

Grand Traverse Bay Alliance

Natural Resources Protection Plan

Approved by Board
October 26, 2009
Approved by the Owner
January 19, 2010

Grand Traverse Bay Alliance Natural Resources Protection Plan

Contents

1. Plan Description & Guiding Principles	1
2. Introduction	1
3. User Inventory	3
4. Natural Features Inventory	6
5. Wildlife Management	6
6. Management Zones Definitions.....	7
7. Management Zone Goal Definitions	7
8. Shoreline buffer and West Bay near-shore bottomlands under lease	8
9. Creek and buffer	9
10. Wetlands and buffer	9
11. GTBA trail corridor.....	10
12. Occupied Cultural Zone	10
13. General BMPS.....	12
14. Restrictions, Compliance and Enforcement	13
15. Appendices	14

Process and Acknowledgements

The attached Natural Features Inventory and this plan were created over an eighteen-month period in 2008 and 2009. The Grand Traverse Bay Alliance worked in a facilitated consensus decision making process with Paula Sagala to draft the final plan.

Primary funding was provided by the Department of Environmental Quality through a Coastal Management Program grant. Additional financial support was provided by the property’s owner, Rotary Camps & Services, with the assistance of Rotary Charities.

Significant in-kind support was offered by the lead consultant, Grobbel Environmental & Planning Associates. Additional in-kind support was provided by the dedicated Board of the Grand Traverse Bay Alliance, as well as the staff of its member organizations.



1. Plan Description & Guiding Principles

a. Plan Description

A plan and management policies, adopted by the Board and approved by the Owner, to identify ways that the existing Natural Resources will be protected and enhanced, animal habitat maintained and improved, while accommodating and minimizing the impact from activities consistent with our mission.

b. Guiding Principles

- i. Set an example for the community for natural resource best management practices, creating natural resource stewardship educational opportunities.
- ii. Protect and enhance the integrity of aquatic and terrestrial ecosystems within the property.
- iii. Protect and improve the quality of water resources on and adjacent to the property.
- iv. To the maximum extent possible, capture and treat surface water runoff through low impact development techniques on the property.
- v. Promote native species and work to eradicate invasive species.
- vi. Provide or improve access for education, cultural and recreational opportunities.
- vii. Balance natural resources with human activity and facilities in a manner consistent with the mission and the best interests of the GTBA consistent with the Deed of Gift.
- viii. Use and management of the resource shall not negatively impact the neighboring properties.

2. Introduction

a. GTBA Mission Statement

The mission of the Alliance is to create and maintain a collaborative water-related educational facility where children, youth, and adults can learn the value of historic preservation, the importance of environmental stewardship, the joy of discovery, and the pleasure of water-based recreation.

b. GTBA Organizational Background

The Alliance was formed to facilitate the use of this asset for our community so that the missions of its members are best fulfilled; the deed of gift from the Donor is honored; the property is best shared with the community; and the Natural Resources of this asset are best respected. The Grand Traverse Bay Alliance (the Alliance) is composed of representatives from the Non-Profit Organizations (NPOs) that occupy the Discovery Center ~ Great Lakes property and representatives of Rotary Camps and Services (the Owner). The NPOs that constitute the Alliance are The Maritime Heritage Alliance, the Great Lakes Children's Museum, The Watershed Center Grand Traverse Bay, and Traverse Area Community Sailing. Other water-related non-profits may become members in the future.

c. Brief History of property uses

The Discovery Center Great Lakes property has been home to several industrial and commercial uses over the years.

In 1973, the South Parcel contained two small cottages and a home with a 2 car garage when it was acquired from Hoyt Coddington, who lived in and operated his insurance office from the house. The cottages were connected and converted to business use for Scuba North and the docks were built for their boat rental and charter fleet. A pole building (now known as building 4) was built in 1974 for Seese Marine, which eventually became West Bay Boat Works. The home was eventually converted in 1980 to business use for Sail North. Michael Dow became involved with Michael Wills in the businesses and the property in 1984 and West Bay Boat Works was acquired along with a lease on the 60 slip Coal Dock marina from Traverse City Light and Power. Buildings 1, 2 and 3 were constructed over the years for boat sales, service and storage and building 4 was converted to a paint shop.

In 1985, Wills and Dow formed the Harbor Corporation to purchase, renovate and expand Harbor West marina. The boat sales and ships store operations were moved to Harbor West and renamed the Harbor Boat Shop. Service and storage functions continued on the south parcel as the Boat Service Center.



In 1989 the “railroad parcel” lying to the west between the south parcel and the railroad tracks was acquired from Bob Andrews. This parcel was known as the “railroad lot” because it bordered the rail line that is now part of the TART trail system. A year later the North Parcel with the brick building that is currently home to the Great Lakes Children’s Museum was purchased from Arnold Bohn. A small vacant home on the north side of the brick building also came with the property and was demolished.

The brick building was occupied by the Parsons Corporation in the manufacturing of rotor blades on the site from 1947 until 1970, at which point the company moved to California. Other uses of the building through 1986 included Rapid Design Service, Dean Anderson Appliances, Traverse Foreign Car Service and Tom and Irv’s Truck Repair.

The Harbor Boat Shop ship’s store and boat sales operations were relocated from Harbor West to the brick building in 1992 and continued until 1996 when the business was dissolved and the building was rented to Harbor Sea Doo and then Bayshore Sports Outfitters. The south parcel and all its buildings were rented to Bayshore Marine from 1996 through 2006 when Michael Dow donated all the property to Rotary Camps and Services.

d. Plan Interaction with other GTBA Documents

There are several documents and agreements that define these roles and overlap in scope. The Deed of Gift was established by the Donor of the property to Rotary Camps and Services and sets limits as to how the property can be shared with the community. The Master Lease between the Owner and the Alliance establishes the legal rights for the Alliance to occupy, maintain, and develop the property. Occupancy Agreements act as Sub-Leases between the Alliance and the NPO’s further defining the legal obligations of the NPO occupants and are supported by the Site Use Policies. To protect the Occupants and Owner, a Baseline Environmental Assessment was completed and a set of Due Care Plans have been drafted for the upland portions of the Property. These plans serve to define how certain activities can occur in a safe, lawful and environmentally sensitive way.

3. User Inventory

a. Description of Current and Potential Occupant Uses

i. GTBA Independent Uses on that Site that would have an impact on the site.

- Grounds Maintenance and storage of equipment
- Fundraisers independent of the member organization
- Harbormaster/Site Manager/ or Alliance Executive Director office
- Rainwater dissipation systems
- Future Building expansion

ii. The Great Lakes Children’s Museum

The Great Lakes Children’s Museum operates a year-round hands-on children’s museum in the 5500 sq. ft. building fronting M-22. GLCM also maintains a 2400 sq. ft. storage building and workshop in building #4. Passenger vehicles and School Buses utilize the

paved parking areas during Museum Operation times with overflow capability for larger events being held on the gravel areas and adjacent properties.

When a trail connection to the Leelanau Trail exists, GLCM plans to utilize the wetlands and creek for interpretive programming. In addition, GLCM would like to increase outdoor programming on the front of the site, by adding semi-permanent interpretive materials to the gravel area at the front of the property. Finally GLCM would like to be able to safely incorporate the learning opportunities provided by the activities available on West Bay, including the MHA boats, the Greilickville Harbor Park, and the GTBA waterfront property.

Current uses:

Museum

- Hands-on exhibits and activities
- Museum Store
- Great Lakes Activity Room for programs and meetings
- Offices (currently at capacity)
- Storage

Building #4

- Exhibit Storage (unheated)
- Program materials & supplies (unheated)
- Paint locker (heated)
- Closed file storage and electronics storage (heated)
- Workshop with hand-tools (unheated)

Potential Future Uses:

Museum

- Expanded exhibit areas (up to 20,000 sq. ft.)
- Expanded Museum Store
- Expanded office space

Building #4

- Expanded capacity to fabricate exhibits

iii. The Watershed Center – Grand Traverse Bay

The Watershed Center (TWC) currently uses the “House” at Discovery Center for office and small event space. A planned rain garden in the front yard will be used for educational purposes for the general public. TWC also uses a mooring for the *Bay Monitor* tugboat. A dinghy for the tugboat is also stored on shore either on the Discovery Center shoreline or more commonly next door at TCLP’s harbor. TWC also uses winter storage space in Building 3 for the tugboat, for our utility vessel (*Bob’s Boat*) and a canoe.

Potential uses include other educational opportunities around additional rain gardens or other low-impact development features or natural resource restoration projects that may be incorporated on the property. Educational opportunities along a potential connector trail to the

Leelanau Trail would also be used by TWC. Potential uses also include use of the property for larger events in conjunction with other GTBA member organizations, other non-GTBA organizations, or as an individual organization.

iv. MHA's Discovery Center ~ Great Lakes

Current Site Use

- Boat building and restoration
- Youth mentoring
- Equipment storage and workshop for existing fleet
- Educational programs
- Annual boat auction in June
- Outdoor Boat Storage

Future Possible Additional Uses

- Office space
- Displays and interpretation
- Conference and meeting space
- Retail sales
- Maritime-oriented school
- Large ship building project

v. Traverse Area Community Sailing

To date, TACS has been a non-occupant member of the Grand Traverse Bay Alliance, which occupies the property known as Discovery Center Great Lakes. In the future TACS intends to become an occupant member. Past use of the GTBA property has been limited to rental of indoor and outdoor storage space. Potential uses include the following.

- use of the dock and Bay frontage(mooring of teaching boats)
- indoor/outdoor space (storage of boats/equipment)
- indoor space (small shop)
- parking for participants
- office/meeting space
- special event/fundraising
- collaboration on site with other GTBA entities
- regattas
- hoists/racks for small boats and equipment
- Gin Pole for launching of larger trailerable boats (up to 26')

b. Description of Current and Potential Tenant Uses

Boat Storage

- Seasonal boat storage in building #3
- Pre-season and post-season boat preparation

- Minimal year-round boat storage in building #3
- Transport and temporary staging of boats outside building #3

Docks & Moorings

- Summer recreational use of slips and moorings for boats
- Summer commercial use of slips for charter fishing
- Drop-off and pick-up on east side of M-22
- Parking on GTBA parking lot
- Store tenders to access boats on moorings
- Fish cleaning at existing station
- Summer recreational use of shoreline area by boaters
- Storage of boater personal items, including dock boxes, bicycles, etc.
- Portable Toilet

Future Uses

- Summer commercial use of slips for dive boats
- Beach -launch area for small boats (e.g. kayaks, small sail boats, rowing shells, etc).
- Improved fish cleaning station?
- Ice machine for commercial fishing customers?
- Ferry Boat to Island
- Water Taxi
- Dive Boat
- Bare Boat Charters
- Dry Sail

c. Casual Public Use

Casual public use and pass through of the property by visitors to the site and those using the trail system or visiting the outdoor exhibits or waterfront

4. Natural Features Inventory

The Natural Features Inventory was conducted by Grobbel Environmental Planning Associates during the 2009 growing season and is contained in Appendix I. Grobbel's recommendations are contained in Appendix II. The recommendations provided are those of the consultant and not adopted as part of this Natural Resources Protection plan, but are provided for reference only.

5. Wildlife Management

Manage property to maximize diverse native wildlife habitat. For example, efforts will be made to improve nesting habitat, enhance food sources, and maintain wildlife corridors. One area of focus will be along the Discovery Trail, in order to improve the quality of educational experience along the trail.

To the extent that a species creates conflicts with other onsite or neighboring property uses or other species' habitat, a decision with regards to management practices will be

made by the Board of Directors on a case-by-case basis based on the following factors in no particular order of priority:

- Consideration of creating potential liability for the Owner, Alliance and its members.
- Preserving wildlife
- Consideration of preserving habitat for other species
- Nature and severity of impact of onsite or neighboring property uses
- Identifying and considering low impact methods for mitigating conflict
- The Alliance shall not impound, nor allow Discovery Creek to be impounded such that it causes water to back up on adjacent properties.

6. Management Zones Definitions

a. Shoreline Buffer and West Bay Riparian and Bottomlands under Lease

- Land owned and leased by the Alliance, East of the Highway, including uplands, coastal wetlands and riparian bottomlands.

b. Discovery Creek and Management Zone

- Discovery Creek and its branches that flow through and along the property, including a variable width buffer on either side of the creek.

c. Wetlands and Buffer

- The mixed conifer-deciduous and transitional forested wetlands west of the occupied cultural zone including a variable width buffer.

d. Discovery Trail Corridor

- Exact corridor from the Leelanau Trail through the Wetlands to be determined with a balance between existing uses, transportation, educational, and ecological protection goals.

e. Occupied Cultural Zone

- The land west of M-22 that hosts the primary mission of the NPOs that share the Discovery Center ~ Great Lakes campus.

7. Management Zone Goal Definitions

i. Immediate actions and best management practices (BMPs)

Actions that can be taken immediately or in first twelve months following adoption of the plan, that have limited or no costs, and any costs can be met with current budgeted funds. BMPs include operational or procedural practices designed to protect natural resources.

ii. Near-term management goals

Actions that require additional planning, moderate capital funds where funding sources are likely available and that take place in the next five years.

iii. Long-term visionary goals

Actions that require extensive additional planning, significant capital funds that are as yet unidentified, and are more than five years in the future.

8. Shoreline buffer and West Bay near-shore bottomlands under lease

i. Immediate actions & best management practices (BMPs)

- Above the Ordinary High Watermark, plan and implement an aesthetically appropriate landscaping plan, emphasizing native species to provide an appropriate protective buffer.
- Below the Ordinary High Water Mark, limit mowing along the shoreline to allow native plants to naturally re-establish themselves for the first growing season. If native species fail to adequately re-establish after the first season, consider augmenting natural regeneration by broadcasting emergent wetland seed mix (see page 27 of Grobbel report for list of plants). Seeded areas should be protected from mowing and other human disturbance in the first growing season by placing snow fencing on the upland side and silt fence at the water's edge.
- Limit mowing below Ordinary High Watermark to allow for a recreation area for picnic tables and a fire pit. Mowing area not to exceed 400 square feet as defined by the MDEQ general permit for shoreline management.
- Establish a mowed path no wider than ten feet from the upland portion to the shoreline as defined by the MDEQ general permit for shoreline management.
- Develop environmentally sound access from roadway shoulder to the docks.
- Obtain an assessment of the willow tree on the shoreline and develop plan for sustaining its health.
- Communicate with slip and mooring holders the management plan for this area.

ii. Near-term management goals

- Assess native species recovery. Monitor for and eradicate invasive species, if present. Plants and roots should continue to be protected from any future mowing or beach maintenance.

iii. Long-term visionary goals

- Plants and roots should continue to be protected from any future mowing or beach maintenance.
- Future dock improvements should consider including fish habitat structures and be designed to protect and enhance the shoreline, bottomlands, and their interface. Design consideration should also be made to minimize the need for dredging during future dock construction and maintenance.

9. Creek and buffer

i. Immediate actions & best management practices (BMPs)

- Establish variable width buffer as shown on drawing Appendix III. Mark buffer boundary and allow native vegetation to grow within buffer area. Manage snow plowing to minimize depositing gravel and sediments in buffer and prevent deposition into creek.
- Clean out and maintain culverts to improve flow, reduce sedimentation and improve aquatic habitat.

ii. Near-term management goals

- Construct berm to slope runoff away from creek thereby minimizing sediment and debris flow to the creek. Develop and implement native vegetation plantings in buffers.
- Construct educational creek observation platform. Install educational signage describing buffers and their value to water quality protection and habitat.
- Replace culvert with open-bottom bridge structure to improve flow, reduce sedimentation and improve aquatic habitat. Establish adequate buffer and curb around bridge structure to avoid gravel deposition into creek.
- Encourage MDOT and Leelanau County Drain Commissioner to replace the existing culvert under M-22 with an open bottom culvert to improve stream flow and quality. Propose with MDOT the development of an interpretive pedestrian tunnel under M-22 showcasing the stream.
- Monitor stream quality through annual aquatic insect survey.
- Make other habitat improvements to Discovery Creek and its branches.

iii. Long-term visionary goals

- Maintain buffers. Continue water quality monitoring to demonstrate improvement in water quality over time.

10. Wetlands and buffer

i. Immediate actions & best management practices (BMPs)

Establish variable width buffer as shown on drawing Appendix III Mark buffer boundary and allow native vegetation to grow within buffer area. Manage snow plowing to avoid depositing gravel and sediments in buffer and wetlands.

Make wetlands available for endangered and threatened plant species rescue projects.

ii. Near-term management goals

Construct berm to slope runoff away from wetland thereby minimizing sediment and debris flow to the creek. Develop and implement native vegetation plantings in buffers.

Install educational signage describing buffers and their value to water quality protection and habitat.

When Discovery Trail is constructed, remove remnants of old boardwalk.

iii. Long-term visionary goals

Maintain buffers.

11. GTBA trail corridor

- a) Open a connector from the Leelanau Trail to the Discovery Center ~ Great Lakes and other attractions on or in the vicinity of the property. Create a self-guided nature trail that will provide access to and interpretation of key elements of the natural features, especially in the wetland and creek areas. Provide an opportunity to offer specialized facilitated educational programs.
- b) Create overlooks and/or cutouts at appropriate locations in a way to best enable coexistence of both self-guided and facilitated educational experiences, and trail connection uses.

12. Occupied Cultural Zone

a. M-22 frontage

i. Immediate actions & best management practices (BMPs)

Develop a landscape plan to take into consideration:

- Retain and maintain junipers to buffer the impacts of M-22
- Create rain garden in front of Watershed Center building. This rain garden will primarily serve as infiltration areas for runoff from the adjacent building.
- Create dune feature in front of Children's Museum, including native dune grass plantings.

All future features and plantings will be designed in a way that does not interfere with property signage or drivers' line-of-sight when exiting the property onto M-22.

ii. Near-term management goals

Consider areas for future display development. Evaluate the performance and adequacy of established drainage system and rain garden.

iii. Long-term visionary goals

Evaluate the health and performance of established drainage systems, rain garden and other landscape elements

b. Existing Paved Parking

i. Immediate actions & best management practices (BMPs)

- Monitor and enforce the Site Use policies that restrict long-term parking.
- Utilize water quality friendly de-icing practices.
- Investigate and repair existing storm water drainage system integration with proposed rain garden and infiltration systems.

ii. Near-term management goals

Evaluate adequacy of parking lot storm water management.

iii. Long-term visionary goals

To the extent possible, incorporate porous paving materials in future major property improvements. Construct “islands” in parking areas for tree and other native vegetation plantings to slow storm water runoff and increase groundwater infiltration.

c. Unpaved areas currently suitable for landscaping

i. Immediate actions & best management practices (BMPs)

- Create rain garden on northwest corner of Children’s Museum. This rain garden will primarily serve as infiltration areas for runoff from the adjacent building.

ii. Near-term management goals

- Create a landscaping plan utilizing native species of ground plantings, shrubs and trees. Ensure that long-term tree plantings do not occur in future build-out zones. Develop irrigation plan to ensure plant survival.

iii. Long-term visionary goals

- Construction in future build-out zone will utilize low-impact development techniques.

d. Gravel Parking and Storage

i. Immediate actions and best management practice (BMPs)

Monitor and enforce the Site Use policies that restrict long-term parking. Utilize water quality friendly de-icing practices. Encourage all regular parking to take place on existing paved surfaces and encourage use of unpaved areas for overflow parking.

ii. Near-term management goals

Evaluate adequacy of parking area storm water management and snow pile management.

iii. Long-term visionary goals

If gravel is replaced with hard surfaces, incorporate pervious paving materials to the extent possible. Construct “islands” in parking areas for tree and other native vegetation plantings to slow storm water runoff and increase groundwater infiltration.

e. Cul de Sac Parking and Storage

i. i. Immediate actions & best management practices (BMPs)

Maintain the existing native vegetative buffer along wetland area adjacent to the Cul de Sac. Prohibit the use of fertilizers and pesticides in the Cul de sac area. Prohibit snow plowing and snow storage in to the area to prevent the deposition of gravel and sediments into the adjacent wetlands. If access in the winter is needed, then snow will be removed by a single path with snow pulled out, not pushed in to the Cul de Sac.

Storage of boats shall be controlled so that any motorized vessel shall be with its motor, fuel storage, or potential drainage of areas where the motor or fuel is stored is kept at least 15 feet from the wetland.

Parking of vehicles in the Cul de Sac by the crews of Tall Ships on extended sails shall be kept at least 15 feet from the wetland.

ii. Near-term management goals

Construct trailhead for Discovery Trail with informational signage. Continue to clean up debris and waste material during site clean-up days. Utilize minimal cutting techniques to maintain an adequate buffer while allowing optimal use of the Cul de Sac for storage. Add berm along wetland and storm water retention basin, if indicated, to intercept and treat storm water to prevent direct flow into the adjacent wetland and or creek.

iii. Long-term visionary goals

Monitor storage compliance and adequacy of buffer along wetland area adjacent to the Cul de Sac. If the development of the trail and wetland are conducive, build an ADA accessible, all weather, wildlife observation station, able to hold 4 to 8 people overlooking the wetland.

13. General BMPS

- a. Prohibit use of phosphorus-containing fertilizers on GTBA property.
- b. Manage snow plowing to ensure that plows do not move gravel or sediments into streams and wetlands. Designate snow storage area away from water bodies on pervious surface. Ensure all landscaped areas and buffers are staked for snow plowing.
- c. Road stream crossings should be minimized, however if new stream crossings are established, utilize open bottom bridge/culvert structure and establish vegetative buffer adjacent to crossing. Design of such crossings should divert storm water runoff away from stream and towards infiltration areas.

- d. To the extent possible, utilize non-toxic herbicides for invasive/nuisance plant control, recognizing that some invasive/nuisance plants may require traditional chemical treatment.
- e. Consideration will be given to long-term maintenance of vegetation when installing landscaping to reduce labor, watering and herbicides/pesticides needed. GTBA will prioritize native species, including plantings to improve wildlife habitat, in future plantings, utilizing the list in Grobbel report. Any species not listed in the Grobbel report will require prior approval by the GTBA board.
- f. The design of landscaping shall strive to appear natural as opposed to manicured, with the exception of foundation plantings.
- g. All solid waste shall be disposed of properly. Compostable materials can be deposited on-site in designated areas. Brush and non-compostable landscape trimmings may be deposited in an area designated for such activity. Where practical, brush will be chipped for future landscaping and trail use.
- h. **Spill Policy**

Any release of hazardous materials, as defined by statute or regulations, shall be reported immediately to the Chair of the GTBA Board, Site Manager, if any, and the organization's GTBA Board representative(s). The organization responsible shall comply with all statutes and regulations in responding to the release and shall document for the next Board Meeting of the GTBA the incident and the clean-up response. In the event a spill occurs that requires reporting to governmental agencies, the owner shall be informed in a timely fashion (within 24 hours) with written documentation to follow.

14. Restrictions, Compliance and Enforcement

a. Permitting Process

- All natural resources and environmental activities on GTBA property shall comply with applicable local, state and federal law and regulations. All permit applications dealing with the property and facilities must be approved by the GTBA board.

b. Enforcement Policies

- Violations of the Natural Resources Protection Plan, shall be documented by the Alliance. Any member of the Alliance Board, Occupant Member or Owner's representative shall have the right to report said violation to the Alliance Board. The violation shall be reviewed with the responsible party(s) and their parent organization, if any; a remediation plan shall be developed and implemented such that the responsible party(s) understands the nature and spirit of the violation, the liability consequences, why it adversely affects the Natural Resource and the Alliance's relationship with the property owner. The documentation of said violations shall be recorded as part of the regular Alliance Meeting Minutes and shall be part of the regular contractual reporting obligations of the Alliance to the Owner. Remediation costs, if any shall be borne by the responsible party(s) and their parent organization, if any.

15. Appendices

- I. Natural Features Inventory – Grobbel
- II. Grobbel Environmental Recommendations (for future reference and guidance only, not specifically part of plan)
- III. Site Plan with Variable Width Buffers
- IV. Michigan Department of Natural Resources Landowners Guide—without Grassland and Cropland sections (for future reference and guidance only, not specifically part of plan)
212 Pages – not included in DEQ Report. Can be found at:
http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/Landowners_Guide/index.htm

Appendix I

Natural Features Inventory

Appendix II

Grobbel Recommendations

(For future reference and guidance only,
not specifically part of plan)

Appendix III
Site Plan with Variable
Width Buffers

Appendix IV

MDNR Landowners Guide

Without Grassland and Cropland sections

212 Pages – not included in DEQ Report
Can be found at:

http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/Landowners_Guide/index.htm