



**RECA** AUTHORITY  
TRAVERSE CITY / GARFIELD TOWNSHIP

# **Hickory Meadows Management Plan**

**Updated and Adopted June 1, 2022**

## **Mission Statement**

To provide open space for passive public recreation while protecting natural areas, wildlife habitat, and scenic views in perpetuity.

## **Objectives**

1. To improve, expand and develop opportunities for passive public recreation.
2. To protect and improve natural areas and wildlife habitat.
3. To preserve scenic views and open spaces.

## **Management Recommendation Summary**

This document lays out a general plan for achieving the mission stated above.

Management of Hickory Meadows will be focused on providing passive public recreation opportunities and protecting natural areas and wildlife habitat. To this end, management activities will be directed toward supporting user amenities and activities and maintaining and improving the integrity of natural features within the property. Annual work plans and budgets will be created and approved to address specific management tasks needed on the property.

## **Hickory Meadows**

Hickory Meadows is a 112-acre parcel adjacent to the city-owned Hickory Hills (HH) ski area. Passage of a 2004 bond proposal by voters in Traverse City and Garfield Township allowed the Recreational Authority to acquire Hickory Meadows. Purchase of this property protected the area from private development and preserved it as a popular destination for hiking, snowshoeing, skiing, bird watching and other passive recreational pursuits. A brief history of the Hickory Meadows property can be found in Appendix 1. The millage proposals passed in 2004 and 2020 provide the guiding principles for the acquisition and continued operation and preservation of Hickory Meadows, and the language from the proposals is also included in Appendix 1.

## **Administration**

### **Governing Body**

Hickory Meadows is governed by The City of Traverse City and the Charter Township of Garfield Recreational Authority. The Recreational Authority retains control of all management and budgeting decisions for Hickory Meadows.

### Hickory Meadows Advisory Committee (HMAC)

The Recreational Authority Board authorized the creation of a seven-member citizen advisory committee in 2005. The HMAC makes management recommendations to the Recreational Authority for final approval. The Recreational Authority Board appoints members of the HMAC for staggered two-year terms, and reviews new appointments on an annual basis. The Executive Director of the Recreational Authority and a representative of the Grand Traverse Conservation District support the work of the HMAC.

### Property Management

A property manager appointed by the Recreational Authority shall perform or oversee all maintenance required at Hickory Meadows. This person or entity shall prepare a quarterly maintenance report for submission to the advisory committee and the Recreational Authority Board.

The Grand Traverse Conservation District (GTCD) has been contracted to serve as the property manager since 2006. GTCD provides professional and technical services to implement an annual work plan for the management of Hickory Meadows. A scope of services for the GTCD is provided in Appendix 2.

### Rules at Hickory Meadows

1. Camping and fires are prohibited at Hickory Meadows.
2. All trail users must stay on designated improved trails, and must respect any special access restrictions.
3. Off-road or other motorized vehicles shall be prohibited in Hickory Meadows except for directly authorized management purposes.
4. Dogs are permitted within Hickory Meadows, but must be kept on leash in accordance with State and local laws. Pet owners are required to clean up after their pets.
5. Hunting and trapping are not allowed on the property. Fishing is allowed in accordance with Michigan Department of Natural Resources regulations.
6. No plants or other specimens are to be removed from Hickory Meadows unless authorized by management.
7. Littering is strictly forbidden. This includes dumping of yard waste, household trash and abandoning animal waste bags along trails.
8. No person shall damage, deface, or destroy any property or features within Hickory Meadows.
9. Glass containers and alcoholic beverages are prohibited at Hickory Meadows.
10. Fireworks, horse-riding and paintball are prohibited at Hickory Meadows.
11. Drone use must be approved in writing by the Recreational Authority.

## Enforcement

The rules for Hickory Meadows should be approved by the advisory committee and submitted to the Recreational Authority for adoption into local ordinance by the appropriate entity. The Recreational Authority may also wish to pursue a liaison with a local law enforcement agency.

## Emergency Access

Emergency vehicle access to Hickory Meadows is provided at the gated entries off of Randolph Street, Wayne Street, and M-72. Emergency service agencies shall be provided with a key or combination to any locked gates on the property.

## **Recreation Management**

### User Groups

The grounds and trails of Hickory Meadows are intended to provide for those activities that are considered as “passive recreation.” Passive recreational activities such as hiking and cross country skiing have minimal negative impact on the environment, and hence are highly compatible with natural resource protection. In contrast, active recreational activities would require major developments such as soccer and baseball fields, which are inconsistent with the objectives of Hickory Meadows. Hickory Meadows will accommodate many low-impact users, including but not limited to:

- Hikers
- Nature Enthusiasts
- Trail Runners
- Dog Owners
- Mountain Bikers
- Cross Country Skiers

No fees will be assessed to individual users of Hickory Meadows, however donations may be considered in the future. Fees may be charged for approved, commercial or organized group use of the property (see section on Group Use below).

In order to ensure that user needs are being met, it is important that the managers of Hickory Meadows stay abreast of the numbers and types of users on the property. To this end, in October of 2017, trail counters were installed at the three main trailheads – end of Randolph Street, Wayne Street, and M-72 – to better assess the amount and patterns of use at Hickory Meadows. Two additional trail counters were installed in January of 2020 to account for newly created access points from the Hickory Hills parking area post-infrastructure developments and the M-72 loop trail established in 2019. Data from each of these trail counters are collected on a monthly basis and incorporated into management reports to the Recreational Authority.

At the recommendation of the advisory committee, user surveys were distributed and collected at each of the three main trailheads via temporary survey boxes from November of 2017

through November of 2019 to better understand current and desired usage at Hickory Meadows. This occurred while Hickory Hills infrastructure developments were in progress. An analysis of survey results from 2018 through April of 2019 was prepared by CS Research & Consulting, LLC (see Appendix 3). It may prove beneficial to follow up with additional user surveys to better assess the desire/need for more specific future planning efforts.

### Current Trail System

The current trail system is well established and winds through most of the cover types present on the property, including open meadows, former red pine plantations and regenerated woodlands. The property contains approximately three (3) miles of established / maintained trails, including a crushed-gravel ADA-compliant trail which was fully established in 2015. See Appendix 4 for a map of the trail system.

Unauthorized social trails exist in numerous parts of the property, some of which potentially impact on sensitive natural areas or are prone to erosion. The manager of Hickory Meadows should endeavor to block any current or new 'social' trails that become established through frequent visitor use, thereby discouraging use and allowing rehabilitation of the affected areas.

### Trail Design

Trail development in Hickory Meadows should be consistent with the guiding principles for the property as spelled out in the ballot language for the 2004 millage that supported the park's acquisition (Appendix 1). Trails should be designed to avoid ecologically sensitive areas (e.g., creeks, wetlands), minimize removal of canopy trees and negative impacts on the environment as a whole, and provide a safe and satisfying user experience. Trail surfaces and routes should be sustainably designed, thereby limiting erosion and reducing maintenance requirements. Erosion issues should be addressed by the property manager as appropriate, with an aim to provide longer-term, sustainable solutions. Trail footprints should generally be limited to maintain the natural, backcountry feel, particularly in forested areas of the property. Connecting loops should be developed, where feasible, to provide a more diverse and enjoyable user experience. Accessible trails with improved surfaces should be considered to make the property more accessible to people with limited mobility.

### Trailheads & Parking

Parking for Hickory Meadows users is available at the following locations

1. Randolph Street Trailhead parking at the southwest corner of the property (parking is not permitted along the shoulder of Randolph Street), and in the adjacent, paved Hickory Hills Ski Area parking lot.
2. At the barn on M-72 on the north end of the property.

Each trailhead/parking area shall have trash receptacles as well as an information station/kiosk and dog waste bag dispenser.

### Restrooms and Other Facilities

As of 2019, Hickory Hills Ski Area has built restroom facilities at the Lodge that are accessible to Hickory Meadows users during normal park hours. At this time, it is recommended that no permanent restroom facilities be installed at Hickory Meadows. Portable facilities may be used for special events with the Recreational Authority's permission.

### Future Trail System

In 2021 a new trail was approved by the Recreational Authority to connect the M-72 spur trail to the West Meadow via the forested area on the northwest side of the property. The new trail will provide boardwalk crossings across sensitive wetland areas and a small creek, with an aim to provide a positive user experience while reducing the negative impact of existing social trails in the area. The trail is expected to be completed in Spring 2022. In future, this trail may provide a connection to Hickory Hills and ultimately through to the recently (2022) acquired 75-acre Hickory Forest property, immediately to the west of Hickory Hills.

Future trail construction should primarily focus on inter-park connections and/or to enhance the experience or safety of the public. In all cases, new trails should honor the Hickory Meadows management objectives and follow the guidelines highlighted under the Trail Design section.

### Future Property Acquisitions and Trail Considerations

Efforts should be made to acquire adjacent, undeveloped properties from willing landowners. Opportunities for recreation would be increased if a trail corridor existed between Hickory Meadows and the Commons Natural Area or TART/Leelanau trails; several parcels of land or trail easements would need to be acquired to accomplish this.

### Recommendations on Recreation Management

- Continue to encourage four-season, multi-use recreational opportunities on established trails for all users, including youth-focused groups, while ensuring sustainability and ecological integrity of the property.
- Permit organized events (on a case-by-case basis) with Recreational Authority approval (see section on Group Use below).
- Continue winter grooming to encourage nordic skiing, walking, snowshoeing, etc. while monitoring user feedback.
- Actively discourage the development and continued use of 'social' trails in undeveloped areas to preserve sensitive natural features, including wildlife habitat, wetlands, and forests.

- Work with community partners to investigate acquisition of additional parcels or seek easements (e.g., along M-72) to facilitate connections to the Commons and/or TART trails.

## **Forest Management**

### **Management Unit Review**

To effectively explain forest management recommendations within Hickory Meadows, the land was broken into 28 management units. These units are based on the results of a floristic inventory performed on the property in 2006 (see Appendix 5). The units were broken into five categories based on vegetation. The categories are: wetland, meadow, mesic northern forest, forest regeneration, and pine plantation. A map of the management units can be found at the end of this document. The units, for the most part, do not require active management. Most management activities will be focused along trail corridors.

### **Natural Communities**

The natural communities at Hickory Meadows consist of emergent wetlands, Mesic Northern Forests, and areas of forest regeneration (successive regeneration). These communities occur in isolated areas throughout the Hickory Meadows property.

### **Artificial Communities**

Artificial communities at Hickory Meadows include three pine plantations and three meadows. These communities are the result of agricultural activities that had been practiced on the property for many years.

### **Special Concern Plant Species**

Based on criteria developed by the Michigan Department of Natural Resources Natural Features Inventory (Herman et. al., 2001), three noteworthy species – *Castanea dentata* (American chestnut), *Conopholis americana*, (American cancer-root), and *Salix candida* (Hoary willow) – were found within the Hickory Meadows property as part of the 2006 Floristic and Natural Features Inventory. One of these three, the American chestnut (*Castanea dentata*), is listed as a state-level endangered species within the state of Michigan by the MNFI. It is worth noting that an additional plant species with a high coefficient of conservatism value, *Pedicularis canadensis* (Canadian wood betony), was identified on the property in 2021.

### **Timber Harvesting**

Timber harvesting for monetary gain is not recommended for Hickory Meadows. Harvesting for uses within the property (e.g., fencing, erosion cribs, etc.) may be considered with the approval of the Recreational Authority. The manager should be permitted to harvest trees in order to keep the integrity of the forest from deteriorating (e.g., non-native/invasive species) or if the

safety of visitors is in question. This applies primarily to the removal of dead trees along trails which are assessed to pose a hazard. Dead trees (standing and fallen) are important to the ecological health of the natural area and should be retained if not deemed hazardous.

### Insect and Disease Control

Damage from insects and diseases can be extremely serious to the health of a forest. The manager should monitor for new insect or disease damage. A few of the insects and diseases that are or could become possible problems within Hickory Meadows are listed here:

#### Insects:

- Spongy Moth (*Lymantria dispar*) – An exotic from Europe, the spongy moth is the main defoliator of forests in the Northeastern U.S.
- Spotted Lanternfly (*Lycorma delicatula*) – Not yet found in Michigan, but a species of concern, already invasive in the Eastern U.S. This pest could cause significant damage to shrubs and trees.
- Hemlock Woolly Adelgid – HWA is an insect of the order Hemiptera native to East Asia. It feeds by sucking sap from hemlock and spruce trees. It has been slowly spreading northwards along the western side of Michigan.
- Asian Longhorn Beetle (*Anoplophora glabripennis*) – A destructive wood-boring pest of maple and other hardwoods that has been reported in Ohio, Illinois, and New York.
- Emerald Ash Borer (*Agrilus planipennis*) – An exotic beetle that feeds on and kills ash trees. Virtually all of the mature ash trees in Hickory Meadows have died as a result of this pest, and it is uncertain whether young ash trees in the park will demonstrate resistance to this pest.

#### Diseases:

- Oak Wilt – This disease kills thousands of oaks each year in the Eastern U.S. The disease, once established, spreads to other oaks mostly through contact with infected trees' roots. This is especially relevant in Hickory Meadows because its sandy soils are more conducive to this type of spread.
- Beech bark disease – This disease causes mortality and defects in beech trees. In North America, the disease occurs after extensive bark invasion by *Xylococculus betulae* and the beech scale insect, *Cryptococcus fagisuga*.
- Thousand Cankers Black Walnut disease – Spread by the walnut twig beetle, possibly through transportation of logs and firewood, this fungal disease is particularly lethal to black walnut (*Juglans nigra*). The disease has been reported in Ohio and Indiana.

### Non-Native Plant Control

Where practical the property manager should remove non-native and invasive species. Plans to remove such species should be included as part of the annual work plan approved by the



Recreational Authority.

The species of most concern at Hickory Meadows are Japanese honeysuckle, Japanese barberry, oriental bittersweet, autumn olive, black locust, and garlic mustard. While there are significant amounts of these species established in Hickory Meadows, progress is being made to remove them over time. In addition to those mentioned above, the Northwest Michigan Invasive Species Network maintains a list of their top 12 invasive species to watch for and report in Northern Michigan (see Appendix 6).

### **Wildlife Management**

A comprehensive wildlife inventory has not been performed on the Hickory Meadows property. A comprehensive wildlife survey should be considered to identify any “endangered” or “special concern” species. Once finished, the management plan may be adjusted if necessary.

The feeding of wildlife on the property should be discouraged.

### **Hunting and Trapping**

Hunting, trapping, or removal of any wildlife (except fishing) is strictly forbidden within Hickory Meadows. However, the removal of wildlife may be used as a tool for management purposes if other avenues are cost prohibitive or otherwise not practical.

Note: Certain species such as deer and beaver can degrade habitat and recreational opportunities if populations become too large.

### **Special Concern Species**

There are no “endangered” or “special concern” animal species known to reside on the Hickory Meadows property. However, the Hickory Meadows property includes habitat suitable for several of these species.

### **Watershed Management**

#### **Surface Water**

There are several surface water features on the Hickory Meadows property, including an emergent wetland in the northern portion of the property that feeds a small, ephemeral stream, which flows from northwest to southeast across the property. Restoration of impaired or altered sections of these ecologically sensitive areas may be considered in future restoration efforts. Trails and other recreational resources should be planned and maintained in such a way that minimizes impacts to these water features.

Hickory Meadows stormwater management is important, as high rainfall events have caused severe erosion of the ADA trail in the past. The Hickory Meadows stormwater map, including key infrastructure improvement and ongoing maintenance activities, is provided in Appendix 7.

### Fishing

Fishing is permitted within Hickory Meadows, and must be conducted according to all State and DNR rules and regulations. Introducing fish into any water bodies in Hickory Meadows is not recommended at this time.

### Erosion

Erosion caused by human activities and the introduction of excess sediment to water bodies is the primary threat to surface waters at Hickory Meadows. An established trail system with appropriate surfaces will minimize erosion caused by foot or bike traffic. Constructing boardwalks and bridges will also minimize stream bank damage and sediment delivery by protecting stream-crossing points on the trail system.

### Adjacent Lands Impact

The water features at Hickory Meadows may also be impacted by land use or management changes on lands adjacent to the property. The advisory committee and the Recreational Authority should work closely with adjacent landowners, including the City-owned Hickory Hills property, to minimize negative impacts from these lands.

## **Education/Interpretation**

### Signs

- Informational Signs: Trails should be clearly marked to provide a safe and comfortable atmosphere for the visitor; international symbols should be used on signs. Any rules for Hickory Meadows should be clearly displayed at each parking area.
- Interpretive Signs: The HMAAC, in conjunction with the property manager (GTCD), shall recommend topics and placement for interpretive signage.

As a general rule, signage should be limited to parking areas and trailheads. Notable exceptions include wayfinding, trail identification, and maintenance/safety-related signage.

### Trailhead Kiosks

Trailhead kiosks or info stations will be an important aspect of the trail system. They are what the visitor will encounter upon arrival and the last thing they see as they leave. This unique situation presents an opportunity to not only orient the visitor through the use of trail maps, but to educate them on management practices, trail conditions, trail etiquette, park rules, and relevant contact information.

## Group Use

Group use will be welcomed at Hickory Meadows. Organized groups must complete an application form and secure approval from the Recreational Authority (and Garfield Township for groups larger than 300 participants). [Rec Authority Land Use Form](#)

## Research

Research regarding the natural and recreational qualities of Hickory Meadows should be encouraged, including community science activities (e.g., iNaturalist provides a way to gather community observations of flora and fauna in Hickory Meadows, including sensitive species and invasives). The advisory committee shall review and make recommendations to the Recreational Authority for prior approval of all research projects. This research should be beneficial to the ongoing management and improvement of the Hickory Meadows property.

## **Cooperation Between Hickory Meadows and Hickory Hills Properties**

### Benefits of cooperation:

The continuing, cooperative partnership between the Recreational Authority and Traverse City Parks and Recreation will help ensure that recreational opportunities and management efficiencies are maximized between Hickory Meadows (HM), Hickory Hills (HH), and in the future, Hickory Forest, in the best interest of area residents and visitors, respecting the different management plans and user groups of each.

### Existing examples of cooperation between the parks:

- Creation of drainage field for HH on HM property
- HH restrooms accessible to HM users during park hours
- Agreement with HH to take point on stormwater remediation
- Winter trail grooming of both parks utilizing HH equipment to encourage multi-use activities
- Regular quarterly meetings between Traverse City Parks & Recreation and Recreational Authority leadership

### Areas for further cooperation / consideration:

- Joint approach to new wayfinding signage for HM and HH
- Opportunities to sustainably connect trail systems
- Buffer plantings between HH and HM along shared fence line
- Summer mowing
- Future trail or recreational development within both parks utilizing watershed/wetlands protection experts prior to development
- Invasive species management and habitat restoration

### **Hickory Meadows Property History**

The Hickory Meadows property originally contained upland forest and wooded swamp wetlands before European settlement. The vegetation was un-spoiled until the mid-1800s when settlers began clearing the land. This clearing consisted of logging, subsequent burning of slash and stump removal. Logging occurred in all areas of the property with any tree species of several inches in diameter or larger being harvested. This harvest included the removal of all trees in areas with level topography (in preparation of agriculture) and most trees on sloped grades. Following this period of logging, the non-sloping areas were extensively used for traditional agriculture, which included grazing, crop cultivation, and orchard establishment. This led to, along with the removal of forest cover, erosion and depletion of topsoil that in many areas can still be seen to this day. In addition, limited logging of some secondary-growth forest trees has occurred - most notably in the mesic hardwood forest areas.

Interpretation of aerial photographs and Plat maps show farmstead homes present as early as 1905. Historical records for Grand Traverse County show the land, which includes the present-day Hickory Meadows property, was owned by several individuals. Plat maps from 1905 show that a T. A. Hitchcock owned a large parcel that included the lower half of the Hickory Meadows property (though only that portion which is found in present-day Garfield Township). The northern half of the Hickory Meadows property was contained in a parcel owned by the Cherry Valley Fruit farm (Charles Manville-owner). The portion of the present-day property, located within the current Traverse City limits, was owned (in 1905), separately, by G. W. McWethey, G. Pubus, and Anna Koening. Aerial photograph interpretation reveals that the property has been used for agriculture until its recent purchase. Aerial photos from 1938, 1952, and 1971 all show the presence of orchards in various and changing locations within the presently defined oldfield areas. In addition, stream channelization appears in photos from 1971 and the artificially constructed cattail marsh area (designated as W6) is not present on the 1938 photo though it does appear in the 1952 and subsequent photos. Finally, vegetative cover has returned to many areas since the 1980s. LaCross, 2006

### **Property Acquisition**

In February of 2004 the Grand Traverse Regional Land Conservancy acquired an option from G.D.O. Investments for the Hickory Meadows property. As part of the option G.D.O. Investments reserved a 25-year right to grow and harvest hay on the property in locations historically used for this purpose. However, agricultural use is subordinate to public recreation.

In November of 2004 an Open Space and Natural Area Preservation Bond Proposal was passed by voters in Traverse City. This allowed the Recreational Authority to execute the option and acquire Hickory Meadows for public recreation. The ballot language is provided below:

## OPEN SPACE AND NATURAL AREA PRESERVATION BOND PROPOSAL (November 2004)

*This proposal will allow the Recreational Authority of Traverse City and Garfield Township to purchase and improve land to preserve open space and scenic views of the Bay and protect wildlife habitat and natural areas. Properties to be purchased include the West Bay Waterfront property, the Barns at the Commons, and the property next to Hickory Hills. State law requires an annual independent audit of the Recreational Authority. This proposal, if approved by the voters, will only be effective if both it and the Open Space and Natural Areas Millage Proposal pass.*

Shall the City of Traverse City and Charter Township of Garfield Recreational Authority, formed by the City of Traverse City and Charter Township of Garfield, borrow the sum of not to exceed Six Million Six Hundred Fifty Thousand Dollars (\$6,650,000) and issue its general obligation unlimited tax bond for all or a portion of that amount, payable in not to exceed twenty (20) years from date of issuance, for the purpose of open space and scenic view preservation and wildlife habitat and natural areas protection by purchasing and improving land for public parks, including West Bay waterfront property, the Barns at the Commons, and the property next to Hickory Hills? The estimated millage to be levied in 2004 is .27 mill (\$0.27 per \$1,000 of taxable value). This is expected to result in an increase of \$13.50 in the tax levied on property valued at \$100,000 for a period of 20 years.

## OPEN SPACE AND NATURAL AREA MILLAGE PROPOSAL (November 2004)

*This proposal will allow the Recreational Authority of Traverse City and Garfield Township to maintain natural areas, wildlife habitat, public parks, and open space. This proposal would levy a property tax of up to 0.1 mill that would cost the owner of a home with a value of \$100,000 \$5.00 per year. State law requires an annual independent audit of the Recreational Authority. This proposal, if approved by the voters, will only be effective if both it and the Open Space and Natural Area Preservation Bond Proposal pass.*

Shall the limitation on the amount of taxes which may be imposed on taxable property in the City of Traverse City and Charter Township of Garfield Recreational Authority, be increased by up to 0.1 mill (\$0.10 per \$1,000 of taxable value) for a period of twenty (20) years, as a new millage for the purpose of protecting natural areas, wildlife habitat and open space by acquiring, maintaining and improving public parks? It is estimated that 0.1 mill will raise approximately \$125,000 when first levied in 2004.

In November of 2020 an Open Space and Natural Area Millage Proposal was passed by voters in Grand Traverse County. This millage allows the Recreational Authority to continue to preserve and maintain opportunities for public recreation at the Historic Barns Park, Hickory Meadows, and the West Bay Waterfront for the next 20 years, as well as providing funds to pursue acquisition of a new public park area adjacent to Hickory Hills and nearby to Hickory Meadows (aka Hickory Forest). The ballot language is provided below:

CITY OF TRAVERSE CITY AND CHARTER TOWNSHIP OF GARFIELD RECREATIONAL AUTHORITY MILLAGE PROPOSAL (November 2020)

*This proposal will allow a new millage for the City of Traverse City and Charter Township of Garfield Recreational Authority to protect the water quality of rivers, creeks, lakes, and bays, protect wildlife habitat, protect natural woodlands and forests, preserve environmentally sensitive lands, and provide opportunities for children and families to enjoy the outdoors by continuing its operations at the Historic Barns Park, Hickory Meadows, and the West Bay Waterfront along with continued historic preservation of the Historic Barns Park for the next 20 years as well as acquiring a new property adjoining Hickory Hills to expand the public park area near Hickory Meadows. State law requires an annual independent audit of the Recreational Authority.*

For the purpose of providing funds for the continued acquisition, construction, operations, maintenance, and improvement of public parks by the City of Traverse City and Charter Township of Garfield Recreational Authority (the "Authority") at an increased millage level, shall the tax limitation on general ad valorem taxes within the territory of the Authority that may be assessed in one (1) year upon all property within the Charter Township of Garfield and the City of Traverse City, Michigan, be increased and shall the Authority be authorized to levy, up to 0.30 mills (\$0.30 per \$1,000 of Taxable Value) as a new, additional millage for a period of 20 years, 2020 through 2039 inclusive? If approved and levied in full, this millage will raise an estimated \$644,000 in the first calendar year of the levy based on taxable value.

As required by law, a small portion of this millage must be distributed to other governmental units within Grand Traverse County that are entitled to receive a portion of this millage, which are the City of Traverse City Downtown Development Authority, Grand Traverse County Brownfield Redevelopment Authority, and Grand Traverse County Land Bank Authority.

## **Appendix 2: Scope of Services 2020-2023 for Hickory Meadows Manager**

The Grand Traverse Conservation District shall provide resource management services to the Recreational Authority. As such the District shall:

1. Oversee implementation of the Hickory Meadows Management Plan and with mutual agreement of the Recreational Authority and the District; assist with projects on other Recreational Authority owned quiet recreation parklands.
2. Develop and implement an annual Work Plan for Hickory Meadows. The Work Plan will be submitted to the Recreational Authority annually by the end of March. Projects identified in the Work Plan are dependent on funds provided by the Recreational Authority.
3. Regularly monitor activities at Hickory Meadows and coordinate routine inspections and maintenance of existing structures and trails; report any abuse or misuse to Recreational Authority.
  - (a) Monitor all trailheads at least weekly during the field season (May 1- September 30) and biweekly during non-field season.
  - (b) Inspect all structures and trails at least monthly looking for maintenance, structural, or safety concerns.
4. Develop, at minimum, one grant proposal during the duration of the agreement to fund a specific project at Hickory Meadows.
5. Obtain permits needed for the above activities.
6. Whenever possible, coordinate and utilize volunteers to accomplish work to garner greater community support, create better stewards of our environment, and to reduce labor costs.
7. The District shall coordinate, to the maximum possible extent, the acquisition of materials and the use of labor on projects at Hickory Meadows.
8. The District shall provide administrative and clerical support necessary to accomplish the above tasks.
9. The District shall regularly attend Recreational Authority meetings to provide monthly verbal reports of progress and written quarterly reports.
10. The District shall provide a final report and recommendations for program continuation to the Recreational Authority prior to March 31, 2023.
11. The District will not be responsible for any activities listed above that are not accomplished due to inability to obtain permits, or to lack of funding, labor availability, or other factors beyond the District's control.

**Appendix 3: User Survey Analysis by CS Research & Consulting, LLC**

Provide link to User Survey and Analysis document.



## Appendix 4: Hickory Meadows Trail Map

The current trail system south of the utility corridor primarily follows the perimeter of open meadows and through former red pine plantations. In 2018, a connection was created from the Upper Meadow adjacent to Randolph Street south to the gated maintenance access off Randolph Street. On that route, a lookout over the former quarry pit was also created. In 2019, a low-impact woodland trail was established through the hills from the M-72 Trailhead to East Meadow, thereby creating a loop opportunity north of the utility corridor. A crushed-gravel ADA-compliant trail was fully established in 2015.



**Appendix 5: 2006 Floristic & Natural Features Inventory (Final Report)**

Provide link to document: [HM\\_Floristic&NatFeaturesInv\\_LaCross\\_2006](#)

Appendix 6: NMISN Invasive Species Watch List



## Top 12 Invasive Species

There are many invasive species in northwest Michigan, both aquatic and terrestrial. ISN prioritizes them based on their habitat impact and management feasibility. The species featured on this list are the terrestrial plants that are already established in our region which are at a higher risk to harm our regional ecology. They are prioritized in messaging, outreach, and - when possible - control efforts by ISN and many of our partners.

Those with an \* by their name are illegal to move, trade, sell, or share in Michigan.



**Baby's Breath**  
*Gypsophila paniculata*



**Barberry, Japanese and common**  
*Berberis thunbergii*  
*Berberis vulgaris*



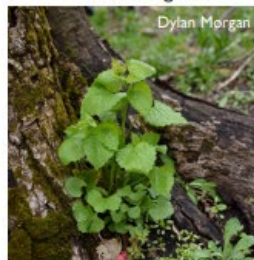
**Blue lyme grass**  
*Leymus arenarius*



**Buckthorn, glossy and common**  
*Frangula alnus*  
*Rhamnus cathartica*



**Callery pear (Bradford and Cleveland)**  
*Pyrus calleryana* varieties and hybrids



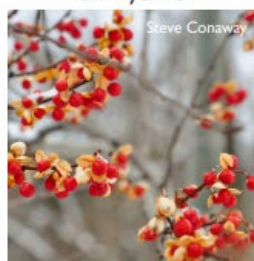
**Garlic mustard**  
*Aliaria petiolata*



**Invasive honeysuckles**  
Many, *Lonicera* spp.



**\*Knotweeds - Japanese, giant, and bohemian**  
*Reynoutria japonica*, *R. sachalinensis*, *R. x bohemica*



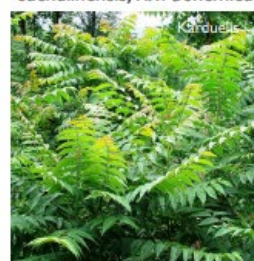
**Oriental bittersweet**  
*Celastrus orbiculatus*



**\*Invasive phragmites**  
*Phragmites australis*



**\*Purple loosestrife**  
*Lythrum salicaria*



**Tree-of-Heaven**  
*Ailanthus altissima*

To learn more about Early Detection Species and other invasives, please visit:  
[www.HabitatMatters.org](http://www.HabitatMatters.org)

# Hickory Stormwater Drainage

Revised 4/18/2022

