting announcements, distributing copies of minutes and the agenda to each Board member, and assuring that corporate records are maintained. The Secretary may sign in the name of the corporation for those instances required by law or by position.

Section 5: **Treasurer**

The Treasurer shall make a report at each Board meeting. The Treasurer shall chair the finance committee, assist in the preparation of the budget, help develop fundraising plans, keep track of all assets of the Conservancy, keep a record of all receipts and expenditures and make financial information available to Board members and the public.

Section 6: **Other Positions**

The Board of Directors may establish other officer positions as deemed necessary.

## **ARTICLE 6 - FISCAL YEAR**

Section 1: **Fiscal Year**

The fiscal year shall be the calendar year.

## **ARTICLE 7 - COMMITTEES**

Section 1: **Committee Formation**

The Board may establish committees as needed. Volunteers for committees shall be sought from the general public. Committees shall elect Chairpersons and make recommendations to the Board of Directors.

Section 2: **Executive Committee**

The four officers serve as the members of the Executive Committee. The Executive Committee may meet periodically and discuss recommendations that will be presented to the full Board at either the next regular meeting or special meeting.

Section 3: **Finance Committee**

The treasurer is the chair of the Finance Committee which includes three other Board members. The Finance Committee is responsible for developing and reviewing fiscal procedures, fundraising plan, and annual budget with other Board members. The Board must approve the budget and all expenditures must be within budget. Any major change in the budget must be approved by the Board. Annual reports are required to be submitted to the Board showing income, expenditures, and pending income. The financial records of the organization are public information and shall be made available to Board members and the public.



## **ARTICLE 8 - BENEFIT**

### **Section 1: Benefit**

No part of the earnings of the corporation shall inure to the benefit of, or be distributable to its members, directors, officers, or other private persons, except that the corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth in Article 2 hereof. No substantial part of the activities of the corporation shall be carrying on propaganda, or otherwise attempting to influence legislation, and the corporation shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office. Notwithstanding any other provisions of these articles, this corporation shall not, except to an insubstantial degree, engage in any activities or exercise any powers that are not in furtherance of the purposes of this corporation.

## **ARTICLE 9 - AMENDMENTS**

### **Section 1: Amendments**

These bylaws may be amended when necessary by two-thirds of the board of directors.

## **ARTICLE 10 - PROPERTY HOLDINGS**

### **Section 1: Holdings**

It will be the policy of the Thumb Land Conservancy not to sell their land once it has been acquired.

## **ARTICLE 11 - DISSOLUTION**

### **Section 1: Dissolution**

In the event of dissolution, all debts and liabilities shall first be paid according to their respective priorities. Any remaining assets shall be contributed to a similar non-profit charitable organization which is exempt from income taxes under Section 501(c) 3 of the Internal Revenue Code.

## **CERTIFICATION**

These bylaws were approved at a meeting of the board of directors by a two-thirds majority vote on

Secretary: 

Date: 11-15-08