

Notice
City of Traverse City and Charter Township of Garfield
Recreational Authority Board of Directors
Regular Meeting

7:00 p.m.

Wednesday, March 2, 2016

Second Floor County Training Room, Governmental Center
400 Boardman Avenue
Traverse City, MI 49684

Posted: 2-25-16

The Authority does not discriminate on the basis of disability in the admission or access to, or treatment or employment in, its programs or activities. Penny Hill, Assistant City Manager, 400 Boardman Avenue, Traverse City, Michigan 49684, 922-4440, TDD: 922-4412, has been designated to coordinate compliance with the non-discrimination requirements contained in Section 35.107 of the Department of Justice regulations. Information concerning the provisions of the Americans with Disabilities Act, and the rights provided thereunder, are available from the ADA Coordinator.

If you are planning to attend and you have a disability requiring any special assistance at the meeting and/or if you have any concerns, please immediately notify the ADA Coordinator.

Recreational Authority Board of Directors
Matthew Cowall, Executive Director
324 Munson Avenue
Traverse City, MI 49686
(231) 929-3696 TDD: (231) 922-4412
<http://www.traverscitymi.gov/recauthority.asp>
mcowall@liaa.org

Agenda

Roll Call.

1. Consideration of approving the minutes of the regular meeting of January 6, 2016. (Matt Cowall)
2. Reports. (Matt Cowall et al)
 - Grand Traverse Conservation District
 - Event Facility Management
 - March 1 Quarterly Reports and other updates from Management Entities at Historic Barns Park (Botanic Garden, SEEDS, TC Community Garden)
 - Any reports from Board members
 - Executive Director's report and possible verbal updates, including:
 - Strategic Planning update
 - Silver Drive wetland easement update
3. Consideration of 2014-15 Audited Financial Statements. (Matt Cowall, DGN)
4. Consideration of a draft cooperative agreement with the City of Traverse City concerning Hickory Meadows and Hickory Hills. (Matt Cowall, HMAC)
5. Presentation of the Energy Farm Master Plan for Historic Barns Park. (Matt Cowall, SEEDS)
6. Report regarding payment of expenditures. (Matt Cowall)
7. Public Comment.
8. Adjournment.

The City of Traverse City and Charter Township of Garfield

Communication to the Recreational Authority

FOR THE MEETING OF MARCH 2, 2016

DATE: THURSDAY, FEBRUARY 25, 2016

FROM: MATT COWALL, EXECUTIVE DIRECTOR

SUBJECT: MINUTES

Attached are the minutes of the regular meeting of January 6, 2016.

The following motion would be appropriate to approve the minutes:

That the minutes of the regular meeting of January 6, 2016, be approved.

Minutes

The City of Traverse City and Charter Township of Garfield Recreational Authority Board of Directors

January 6, 2016

A regular meeting of the Recreational Authority Board of Directors was called to order in the Second Floor County Training Room, Governmental Center, 400 Boardman Avenue, Traverse City, Michigan, at 7:00 p.m.

The following Directors were present, constituting a quorum: Ross Biederman, Chair; Michael Groleau, Secretary; Tim Hughes, Treasurer; Molly Agostinelli; Gary Howe; Mattias Johnson; and Matt McDonough.

The following Directors were absent: none.

Chair Biederman presided at the meeting.

1.

The first item being "Election of officers for 2016," Chair Biederman introduced this matter. The following individual addressed the Board:

Matt Cowall, Executive Director

Chair Biederman opened the floor for nominations.

Agostinelli nominated Ross Biederman as Chair, Michael Groleau as Secretary, and Tim Hughes as Treasurer.

Moved by Agostinelli, seconded by Howe, that nominations be closed and that a unanimous ballot be cast for Ross Biederman as Chair, Michael Groleau as Secretary, and Tim Hughes as Treasurer.

CARRIED.

2.

The next item being “Consideration of approving the minutes of the regular meeting of December 2, 2015,” Chair Biederman introduced this matter. The following individual addressed the Board:

Matt Cowall, Executive Director

Moved by Hughes, seconded by Groleau, that the minutes of the regular meeting of December 2, 2015, be approved.

CARRIED.

3.

The next item being “Reports,” Chair Biederman introduced this matter. The following individuals addressed the Board:

Matt Cowall, Executive Director
Tom Vitale, GTCD
Jenee Rowe, SEEDS
Karen Schmidt, BGHBP
Inara Kurt, TCCG

No action was taken.

4.

The next item being “Consideration of Annual Goals for the Management Entities at Historic Barns Park,” Chair Biederman introduced this matter. The following individuals addressed the Board:

Matt Cowall, Executive Director
Jenee Rowe, SEEDS
Karen Schmidt, BGHBP
Inara Kurt, TCCG

Moved by Johnson, seconded by Agostinelli, that the 2016 annual goals and benchmarks for the Botanic Garden at Historic Barns Park, SEEDS and TC Community Garden be adopted.

CARRIED.

5.

The next item being “Consideration of new rental packet documents for the Cathedral Barn at Historic Barns Park,” Chair Biederman introduced this matter. The following individuals addressed the Board:

Matt Cowall, Executive Director
Brianna Bidwell, Two B Events

Moved by Groleau, seconded by McDonough, that the 2016 Cathedral Barn Rental Packet be approved, contingent upon review and approval of counsel, with price increases for 2017 limited to \$100 for Mondays through Wednesdays.

CARRIED.

6.

The next item being “Report regarding payment of expenditures,” Chair Biederman introduced this matter. The following individual addressed the Board:

Matt Cowall, Executive Director

No action was taken.

7.

The next item being “Public Comment,” Chair Biederman introduced this matter. The following individuals addressed the Board:

Karen Schmidt

Jenee Rowe
Brianna Bidwell

There being no objection, Chair Biederman declared the meeting adjourned at 8:39 p.m.

Matt Cowall, Executive Director

DRAFT

The City of Traverse City and Charter Township of Garfield

Communication to the Recreational Authority

FOR THE MEETING OF MARCH 2, 2016

DATE: THURSDAY, FEBRUARY 25, 2016

FROM: MATT COWALL, EXECUTIVE DIRECTOR

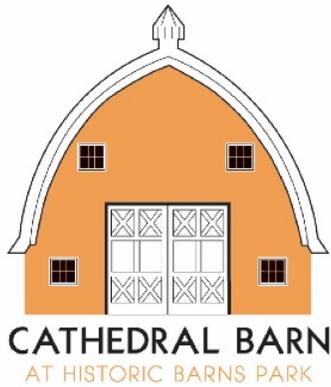
SUBJECT: REPORTS

Expected reports include:

- Grand Traverse Conservation District
- Event Facility Management
- March 1 Quarterly Reports and other updates from Management Entities at Historic Barns Park (Botanic Garden, SEEDS, TC Community Garden)
- Any reports from Board members
- Executive Director's report and possible verbal updates, including:
 - Strategic Planning update
 - Silver Drive wetland easement update

One item of action to note for Wednesday: the Botanic Garden, SEEDS and the Community Garden are planning to collaborate on a grant request to the Oleson Foundation and would appreciate a letter of support from the Authority. The groups can explain the effort to you in more detail on Wednesday night during Reports. A sample motion in the affirmative follows:

That the Chair be authorized to execute a letter supporting a grant request to the Oleson Foundation by the Botanic Garden, SEEDS and TC Community Garden on behalf of Historic Barns Park.



MONTHLY BOARD REPORT

Wednesday, March 2nd, 2016

2016 Updates & on-going items:

Barn Rentals –

2015: 23 total events held (\$57,750)

2016: 22 total events currently booked (\$69,600)

2017: 1 total event currently booked (\$580)

Marketing & Advertising –

Barn Poster:

Attached is a sample copy of the poster for the barn doors (main and back entrance). This poster serves as a marketing tool for capturing “walk-ins” (those who have stopped by on their own time) and any foot traffic. Provides the community and any interested users with my name and number for rental information and pricing (thanks for your contribution to this idea, Ross!)

Needs: 2 (front and back doors)

Size: TBD (likely 11x17, give or take)

Pricing: \$ TBD

Material: Cling (for purposes of putting up and taking down during events, eliminates typical wear and tear, will not leave any residue on the glass windows)

Social Calendar:

Attached is a social calendar for developing a strategic social plan. This will be used to raise awareness and further promote the barn. It will serve as a marketing tool for the barn’s social media sites. Brianna to explain its purpose and how it works in further detail (which includes “boosting” posts on Facebook and how that process affects social media efforts).

Brand Standards Page:

A brand standards page for the barn does not currently exist. As result, I am working to have one created. I expect to have a copy available for the meeting in April.

Marketing Opportunity via Old Mission Collective:

I've partnered with Ben Bennett, an artist and musician who is part of a Local Traverse City Band called Old Mission Collective. Ben and his crew who will be given access to the barn on Sunday, March 20th for an afternoon to produce a music video. They require no setup other than access to the lighting controls. In turn, I will be given full rights to all of the raw footage and the complete video once produced, access to promote the full video via all of the barn's social media websites, and the opportunity to add any marketing items (such as the barn's logo, etc.) to the video to help promote the space. Old Mission Collective will in turn promote the venue on their website and give credit as needed online and in any videos posted on YouTube.

Links to their webpage and their videos are below. Check them out!

<https://www.youtube.com/watch?v=5cEnH3t-A6I>

<http://www.benjaminjamesmusic.com/videos/<%22>>

Event Operations –

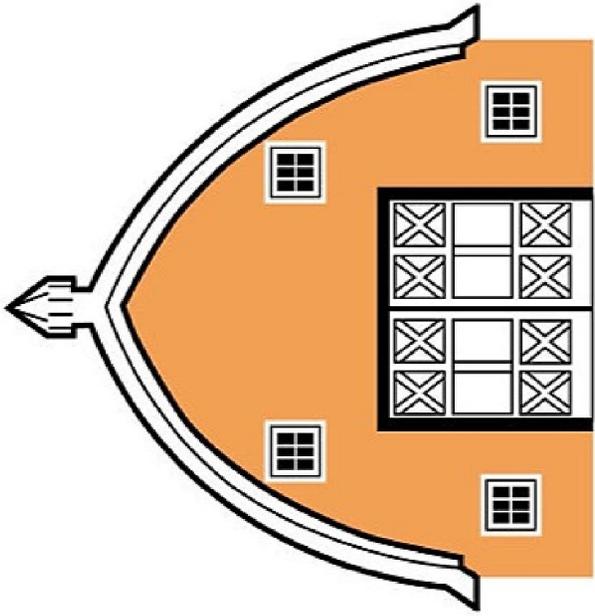
Rental Equipment Package (tables, chairs, linen):

Met with Alex MacDonald, owner of Monstrey MacDonald (MM). MM is a local rental company who provides a variety equipment for all types of events. Discussed partnership opportunities regarding tables, chairs, and linen for mid-week rentals. Attached is a preliminary proposal from MM. Brianna to discuss options in further detail.

Contract Renewal (for Brianna) –

Contract Renewal:

It is time to discuss contract renewal, the process, and next steps.



CATHEDRAL BARN

AT HISTORIC BARNSPARK

hello there!

WE'RE SORRY
WE MISSED YOU.



INTERESTED IN RENTING
THIS BEAUTIFUL BARN?

Connect with Brianna
(231) 342-1526
brianna@historicbarnspark.com

Find us online by visiting
www.historicbarnspark.com

SOCIAL MARKETING CALENDAR: A SAMPLE OVERVIEW

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Share content you're finding inspiration for the coming week (<i>example</i> : a sneak peek at an upcoming project or plan your team is working on)	Photo: Inspirational quote post using hashtag <i>#Monday Motivation</i> (custom image with quote text overlay plus logo)	Text (w/ photo) Trivia Tuesday to present your community with questions about the barns, their history, the history of the property, the renovations, etc.	Promotion: Boosted Post with call to action (<i>example</i> : venue rental information with link to sign up form for the user to get more information)	Link: Share a link to a community post that features local news, happenings, events, etc.	Text (w/ photo) Fun Fact Friday to highlight "Did you know?" items (similar to Trivia Tuesday but in a more informational voice)	Photo: What is the Cathedral Barn team working on? Snap a photo from an event, etc.

Additional long-term content goals: Once a robust presence and community are established online with consistent engagement from your audience, you'll start to see more interaction with posts like the Trivia Tuesday features and can also start running contests, like photo submission contests from visitors, event guests, etc.



Tables and Chairs:

If we buy new tables and chairs to be kept at the venue:

\$75/table for 60" rounds + shipping

\$85/table for 72" rounds + shipping

\$18/Natural wood chair with pad + shipping

\$24/White wood chair with pad + shipping

If these tables and chairs are kept at the Barn in the basement I can have a flat rate of \$100 for the crew to get them out of the basement and set them up in the barn.

I can offer a 50% reduced rental rate to the barn for you to include the tables and chairs in the property rental fee. For a standard event with 72" round tables and natural wood chairs the rental fee including delivery set up and tear down would be \$598.66 (20-72" tables and 100 natural wood chairs) I can cut this to \$299.33.



March 1, 2016

Matt Cowall
LIAA Communications & Development Director
Executive Director - City of Traverse City and
Charter Township of Garfield Recreational Authority
324 Munson Avenue
Traverse City, MI 49686

Dear Matt,

I am delighted to submit the Quarterly Report from The Botanic Garden at Historic Barns Park, for the period of December 1, 2015 through February 29, 2016 and to share our progress with you and the Recreational Authority. As you know, the BGHBP board utilizes a Strategic Planning Process to determine its annual and 3-year goals. Each Quarterly Report presents the progress we have made in the current year's goals over that three-month period. The nine goal areas for 2016 are: to establish a long-term lease; to explore Executive Director options; to implement and expand finance strategies; to assist and support efforts for future road construction, signage and lighting; to continue work on a comprehensive marketing plan; to implement the 2016 fund development plan; to provide exciting and enjoyable experiences to visitors of the Garden through the completion the Walled Garden, and Sugar Maple Allee gardens, expansion and maintenance of the present garden plantings, and development and offering of a wide range of educational classes, workshops and events; to work towards the acquisition and implementation of new technology that supports the garden's mission; and to build the board through the recruitment and training of new board members.

Sincerely,

Karen Schmidt,
Botanic Garden Board Chair



Mission: Public gardens have a powerful and positive impact on the health, environment and economy of a region. They make it a better place to live. The mission of BGHBP is to design build and manage a year-round botanic garden in Northwest Michigan for the purposes of botanical and environmental preservation, education and research, and the enjoyment and renewal of citizens and visitors

Quarterly Report

March 1, 2016

Although the winter months limited work that could be done in the garden, the board accomplished a great deal of work, primarily in the areas of planning.

GOAL #1 – LONG TERM LEASE – Because donors, members and board directors need an assurance that their investment in the Garden will be protected across time: By December 2016 a long-term agreement will be in place with the Recreational Authority and a Reversion Agreement will be finalized with the Recreational Authority, Traverse City and Garfield Township.

- a. During this quarter we continued to work with our attorney and Matt Cowall to finalize a long-term agreement with the Recreational Authority
- b. In addition, we continue conversations with the Recreational Authority about completing a reversion agreement with the Recreational Authority, the City of Traverse City and Garfield Township to guarantee Botanic Garden management rights of the Garden in the event that the Recreational Authority ownership and management of the Historic Barns Park is no longer in place.

GOAL #2 – EXECUTIVE DIRECTOR – Because the needs and responsibilities are expanding as the garden develops, by January of 2018 a Botanic Garden Executive Director will be hired.

The board has determined that grants are not an ideal source for primary funding for this position, since they are temporary in nature and partial in funding. The board is focusing, instead, on building a stronger financial base to fund this future position, with an emphasis on expanded revenue generation in the areas of memberships, venue rentals, donor development and events.

GOAL #3 – FINANCIAL PROCESSES – Because the Botanic Garden’s assets and liabilities are expanding as the garden grows, the BGHBP board is implementing a series of strategies to refine and expand specific financial processes to meet the needs of a growing garden.

- a. During the first quarter of 2016, the Finance Committee reviewed the 2015 Financial Review by Dennis, Garland & Niergarth and found that there were no financial procedures that needed to be corrected.
- b. During the first quarter of 2016, the board obtained three bids for completion of the 2016 financial review, and the April 2016 Form 990. The board chose the low bid from VDL Certified Public Accountants.
- c. During the first quarter of 2016, the Finance Committee completed the 2016 budget, which was approved by the Board in January. Each board committee developed their own budget draft, based on their committee’s projected expenses and revenues, which were then utilized by the Finance Committee in the development of the 2016 BGS Budget.
- d. Because of the trend towards EMV credit cards with chips, the board voted to purchase a new credit card machine and new point-of-sale software to accommodate this change. (The point-of-sale machine is used for gift shop purchases, class and workshop fees, and venue rental deposits & final payments).

GOAL #4 – ROADS, LIGHTING AND SIGNAGE – Because the Botanic Garden and the Historic Barns Park are both negatively impacted by the poor condition and placement of the present roads, limited parking, and the lack of lighting and signage, BGHBP will work closely with the Recreational Authority and other entities at the park to focus on the issue of roads, parking, signage and lighting.

- a. During the first quarter, the Botanic Garden met with an RA committee to discuss the next step in road construction at the park. BGHBP covered the cost of a great deal of the road engineering and design work by Nelson Byrd Woltz and Jozwiak Engineering. We support the next step of sharing those findings and designs with one or more road construction companies to obtain a ballpark estimate of the cost of constructing those roads. Once an estimate is procured, BGHBP would be glad to assist the Recreational Authority in their search for funding for road construction.
- b. The Botanic Garden’s Landscape Committee reviewed a variety of Donor Recognition and Garden Identification sign styles and finalized recommendations that will be shared with the

- board. Design and construction of the following signs will be completed in time for spring installation: The Robert and Anne Tucker Allee, Lucille's Garden, The Native Plant Garden, and The Ruth and Scott Koeze Walled Garden. Additional signs for 2016 will be The Ross and Brenda Biederman Visitor Center, The Rhea and Michael Dow Hall, and a naming-rights sign for the Pavilion.
- c. During the first quarter, BGHBP met with representatives of SEEDS, the Traverse City Community Garden and Kathryn Huschke, executive director of the Oleson Foundation, to discuss a collaborative Oleson grant submission by all three entities for the purpose of "interpreting the park" through signage, demonstration units and a model green-roof shed. Each entity is gathering bids for their piece of the interpretation project, and a BGHBP board member will combine those in a draft of a \$30,000 grant request, which will be shared with all three entities for their input prior to submission by April 1 to the Oleson Foundation. Brand Tonic will develop sign templates that will ensure a consistent and attractive format to be used for all signage by the entities. If this grant is successful, the new signage will provide visitors with attractive and informative displays that explain a variety of historical, horticultural and sustainable features of the park.
 - d. Lack of outdoor lighting continues to be a serious issue at the park and garden. Thanks to a generous donation from a very special individual, work on electrifying the Pavilion has been on-going this quarter, including several different lighting options (night lights, festival lights and pillar lights) as well as electric outlets. The lighting of the Pavilion will be a significant improvement in night visibility for safety and event purposes. The Botanic Garden will continue to explore pathway lighting options, with an emphasis on solar lights.

GOAL #5 – MARKETING – Because the Garden needs to increase public awareness, support and participation: During 2016 the BGHBP board will continue developing a variety of components within a marketing plan, including the use of social media, rack cards, posters, brochures, media ads and public presentations.

- a. During the first quarter, BGHBP continued to improve and expand our Facebook platform, introduced event options, videos and ads and updated information on our website. The Marketing Committee, made up of professionals in social media and advertising, donated their services to design and implement many of these efforts.
- b. During the first quarter, BGHBP purchased an ad through the MyNorth Wedding issue and Discovery Maps to increase awareness of the Garden as a wedding venue and visitor destination. In addition, Traverse Magazine journalists worked with board members to complete a feature article on the Garden, which is scheduled for the June Traverse Magazine issue.
- c. During the first quarter, the Program Committee worked with the Marketing Committee to develop a plan to increase awareness and support of the garden by Michigan garden clubs. BGHBP recognizes that garden club members make up an important component of botanic garden participants and supporters. A special open house – 'Celebrating Garden Clubs' – will be held on Sunday, July 31, with a series of special events for garden club members all over the state. Informational packets about the garden and park have been developed and

will be distributed at the spring National Garden Club conference in Grand Rapids. And a number of classes by and for Federated Garden Clubs will be offered at the Visitor Center this year.

GOAL #6 – FUND DEVELOPMENT - Because a diverse and strong revenue source is critical to the operation and growth of the Garden: By December of 2016, The Botanic Garden will implement the fund development plan for this year. The development plan implementation will address each of the elements (membership, annual giving, planned giving, grants, endowments, donations, events, newsletters, marketing) using the timelines defined in the development calendar. Donor Perfect On-line software is now implemented to support a number of these elements.

- a. During the first quarter, through the website, Facebook and personal contacts, the Garden continued to focus heavily on new memberships and membership renewals.
- b. During the first quarter, a great deal of grant application work was completed, with a focus on funding for handicap accessibility, new garden development, and garden signage.
- c. During the first quarter, the Garden's administrator and a skilled volunteer continued work expanding the Donor Perfect software system, evaluating the donation and membership components and the link to our website.
- d. Venue rental continues to be an important source of revenues for the Garden. Although venue rental was slower during the winter months, we continued to enjoy rentals of the visitor center meeting room as well as deposits for spring, summer and fall garden venue rentals.
- e. During the fourth quarter, a large and robust schedule of workshops, classes and events was developed by the Program Committee. (See the attached schedule) These classes and workshops provide revenue for the garden while supporting our mission of education.

GOAL #7 – FEATURES AND PROGRAMS –In order for the Garden to achieve its mission to provide botanical and environmental preservation, education and research, and the enjoyment and renewal of citizens and visitors, the Garden recognizes the need to establish beautiful spaces, trial and ornamental gardens, and attractive buildings and hardscapes, as well as educational opportunities for both adults and children. For that reason, the 2016 Goals focus on features and programs that includes completion of the Silo Pool landscape, the Sugar Maple Allee and Allee Garden, the Walled Garden, as well as an expanded Visitor Center Gift Shop and a significant increase in programming for children and adults: During the first quarter:

- a. **SILo POOL LANDSCAPE** – Because the Silo Pool and Fountain and surrounding gardens and hardscape are popular spots for visitors to the garden, and because the Silo Pool Garden features a wide range of native plants, we continued to focus on this area during the first quarter, planning for additional plant selections and maintenance strategies. A number of spring bulbs were planted around the Silo Pool in early December.

- b. SUGAR MAPLE ALLEE – Because the Sugar Maple Allee is an important architectural and horticultural component of the garden, providing structure and beauty as well as access to future gardens for thousands of visitors, a great deal of work was dedicated this quarter to the Allee. The Allee area was graded and the soil was amended in preparation for spring planting. A planting schedule was finalized with Deering Tree Service, which will take place as soon as the frost laws are lifted this spring. TruNorth was selected as the low bidder to install the 10' wide, 280' long walkway between the double row of maples (donating all of their labor for this project!). They will install the walkway as soon as the trees are planted this spring. The Development Committee wrote and submitted a \$32,000 grant to the Alden and Vada Dow Foundation, which if successful, would cover the cost of landscaping the Allee Gardens with stunning perennial plantings. As a part of that effort, the Landscape Committee developed a perennial planting plan for the two 10' wide, 280' long garden beds in which the trees will be located. Thousands of Chionodoxa ('Glory of the Snow') bulbs would provide a blue carpet of early spring bloom, followed by early, mid and late blooming daffodils for a spring into early summer bloom, and hundreds of 'Rozanne' perennial geraniums for summer and fall bloom. The grant will be reviewed by the Alden and Vada Dow Foundation in April. If we do not receive that grant we will mulch the Allee garden area under the sugar maple trees and continue seeking donations for that project.
- c. WALLED GARDEN: Because the Walled Garden will bring a whole new level of beauty and function to the Botanic Garden and the park, to be enjoyed by thousands, its completion is an important goal: This year, the design and construction of the Walled Garden will be completed, including walkways, plantings, fences and screens. Additional features (fountain, exterior fencing, exterior planting, and the adjoining Secret Garden) are scheduled for completion in 2017.
1. During this quarter, work on the Walled Garden walkways and patio area was completed by TruNorth Landscaping, who donated all of their labor costs. Those surfaces will be topped with a 2" stabilized stone finish when the temperatures reach 50 degrees this spring
 2. During this quarter, the Landscape Committee worked with Dan Nichols of Black Rock Forge to finalize plans for the wrought iron entry gate to the Walled Garden. The gate will be finished this winter and installed this spring, along with two 7' tall cedar walls that will enclose the open areas facing the Garage (Bldg. 223). The gate and walls will secure the Walled Garden and protect it from deer damage and night vandalism.
 3. During this quarter, horticulturist Laurel Voran completed a planting plan for the Walled Garden, including a large variety of shrubs and perennials. These will be purchased and installed this spring and summer.
- d. VISITOR CENTER GIFT SHOP – Because the Visitor Center gift shop is popular with visitors and provides important revenue for the Garden, the final phase of Gift Shop display shelving

was completed this quarter. Master Craft Cabinets designed a set of shelving for the north entrance wall of the gift shop as well as a series of shelves that will be mounted on two of the central pillars of the gift shop, providing additional display space. Board members donated \$4,500 of the \$7,590 cost, with garden revenues covering the rest. The shelving will be installed in March prior to the opening of the season in April.

- e. FIREWISE GARDEN – Because Northern Michigan (especially in the areas of Kalkaska, Grayling and Gaylord) is susceptible to spring grass and forest fires, the Botanic Garden would like to develop a demonstration garden to teach visitors how they can landscape their homes in a way that actually protects them from wildfires. A \$50,000 grant request is being submitted to the Department of Natural Resources for the development of a demonstration FireWise Garden. If the grant is successful, the garden will be established on the ridge above and overlooking the Amphitheater and Cathedral Barn on an area managed by the Botanic Garden. This quarter BGHBP worked with a DNR employee, a landscape architect and a horticulturist to design the garden and provide the necessary data for the grant. The Garden will consist of a winding permeable paved trail that follows the ridge, beginning at the trailhead and exiting towards (but not connecting to) the Trust Fund Trail. There will be three landscaped circular overlooks that will encourage visitors to stop and enjoy the view. (see the attached renderings). Although the garden, on first appearance, will seem like just a lovely landscaped trail, it will actually feature a variety of materials and strategies designed to stop the spread of a wildfire. Signage will show visitors how they can protect their own homes with similar FireWise gardens. The grant request submission date is April 1 and we should hear sometime this summer if we are successful. If so, construction of the garden will begin this fall. It's position up on the ridge will not conflict with activities at the Cathedral Barn, but the finished garden will be a popular 'photo opportunity site' for bridal parties, graduating seniors, etc.
- f. ACCESSIBILITY AT THE GARDEN – BGSNM continues to work towards our goal of making the Garden accessible to everyone. We have submitted a series of grant requests this past quarter for that purpose, with a goal of installing an ADA ramp that would allow people with wheelchairs and walkers to move from the lower level by the Silo Pool up to the Pavilion and upper level of the Visitor Center. We've also submitted grant requests to cover the cost of an automatic door at the upper level of the Visitor Center, and a ramp up to the pavilion. We are hoping that one or more of these grants will be funded, and will know more during the second quarter. Any paths and walkways we install will all be ADA accessible, meeting the requirements of width and surface stability.
- g. PROGRAMS AND EVENTS – Because the mission of the Botanic Garden is to provide horticultural and environmental educational opportunities to the public: This quarter the Program Committee was extremely busy developing a robust series of classes, workshops and events for 2016. During this quarter, a workshop was held for the creation of holiday

decorations with garden materials, as well as a 6-week class in Botanical Illustration. The class was so successful it will be offered again next quarter, along with workshops on English Gardens, Landscape Needle Felting, Vegetable Garden Design, Tree Identification, Peepers at the Park (preschool program), Gentle Yoga for Gardeners, Fused Glass, and Flower Arranging.

<p>SEPTEMBER</p> <p>PEEPERS AT THE PARK PROGRAM September Date TBD, 1:00-2:30 PM Visitor Center Taryn will conduct a class for youngsters ages 3-5. Date to be posted on the website and Facebook or call the Visitor's Center. Donations appreciated.</p> <p>PLANT IT WILD – NATIVE PLANTS IN LANDSCAPE Monday, September 12, 7:00-9:00 PM Visitor Center Cheryl Gross will share her expertise in using native plantings. \$25 class fee</p> <p>MI GARDEN CLUB FLOWER ARRANGING GUILD Thursday, September 15, 10:00 AM-12:00 PM Visitor Center Arrangements taught emphasizing creative American design. Must be a Dist. V Garden Club Member to participate. Class limited to 10. \$20 class fee</p> <p>OCTOBER</p> <p>HOT AND HOBS PROGRAM Sunday, October 2, 1:00-4:00 PM Visitor Center Growing hops and beer tasting. \$20 class fee</p> <p>NOVEMBER</p> <p>BRING IN FALL'S BEAUTY TABLE DECORATION Saturday, November 5, 10:00 AM-12:00 PM Visitor Center Terry Hooper demonstration with dried items followed by a make-your-own session. \$25 class fee</p>	<p>FUSED GLASS MAKE IT – TAKE IT CLASS Saturday, November 12, 7:00-9:00 PM Visitor Center Class with Debra Coburn. Fused glass bowl, supplies provided. \$45 class fee</p> <p>DECEMBER</p> <p>HOLIDAY MAKE IT – TAKE IT DECORATION Saturday, December 3, 9:00-11:00 AM Visitor Center Terry Hooper demonstration followed by a make-your-own session. \$35 class fee</p> <p>CHRISTMAS SALE AT THE VISITOR CENTER Sunday, December 4, 12:00-5:00 PM Visitor Center Gift Shop</p> <p>ANYTIME</p> <p>CHILDREN'S BACKPACK ACTIVITIES Visitor Center Gift Shop Stop by the Visitor's Center and check out a backpack with nature-inspired activities for kids. Backpacks are updated throughout the year. Free</p> <p>CLASS REGISTRATION</p> <p>To register for a class, visit our website at www.thebotanicgarden.org/events. If you prefer to register over the phone, please call the Visitor's Center at 231.935.4077.</p> <p>Keep up on the latest event info on our website or connect with us on Facebook.</p> <p>1490 Red Drive, Traverse City, Michigan 49685 231.935.4077 www.thebotanicgarden.org</p>	<p>THE BOTANIC GARDEN AT HISTORIC BARN'S PARK PRESENTS: 2016 EVENTS AND CLASS OFFERINGS</p> 
<p>JANUARY & FEBRUARY</p> <p>BEGINNING BOTANICAL DRAWING CLASS Wednesdays, 1:00-3:30 PM January 6, 13, 20 & 27, February 3 & 10 Visitor Center Artist Joan Bonney will teach a 6 week class on botanical drawing for beginners. \$225 class fee</p> <p>MARCH</p> <p>GARDENS OF ENGLAND Sunday, March 13, 1:00-3:00 PM Visitor Center Presentation on England's most beautiful gardens. \$25 donation</p> <p>APRIL</p> <p>INTRO TO LANDSCAPE NEEDLE FELTING Wednesdays, April 8 & 13, 1:00-2:30 PM Visitor Center 2 week class for any skill level. All supplies but a multi needle felting tool (available at Ben Franklin and online) will be provided. Class limited to 10. \$35 class fee</p> <p>INTERMEDIATE DRAWING W/ A BOTANICAL TWIST Wednesdays, 1:00-3:30 PM April 20 & 27, May 4, 11, 18 & 25 Visitor Center Artist Joan Bonney will teach an intermediate level 6-week botanical drawing class. Class limited to 12 participants. Plein air when weather permits. \$225 class fee</p> <p>VEGGIE GARDEN DESIGN W/ ELLEN ECKER ODGEN Sunday, April 24, 1:00-4:00 PM Visitor Center Lecture by nationally recognized author Ellen Ecker Odgen on techniques for growing food in elegant and artful ways. \$30 class fee</p>	<p>TREE TOURS AT THE PARK Friday, April 29, 2:30, 2:15 and 9:30 PM Great Bird Nest Dedication w/ 12:30 PM Check in at Visitor Center Tree tours and dedication of an Eagle Scout project. Donations appreciated</p> <p>MAY</p> <p>PEEPERS AT THE PARK PROGRAM Thursday, May 5, 1:00-2:30 PM Visitor Center Taryn will conduct a class for youngsters ages 3-5. Donations appreciated.</p> <p>GENTLE YOGA FOR GARDENERS Tuesdays, May 10, 17, 24 & 31, 10:00-11:30 AM Visitor Center Join instructor Barb Selomonsen for this series of 4 Tuesday sessions of yoga for gardeners. Class is limited to 20 participants. \$15 per session or \$50 for all 4 sessions</p> <p>FUSED GLASS PROJECT W/ DEBRA COBURN Wednesday, May 18, 6:00-8:30 PM Visitor Center Supplies will be provided. Class is limited to 12. \$45 class fee</p> <p>MI GARDEN CLUB FLOWER ARRANGING GUILD Thursday, May 19, 10:00 AM-12:00 PM Visitor Center Arrangements taught emphasizing creative American design. Must be a Dist. V Garden Club Member to participate. Class limited to 10. \$20 class fee</p> <p>VEGETABLE PLANTING BEE W/ PATTI TRAVICHI Saturday, May 21, Time TBD Visitor Center</p>	<p>JUNE</p> <p>COLANATH'S 100 YEAR BIRTHDAY Saturday, June 12, Parade at 2:30 PM Garden Activities 5:00-5:00 PM Visitor Center Celebrate the 100 year birthday of legendary Co.entra the cow. Free</p> <p>MI GARDEN CLUB FLOWER ARRANGING GUILD Thursday, June 16, 10:00 AM-12:00 PM Visitor Center Arrangements taught emphasizing creative American design. Must be a Dist. V Garden Club Member to participate. Class limited to 10. \$20 class fee</p> <p>JULY</p> <p>CELEBRATING GARDEN CLUBS DAY AT THE GARDEN Sunday, July 31, Open House 12:00-4:00 PM Visitor Center Free</p> <p>BLUE STAR MEMORIAL DEDICATION Saturday, July 31, 2:00 PM Visitor Center Free</p> <p>AUGUST</p> <p>FLOWER ARRANGING 101 Wednesday, August 11, 7:00-9:00 PM Visitor Center Cathy Hamilton will teach basics of flower arranging. Open to the public. \$25 class fee</p> <p>MI GARDEN CLUB FLOWER ARRANGING GUILD Thursday, August 11, 10:00 AM-12:00 PM Visitor Center Arrangements taught emphasizing creative American design. Must be a Dist. V Garden Club Member to participate. Class limited to 10. \$20 class fee</p>

GOAL #8 – BOARD CAPACITY – Because a diverse and knowledgeable board, with clear guidelines and policies, bring strength to an organization: During the 2015 year, the capacity of the Botanic Garden board was greatly expanded through the acquisition of nine new board members, whose experience, skills and knowledge have been a huge asset to the board. During 2016, BTHBP will provide new board members with any necessary orientation and training, supporting

them in their work on our standing committees. Board capacity will also be enhanced through the review and revision of present by-laws and board policies.

- a. During the past two quarters the new board members not only became familiar with the roles and responsibilities of the BGHBP board but took strong leadership positions in some of the board's committee work, including finance, marketing, and programs and events. They have proven to be a huge asset to the board, and thus the Garden.
- b. During this quarter, an ad-hoc committee worked on updating the organization's by-laws, policies and procedures, aligning them with the ever-expanding role of the board in this evolving garden. The By-Laws Committee will take their recommendations to the board for discussion at the March meeting, with a vote scheduled for the April meeting.

GOAL #9 - TECHNOLOGY - Because an evolving public garden has responsibilities in marketing, finance, membership, donor and plant data bases, education, and commerce (i.e. gift shop), the importance of staying current in the technology that supports these needs is critical. During 2016, the Botanic Garden will expand its use of Donor Perfect software, purchase new point-of-sale software and card reader, and write grant applications to help fund an electronic guest book and a BG-BASE plant accession software program and training.

- a. During this quarter, the board approved the Finance Committee's recommendation to purchase new point-of-sale software and a new card reader that will support the new chip-based credit cards.
- b. During this quarter, the Development Committee began work on grants and donations for funding the electronic guest book and BG-Base Plant Accession software and training.



FireWise Garden Concept

The Botanic Garden at Historic Barn Park
Traverse City, Michigan

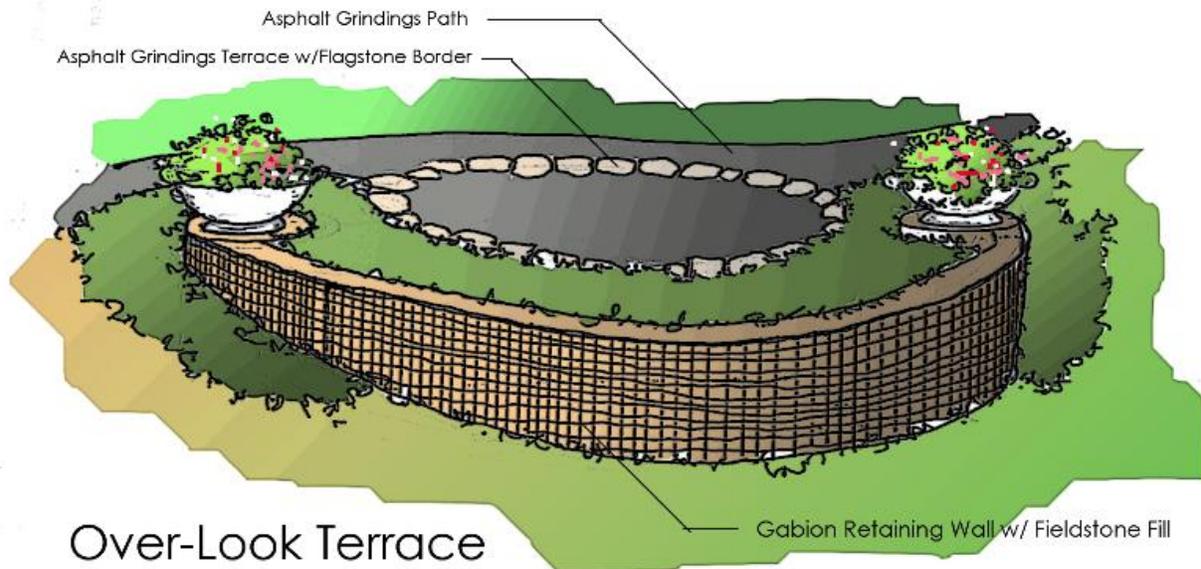


Let our experience be your compass to a beautiful landscape.

Design, Construction & Horticultural Services
9355 Bingham Rd. - Traverse City, MI 49684
p. 231 . 922 . 0087 - f. 231 . 922 . 0087
TruNorthLandscaping.com



Scale: 1" = 30'-0"
Design: MWP
Date: February 8, 2016
Revision:
Sheet: L-1



Over-Look Terrace

FireWise Garden Concept
 The Botanic Garden at Historic Barn Park
 Traverse City, Michigan

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The highest retaining wall (fieldstone within a steel mesh retainer) will be a little over 3' high at the most, while the two smaller overlook retaining walls will be about 2' feet in height. Shrubs will be planted in front of the retaining walls as well, giving it a soft and natural look.



SEEDS at the Historic Barns Park: First Quarter Report 2016

Progress on Goals

1. Develop the strategic direction for SEEDS management areas and building 223:
 - a. Our Board has meet several times and is highly engaged. A summary of their early phase strategic directives are below.

SEEDS Mission (just a reminder):

Implementing local solutions to global issues at the intersection of ecology, education and community design.

SEEDS @ Historic Barns Park Vision:

The Historic Barns Park is a show-case of local solutions to global issues illustrating the interconnected, multidisciplinary nature of our solutions.

How will SEEDS implement the vision:

Implement on-site education, storytelling, and hands-on exhibits that demonstrate the interconnections and a complete picture of energy, ecology, agriculture, youth workforce training and after-school programs. Reveal the complex connections that make on-the-ground implementation and hands-on education possible.

Current Activities on the Property: A Big-Picture Summary

SEEDS committed to the Rec Authority the following for 2016:

- Board establish strategic direction for SEEDS at HBP- on track
- Run the teaching farm with youth- on track - seeking additional funding
- Complete the Energy Plan and convene MOU partners- complete
- Prioritize Energy Strategies to implement- discussions underway
- Install new external windows and doors in 223 -funded- on track
- Create seasonal work stations in 223 -funded- on track
- Conduct YCC workforce training out of Building 223- on track
- Install a geothermal energy exhibit - funded - on track
- Install solar exhibit -unfunded - seeking funding
- Design perennial garden beds around Building 223 -volunteer secured
- Assess Building 223 and conduct a preliminary design of remodel - funded - on track
- Solve flooded basement - unfunded, engineers have done site visit

2. Revitalize Building 223:

- a. Ray Kendra of Environment Architects was hired to evaluate Building 223. Also, structural, mechanical and electrical engineers have visited the

building. Ray and his team are in the design process for a potential remodel project. We expect some preliminary drawings in April. The flooding basement is a key issue and concern.

3. Work proactively and cooperatively with BGS, TCCG and the RA:
 - a. We enjoyed the work session with partners on the Energy Conceptual Plan. Several ideas are already being considered. Sarna will give a presentation to the Rec Authority Board at the upcoming meeting.
 - b. Partners quickly gathered to consider the MDEQ Wetland Conservation Easement. We have a great group of like minded partners at this park.
 - c. All the partners are joining together on a grant request to fund site-wide Habitat, Garden, Energy and Farming Interpretation and Energy Exhibits.
4. Create and maintain beautiful borders in order to add to the visual interest and ecological diversity:
 - a. A volunteer landscaper/Master Gardener will do some garden design work with a focus on beautifying Building 223. Plans will be presented to the Rec Authority when they are complete.
5. Develop the Energy Park:
 - a. The Geothermal System Exhibit is funded and is in the design phase. We are aiming for a fall installation and ribbon-cutting.
 - b. We are seeking funding for a Solar Energy Exhibit and a Carbon Sequestration Exhibit.
6. Educationally focused farm operation:
 - a. Planning for the farm is underway.
 - b. Our hoop house was damaged in the heavy wet snow. Plans for repair are underway.
7. Continue building educational programming in relation to the site by prioritizing the development of **high quality, long term program relationships with select students** over simple quantity of youth on-site:
 - a. We have an active group of youth from TBA's Ag Science program working on farm planning and sprouting seeds. It looks like we have great interest in the summer YCC farm positions from this group.



TC Community Garden
1500 Red Dr – PO Box 875
Traverse City, MI, 49685

Matt Cowall
LIAA Communications & Development Director
Executive Director - City of Traverse City and
Charter Township of Garfield Recreational Authority
324 Munson Avenue
Traverse City, MI 49686

February 29, 2016

Dear Mr. Cowall:

Enclosed please find the Quarterly Report from the TC Community Garden for the period of December 1, 2015 thru February 29, 2016. The Board is pleased to share with you and the Recreational Authority our progress on the 25 goals for the 2016 growing season, as well as touch on our four long-term goals.

Sincerely,

A handwritten signature in blue ink that reads "Kimberly Conaghan". The signature is written in a cursive style.

Kimberly Conaghan
Vice President and Treasurer
TC Community Garden
Board of Directors



The mission of the TC Community Garden is to provide a place for members of the community to gather and share a common interest in organic gardening in an urban setting, to provide educational opportunities to the community that foster an appreciation for sustainable growing practices, and to grow fresh produce for distribution to local food banks.

QUARTERLY REPORT

March 1, 2016

MEMBERSHIP

From our bylaws – “...a place for members of the community to gather and share a common interest in organic gardening...”

GOAL 1: *Full occupancy of all available plots.*

Gardener membership agreements came in over the months of January and February. The Board will meet March 3rd to finalize membership for the 2016 growing season. Full occupancy is expected.

GOAL 2: *Limit new membership to 12X30 (half) plots as needed to include as many new members as possible from the waiting list.*

The Board voted in January to automatically turn vacated 24X30 (full) plots into two 12X30 (half) plots. This respects the time, effort, and energy of the veteran gardeners, while creating a more inclusive approach to the demand for plots moving forward.

GOAL 3: *Discuss the possibility of 12X15 (quarter) sized plots.*

Although there is demand for plots in the garden, the TCCG has been able to accommodate all interested members thus far. Therefore, quarter sized plots do not seem to be a necessary undertaking for this growing season. The Board may revisit this item at a later date.

GOAL 4: *Photographs and videos in various garden seasons.*

Using the existing Facebook page was the first logical place to include more photographic and video content. The TCCG has made great efforts to use social media more effectively to promote our mission by posting current garden photographs and/or relevant gardening content at least weekly to the page. The TCCG Facebook page currently has 314 ‘likes’.

As our calendar of events for 2016 continues to develop, the TCCG will appoint gardener(s) to take photographs and/or videos for key gardening events. Designated events thus far include the Spring Kick-off Meeting April 10th, the Ellen Ecker Ogden Gardening Workshop April 24th, and the annual Spring Gardening Workshops April 23rd and 30th.

The Board is also considering creating a YouTube channel where education, outreach, and event recap videos could be cross-posted in addition to Facebook. Garden member participation will dictate whether this is a viable project to take on during the 2016 gardening season. Interest will be gauged at the Spring Kick-off Meeting.

GOAL 5: *Partner with a community organization to provide access for differently-abled community members to garden, such as raised beds.*

Accessibility at the TCCG is impacted negatively by the present roads, limited parking, and non-paved entrances to the garden. Until the new road is constructed and permanent access points are determined, this goal has been transitioned to a long-term goal.

GOAL 6: *Create brochure for placement at the Botanic Garden at the Historic Barns Park visitor center.*

Drafts have been created and this goal should be met in the next quarter.

GOAL 7: *Improve walkways between plot rows.*

A preliminary plan is in place. Weather has prohibited development of this goal at this time.

GOAL 8: *Ongoing maintenance of the two garden paths at both entrances.*

A preliminary plan is in place. Weather has prohibited development of this goal at this time.

GOAL 9: *Better communication between volunteer groups - Establish a coordinator who will communicate with all leads ensuring that people have been contacted.*

A coordinator will not be established during the 2016 growing season. However, the TCCG strives to engage 100 percent of its membership this season to provide community as defined by our mission statement and by-laws. The Board as a whole will oversee the communication with the leads of the volunteer workgroups.



GOAL 10: *Better communication between volunteer workgroups - Establish a well-defined task list for members to sign up at the Spring Kick-off Meeting.*

Break-out sessions will be a part of the agenda during the Spring Kick-off Meeting April 10th. Each group will utilize sign-up sheets, cross-referencing a calendar of events with group responsibilities. At least one member from each plot must participate in at least one volunteer workgroup, although any member may participate in any or all volunteer workgroups. A designated lead from each volunteer workgroup will report monthly to the Board.

GOAL 11: *Investigate the potential for NMC to build a green roof shed for the Fall 2016 semester.*

The TCCG was chosen in late January to be the beneficiary of a joint-initiative project between the Northwestern Michigan College Construction Technology Program and Inhabitect, LLC to build a Green Roof Shed at the TCCG site. Design is underway and the TCCG hopes to present for approval a finalized proposal at the May RA meeting. The TCCG will make all efforts in alerting neighbors and partners of the construction schedule so activities planned by our partners are minimally impacted.

GOAL 12: *Establish a membership of national designation for our garden exposure*

After completing an internal cost-benefit analysis, the Board determined applying for membership to the American Community Garden Association was not in the best interest of the general membership at this time. The TCCG will concentrate on other goals outlined in this report to achieve the objective of increasing exposure. The Board may review the option to join in the ACGA for 2017 gardening season.

GOAL 13: *Fence Project - Enhance west end fence by adding a high-wire on top of black locust posts, and add stronger wires.*

A preliminary plan is in place. Weather has prohibited development of this goal at this time.

GOAL 14: *Plant more annuals.*

A preliminary plan is in place. Weather has prohibited development of this goal at this time.

GOAL 15: *T-shirts*

Quotes were received. The Board will gauge interest in ordering T-shirts at the Spring Kick-off meeting before undertaking this fundraising project.



EDUCATION

From our bylaws – “...to provide educational opportunities to the community that foster an appreciation for sustainable growing practices...”

GOAL 16: *Hold two classes at the beginning of the season for soil preparation and planting.*

The Spring Gardening Workshops are scheduled for Saturdays, April 23rd and 30th with a rain-out date of Saturday, May 7th. These workshops focus on ensuring the first-year members have a welcoming, warm start to their first growing season at the TCCG. Attendance for first-year members is not required, only suggested. They are open to returning members as well.

GOAL 17: *Hold one class in the fall for winter preparation of the soil.*

The Fall Gardening Workshop is scheduled for Saturday August 20th with a rain-out date of Saturday August 27th. This is the first year for this workshop, which will focus on soil amending, cover crops, and pest-mitigation. It is open to all members.

GOAL 18: *Arrange tours and bring school field trips into the garden.*

A goal of the Event Planning Workgroup is to ensure garden ambassadors are available for inquiries and tours during park-wide events, and events held by our MOU partners. At this time, the TCCG does not plan to actively schedule independent tours. Inquiries about tours will be addressed by the Board on a case-by-case basis.

GOAL 19: *Utilize Bulletin Board for increased communication.*

The Bulletin Board will be updated with relevant communication to the membership at least monthly. It may need to be relocated for the Green Roof Shed project.

DONATION

From our bylaws – “...to grow fresh produce for distribution to local food banks...”

GOAL 20: *Possible modification of the donation garden plot.*

The Botanic Garden at the Historic Barns Park was gracious in offering to have acclaimed gardener and author Ellen Ecker Odgen design the 2016 donation garden. Ms. Odgen brings her expertise in sustainable and creative design to the TCCG donation garden. We are prepared to make modifications to the area should Ms. Odgen deem it necessary to implement her design. The donation garden may also need to be modified for placement of the Green Roof Shed. This will not impact the 2016 growing season.



GOAL 21: *Maintain 1,200 pound donation for Food Rescue.*

For 2015, the goal was to yield 1,000 pounds of produce for local food banks. Exceptional weather for the duration of the growing season led to the tally of over 1,200 lbs at year's end. With Ms. Ogden's collaboration, the TCCG hopes to at least match the 2015 yield of the donation plot – 1,200 pounds.

GOAL 22: *Involve more member gardeners in the donation program.*

There are 18 members that selected to be a part of the Donation Garden Workgroup for this season. The Botanic Garden has also generously offered to share some of their volunteers to maintain the donation garden after the Ogden project is completed. This collaboration is very exciting and will aid in distributing the workload more effectively.

GOAL 23: *Begin clearing the area west of our fence line to prepare soil for 2017 additional plots*

A preliminary plan is in place. Weather has prohibited development of this goal at this time.

FINANCIAL

GOAL 24: *Conduct an analysis of anticipated costs and revenues to determine if a plot fee increase is warranted.*

An annual Revenue and Expense report was presented at the Board meeting in January. Taking into consideration internal research of other community gardens, factoring in population density, climate location, economic circumstances, plot size, and increased operational expenses relative to growth, it was determined a minor fee increase for the 2015 growing season was warranted. 12X30 (half) plots were increased from \$40 to \$45 and 24X30 (full) plots were increased from \$80 to \$90.

With this increase, the Board decided to add verbiage to the TCCG website allowing gardeners to communicate if this amount was cost prohibitive as inclusiveness is extremely important to the Board. Where the fees are listed on the website, it now also states:

“If you are facing a financial hardship but would still like to grow at the garden, please contact us. A board member will contact you about your situation and how you can still be involved. Creative solutions regarding plots may be available.”

If there are inquiries, the Board will decide a course of action on a case-by-case basis. To date, there have been no inquiries regarding same.



GOAL 25: *The Fundraising Volunteer Workgroup will use the 2016 goals to establish fundraising priorities to present to the board for approval.*

The current fundraising priority is for the Green Roof Shed as determined at the February Board meeting. The Fundraising Volunteer Workgroup meets March 3rd to determine a calendar of fundraising for 2016.

LONG-TERM GOALS THROUGH 2018

GOAL 1: *Increase plots to the west at SEEDS and Master Gardner Site*

In the fall of 2015, the TCCG continued soil remediation in this area with the application of organic fertilizer. More remediation will be done in 2016. The Board will discuss the need for developing this land after membership is completed for 2016.

GOAL 2: *Construct a raised bed 4X8 in the Master Gardener 'A' Site*

As a long-term goal, this will not likely transpire this year. Short-term goals are taking precedence at this time.

GOAL 3: *Develop outdoor classroom. This is a partnership opportunity with Seeds and the Botanic Garden.*

As a long-term goal, this will not likely transpire this year. Short-term goals are taking precedence at this time.

GOAL 4: *Increase collaboration with outside organizations such as Northwest Community Action Agency, Groundwork, etc.*

The Green Roof Shed project is an example of a current plan focused on this long-term goal by partnering with Northwest Michigan College Construction Technology Program and Inhabitect, LLC. As other projects are developed, the Board will continually focus on collaborating with other local organizations that have similarly aligned goals and missions.



The City of Traverse City and Charter Township of Garfield

Communication to the Recreational Authority

FOR THE MEETING OF MARCH 2, 2016

DATE: THURSDAY, FEBRUARY 25, 2016

FROM: MATT COWALL, EXECUTIVE DIRECTOR

SUBJECT: CONSIDERATION OF 2014-15 AUDITED FINANCIAL
STATEMENTS

Attached are the 2014-2015 *Audited Financial Statements* from Dennis, Gartland & Niergarth. DGN's Mary Krantz will present the audit and answer any questions you have. The *Audited Financial Statements* will be available for public review in the Executive Director's office, the City and Township offices, the Traverse Area District Library and on the Authority's web page.

The following motion would be appropriate to accept the Audited Financial Statements:

That the Audited Financial Statements for the fiscal year end June 30, 2015, be accepted.



Thomas E. Gartland, CPA
Brad P. Niergarth, CPA
James G. Shumate, CPA
Robert C. Thompson, CPA
Michael D. Shaw, CPA
Mary F. Krantz, CPA
Shelly K. Bedford, CPA
Heidi M. Wendel, CPA
Shelly A. Ashmore, CPA
James M. Taylor, CPA

AUDIT-RELATED COMMUNICATIONS

To the Board of Directors
City of Traverse City and Charter Township of Garfield Recreational Authority

We have audited the financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund and the aggregate remaining fund information of *City of Traverse City and Charter Township of Garfield Recreational Authority* (the "Authority") for the year ended June 30, 2015. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and *Government Auditing Standards* as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated October 23, 2015. Professional standards also require that we communicate to you the following information related to our audit.

Compliance and Internal Controls

As part of obtaining reasonable assurance about whether Authority's financial statements are free from material misstatement, we performed test of its compliance with certain provisions of laws, regulations, contracts and grant agreements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion.

In planning and performing our audit of the financial statements of the Authority, in accordance with auditing standards generally accepted in the United States of America, we considered the Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control.

We have issued our report on internal control over financial reporting and on compliance and other matters based on an audit of financial statements performed in accordance with *Government Auditing Standards* thereon dated December 28, 2015.

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the Authority are described in Note A to the financial statements. The Authority adopted Governmental Accounting Standards Board ("GASB") Statement No. 65, *Items Previously Reported as Assets and Liabilities*, for the year ended June 30, 2015. The application of existing policies did not change in 2015. We noted no transactions entered into by the Authority during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimate affecting the financial statements was:

- *Depreciation expense*

We evaluated the key factors and assumptions used to develop the estimate in determining that it is reasonable in relation to the financial statements taken as a whole.

The financial statement disclosures are neutral, consistent and clear. Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:

- *Budgetary Policy and Practice*
- *Risk Management*
- *Related Party Transactions*

No Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. In addition, none of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to each opinion unit's financial statements taken as a whole.

No Disagreements with Management

For purposes of this letter, a disagreement with management is a financial accounting, reporting or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated December 28, 2015.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Authority's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Authority's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We applied certain limited procedures to the required supplementary information ("RSI") that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

This information is intended solely for the use of Board of Directors and management of the City of Traverse City and Charter Township of Garfield Recreational Authority, and is not intended to be and should not be, used by anyone other than these specified parties.

Dennis, Gartland & Niergarth

December 28, 2015

**City of Traverse City and Charter Township
of Garfield Recreational Authority**

FINANCIAL STATEMENTS
AND REPORT OF INDEPENDENT
CERTIFIED PUBLIC ACCOUNTANTS

June 30, 2015

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Management's Discussion and Analysis For the year ended June 30, 2015

Our discussion and analysis of the City of Traverse City and Charter Township of Garfield Recreational Authority's (the "Authority") financial performance provides an overview of the Authority's financial activities for the fiscal year ended June 30, 2015. Please read this analysis in conjunction with the Authority's financial statements, which immediately follow this section.

Description of Reporting Entity and Services Provided

The City of Traverse City and Garfield Township Recreational Authority was formed in 2003 under the Recreational Authorities Act of 2000, which permits two or more municipal bodies to form a joint authority for the purposes of acquiring, constructing, operating, maintaining or improving public parks, a public recreation center, a public auditorium, a public conference center, a public museum, or a public historic farm.

Overview of the Financial Statements

This annual report consists of three sections presented in the following order:

Management's discussion and analysis, the basic financial statements and required supplementary information. The basic financial statements include two kinds of statements that present different views of the Authority:

- The first two statements are *Authority-wide financial statements* that provide comprehensive *short-term* and *long-term* financial information about the Authority as a whole.
- The remaining statements are *fund financial statements* that focus on *individual parts* of the Authority, reporting the Authority's operations *in more detail* than the district-wide statements.
- The *governmental funds* statements tell how *basic* services were financed in the *short-term* as well as what remains for future spending.

The financial statements also include notes that explain some of the information in the statements and provide more detailed data and supporting documentation. The statements are followed by a section of required supplementary information that further explains and supports the financial statements with a comparison of the Authority's budget for the year. Figure A-1 shows how the various parts of this annual report are arranged.

Figure A-1

Authority Financial Report Organization

Management's Discussion and Analysis (MD&A)
(Required Supplemental Information)

Basic Financial Statements

Authority-wide Financial Statements/ Fund Financial Statements

Notes to Basic Financial Statements

Budgetary Information for Funds
(Required Supplemental Information)

Authority-Wide Statements

The Authority-wide statements provide comprehensive information about the Authority using the accrual basis of accounting which is similar to the method used by private-sector companies. The statement of net position includes all of the Authority's assets and liabilities and the difference between the two, which is net position. The statement of activities accounts for all of the current year's revenues and expenses regardless of when cash is received or paid.

The statement of net position and statement of activities report the governmental activities for the Authority, which encompass all of the Authority's services. Property taxes and grants finance most of these activities.

The two Authority-wide statements report the Authority's *net position* and how they have changed. Examining net position is one way to measure the Authority's financial health or *position*. Over time, increases or decreases in the Authority's net position are an indicator of whether its financial position is improving or declining. The relationship between revenues and expenses is the Authority's operating results, or in other terms, whether the Authority had a profit or a loss at year-end. However, the Authority's mission is not simply to generate profits, as may be the case for a commercial entity.

Fund Financial Statements

The fund financial statements provide more detailed information about the Authority's funds. Each major fund is presented in a separate column. Funds are accounting devices the Authority uses to keep track of specific sources of funding and spending on particular programs. Some funds are required by State law and by bond covenants. The Authority has only one kind of fund:

Governmental funds:

All of the Authority's basic services are included in governmental funds. Governmental fund reporting generally focuses on how dollars flow in and out of the funds and the balances left at year-end. These balances are reported using the modified accrual basis of accounting. Revenues are recognized when they are measurable and available. Expenditures are recorded when the related fund liability is incurred. The governmental fund statements provide a detailed short-term view of the operations of the Authority and the services it provides. Governmental fund information helps the reader determine whether there are more or fewer financial resources that can be spent in the near future to finance the Authority's programs. The relationship or differences between governmental activities (reported in the Statement of Net Position and the Statement of Activities) and governmental funds are presented in a reconciliation displayed further in our documentation. The Authority's major governmental funds are the General, Debt Service and Capital Projects Funds.

The Authority as a Whole

Recall that the statement of net position provides the perspective of the Authority as a whole. Table 1 provides a summary of the Authority's net position as of June 30, 2015:

TABLE 1

	Governmental Activities <u>2014-2015</u>	Governmental Activities <u>2013-2014*</u>
Assets		
Current and other assets	\$ 892,574	\$ 830,152
Capital assets	<u>7,558,749</u>	<u>6,744,457</u>
Total assets	<u>8,451,323</u>	<u>7,574,609</u>
Deferred outflows of resources	<u>205,669</u>	<u>228,106</u>
Total assets and deferred outflows of resources	<u>\$ 8,656,992</u>	<u>\$ 7,802,715</u>
Liabilities		
Current liabilities	\$ 537,640	\$ 40,157
Long-term liabilities	<u>4,925,000</u>	<u>5,605,000</u>
Total liabilities	<u>5,462,640</u>	<u>5,645,157</u>

Net Position		
Invested in capital assets, net of related debt	2,273,749	1,139,457
Restricted:		
Debt service	403,768	369,980
Capital projects	28,209	117,099
Unrestricted	<u>488,626</u>	<u>531,022</u>
Total net position	<u>3,194,352</u>	<u>2,157,558</u>
Total liabilities, deferred inflows of resources and net position	<u>\$ 8,656,992</u>	<u>\$ 7,802,715</u>

The above analysis focuses on the net position (see Table 1). The Authority's net position was \$3,194,352 at June 30, 2015. Restricted net position are reported separately to show legal constraints from debt covenants and enabling legislation that limit the Authority's ability to use those net position for day-to-day operations. The amount of net position \$488,626 was unrestricted.

The \$488,626 in unrestricted net position of governmental activities represents the accumulated results of all past years' operations. It means that if we had to pay off all of our bills today, including all of our non-capital liabilities, we would have \$488,626. The operating results of the Authority will have a significant impact on the change in unrestricted net position from year to year.

The results of this year's operations for the Authority as a whole are reported in the statement of activities (see Table 2), which shows the changes in net position for fiscal year 2015.

TABLE 2

	Governmental Activities <u>2014-2015</u>	Governmental Activities <u>2013-2014*</u>
Revenue		
Program revenue:		
Charges for services	\$ 47,750	\$ -
Operating grants and contributions	61,382	166,435
Capital grants and contributions	720,734	-
General revenue:		
Property taxes	630,761	604,834
Investment and other	<u>456</u>	<u>423</u>
Total revenues	<u>\$ 1,461,083</u>	<u>\$ 771,692</u>
Expenses:		
Recreational and cultural	\$ 279,763	\$ 137,643
Interest and agent fees	<u>144,526</u>	<u>195,424</u>
Total expenses	<u>424,289</u>	<u>333,067</u>
Increase in Net Position	<u>\$ 1,036,794</u>	<u>\$ 438,625</u>

*The Authority implemented GASB 65 during the year ended June 30, 2015. The net position for the year ended June 30, 2014 has been restated and is further described in the financial statement note disclosures.

As reported in the statement of activities, the cost of all of our governmental activities this year was \$ 424,289. These costs were funded mainly from property taxes of \$630,761 as well as \$61,382 received from operating grants and contributions received during the fiscal year.

The Authority experienced an increase in net position of \$1,036,794. The key reason for the change in net position was that actual revenues were more than budgeted revenues, as well as increased capital grants received during the year ended June 30, 2015.

The Authority's Funds

As noted earlier, the Authority uses fund accounting to help it control and manage money for particular purposes. Looking at funds helps the reader consider whether the Authority is being accountable for the resources taxpayers and others provide to it and may provide more insight into the Authority's overall financial health. The Authority's budgets are prepared according to Michigan law. The most significant budgeted fund is the General Fund. The General Fund is the main operating fund of the Authority. All other funds would be used to account for the proceeds from specific revenue sources that are legally restricted to certain types of expenditures.

As the Authority completed this year, the governmental funds reported a combined fund balance of \$744,385, which is a decrease of \$78,284 from the prior year.

Fund Budgetary Highlights

A schedule showing the Authority's original and final budget amounts compared with amounts actually paid and received is provided in required supplemental information of these financial statements.

Capital Asset and Debt Administration

Capital Assets

At June 30, 2015, the Authority had \$7,558,749 invested in a range of capital assets including buildings, land, furniture, equipment and vehicles summarized as follows:

	Balance June 30, 2014	Additions	Deletions	Balance June 30, 2015
Land Improvements	\$ 6,865	\$ 10,000	\$ -	\$ 16,865
Equipment	1,780	-	-	1,780
Buildings infrastructure	<u>1,341,621</u>	<u>854,625</u>	<u>-</u>	<u>2,196,246</u>
Total Capital Assets	1,350,266	864,625	-	2,214,891
Less: Accumulated Depreciation	(173,271)	(50,333)	-	(223,604)
Land	<u>5,567,462</u>	<u>-</u>	<u>-</u>	<u>5,567,462</u>
Total capital assets, net	<u>\$ 6,744,457</u>	<u>\$ 814,292</u>	<u>\$ -</u>	<u>\$ 7,558,749</u>

Depreciation expense of \$50,333 was allocated to recreation and culture.

Long-Term Debt

The Authority had a long-term debt beginning balance of \$5,605,000. At June 30, 2015, the long-term debt ending balance was \$5,285,000 from a 2013 Unlimited Tax general obligation refunding bond.

Economic Factors and Next Year's Budgets and Rates

At the time these financial statements were prepared and audited, the Authority was aware of a number of circumstances that could significantly affect its financial health.

The strong fiscal position of the Authority will continue in the next year with property tax rates of .0994 for the general operating millage and .3100 for the debt service millage. The Capital Project Fund was created to house proceeds for property acquisition and construction. As all remaining bond proceeds were expended on construction projections in 2014/2015, the Capital Project fund was closed during fiscal year 2015/2016.

The Authority is the recipient of a grant from the Environment Protection Agency for Brownfields assessment and cleanup. The amount of the grant is 83% of approved budget period costs, not to exceed \$200,000. The grant period ends September 30, 2016.

Contacting the Authority's Financial Management

This financial report is designed to provide the Authority's citizens, taxpayers, customers, and investors and creditors with a general overview of the Authority's finances and to demonstrate the Authority's accountability for the money it receives. If you have questions about this report or need additional financial information, please contact Matt Cowall, Executive Director, City of Traverse City and Charter Township of Garfield Recreational Authority, 324 Munson Ave., Traverse City, MI 49686.



Thomas E. Gartland, CPA
Brad P. Niergarth, CPA
James G. Shumate, CPA
Robert C. Thompson, CPA
Michael D. Shaw, CPA
Mary F. Krantz, CPA
Shelly K. Bedford, CPA
Heidi M. Wendel, CPA
Shelly A. Ashmore, CPA
James M. Taylor, CPA

REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

Board of Directors
City of Traverse City and Charter Township of Garfield Recreational Authority

Report on the Financial Statements

We have audited the accompanying financial statements of the governmental activities, each major fund and the aggregate remaining fund information of *City of Traverse City and Charter Township of Garfield Recreational Authority* (the "Authority") as of and for the year ended June 30, 2015, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Authority's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, each major fund and the aggregate remaining fund information of City of Traverse City and Charter Township of Garfield Recreational Authority as of June 30, 2015, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

Accounting Changes

As described in Note B to the financial statements, the Authority adopted the provisions of Governmental Accounting Standards Board Statement No. 65, *Items Previously Reported as Assets and Liabilities* during the year ended June 30, 2015.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages *i* through *vii*, and budgetary comparison information on pages 18 through 20, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquires of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 28, 2015 on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

Dennis, Gartland & Niergarth

December 28, 2015

City of Traverse City and Charter Township of Garfield Recreational Authority

STATEMENT OF NET POSITION

June 30, 2015

	<u>Governmental Activities</u>
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	
ASSETS	
Current assets	
Cash	\$ 892,574
Capital assets, net of accumulated depreciation	<u>7,558,749</u>
Total assets	8,451,323
DEFERRED OUTFLOWS OF RESOURCES	
Deferred loss on refunding	<u>205,669</u>
Total assets and deferred outflows of resources	<u><u>\$ 8,656,992</u></u>
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	
LIABILITIES	
Current liabilities	
Accounts payable	\$ 34,071
Interest payable	29,451
Unearned revenue	114,118
Current portion of long-term liabilities	<u>360,000</u>
Total current liabilities	537,640
Non-current portion of long-term liabilities	<u>4,925,000</u>
Total liabilities	<u>5,462,640</u>
NET POSITION	
Invested in capital assets, net of related debt	2,273,749
Restricted for:	
Debt service	403,768
Capital projects	28,209
Unrestricted	<u>488,626</u>
Total net position	<u>3,194,352</u>
Total liabilities, deferred inflows of resources and net position	<u><u>\$ 8,656,992</u></u>

The accompanying notes are an integral part of these financial statements.

City of Traverse City and Charter Township of Garfield Recreational Authority

STATEMENT OF ACTIVITIES

Year Ended June 30, 2015

Functions/Program	Expenses	Program Revenues		Net (Expense)/ Revenue and Changes in Net Position
		Charges For Services	Operating Grants and Contributions	
Governmental activities				
Recreation and culture	\$ 279,763	\$ 47,750	\$ 61,382	\$ 550,103
Interest on long-term debt	144,526	-	-	(144,526)
Total governmental activities	\$ 424,289	\$ 47,750	\$ 61,382	\$ 405,577
General purpose revenues				
Property taxes				154,885
Levied for general purposes				475,876
Levied for Debt Service				456
Investment and other				
Total general purpose revenues				631,217
Change in net position				1,036,794
Net position, beginning of year, as restated				2,157,558
Net position, end of year				\$ 3,194,352

-5- The accompanying notes are an integral part of these financial statements.

City of Traverse City and Charter Township of Garfield Recreational Authority

BALANCE SHEET - GOVERNMENTAL FUNDS

June 30, 2015

	Major Funds			Total Governmental Funds
	General Fund	Debt Service Fund	Capital Projects Fund	
ASSETS				
Cash	\$ 431,027	\$ 433,338	\$ 28,209	\$ 892,574
Total assets	\$ 431,027	\$ 433,338	\$ 28,209	\$ 892,574
LIABILITIES AND FUND BALANCES				
LIABILITIES				
Accounts payable	\$ 33,952	\$ 119	\$ -	\$ 34,071
Unearned revenue	114,118	-	-	114,118
Total liabilities	148,070	119	-	148,189
FUND BALANCES				
Restricted	-	433,219	28,209	461,428
Unassigned	282,957	-	-	282,957
Total fund balances	282,957	433,219	28,209	744,385
Total liabilities and fund balances	\$ 431,027	\$ 433,338	\$ 28,209	

Reconciliation of Governmental Fund Balances to Authority-Wide Government Activities Net Position

<p>Amounts reported for governmental activities in the statement of net position are different because capital assets used in governmental activities are not financial resources and, therefore, are not reported as assets in governmental funds. The cost of the assets is \$7,782,353 and the accumulated depreciation is \$(223,604).</p>	7,558,749						
<p>Deferred outflows of resources is not a financial resource and, therefore, is not reported as an asset in governmental funds.</p>	205,669						
<p>Long-term liabilities, including bonds payable, are not due and payable in the current period and, therefore, are not reported as liabilities in the funds. Long-term liabilities at year-end consist of:</p>							
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Bonds payable</td> <td style="text-align: right;">(5,285,000)</td> </tr> <tr> <td>Accrued interest</td> <td style="text-align: right;">(29,451)</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 3px double black;">\$ 3,194,352</td> </tr> </table>	Bonds payable	(5,285,000)	Accrued interest	(29,451)		\$ 3,194,352
Bonds payable	(5,285,000)						
Accrued interest	(29,451)						
	\$ 3,194,352						
Total net position - governmental activities	\$ 3,194,352						

City of Traverse City and Charter Township of Garfield Recreational Authority

**STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN
FUND BALANCES - GOVERNMENTAL FUNDS**

Year Ended June 30, 2015

	Major Funds			Total Governmental Funds
	General Fund	Debt Service Fund	Capital Projects Fund	
Revenues				
Property taxes	\$ 154,885	\$ 475,876	\$ -	\$ 630,761
Interest	375	-	81	456
Grants and contributions	61,382	-	720,734	782,116
Charges for service	47,750	-	-	47,750
Total revenues	264,392	475,876	720,815	1,461,083
Expenditures				
Recreation and culture	229,350	-	-	229,350
Other	-	-	80	80
Debt Service				
Principal	-	320,000	-	320,000
Interest	-	125,066	-	125,066
Other	-	246	-	246
Capital outlay	10,000	-	854,625	864,625
Total expenditures	239,350	445,312	854,705	1,539,367
REVENUES OVER (UNDER) EXPENDITURES AND OTHER FINANCING SOURCES (USES)	25,042	30,564	(133,890)	(78,284)
Other financing sources (uses)				
Operating transfers in	-	-	45,000	45,000
Operating transfers out	(45,000)	-	-	(45,000)
Total other financing sources (uses)	(45,000)	-	45,000	-
REVENUE OVER (UNDER) EXPENDITURES AND OTHER FINANCING SOURCES (USES)	(19,958)	30,564	(88,890)	(78,284)
Fund balance, beginning of year	302,915	402,655	117,099	822,669
Fund balance, end of year	<u>\$ 282,957</u>	<u>\$ 433,219</u>	<u>\$ 28,209</u>	<u>\$ 744,385</u>

The accompanying notes are an integral part of these financial statements.

City of Traverse City and Charter Township of Garfield Recreational Authority

RECONCILIATION OF THE GOVERNMENTAL FUNDS STATEMENT OF
REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES WITH
THE AUTHORITY-WIDE STATEMENT OF ACTIVITIES

Year Ended June 30, 2015

Total Net Change in Fund Balances - Governmental Funds \$ (78,284)

Amounts reported for governmental activities in the statement of activities are different because:

Capital outlays to purchase or build capital assets are reported in the governmental funds as expenditures. However, costs that meet the capitalization policy are shown in the statement of net position and allocated over their estimated useful lives as annual depreciation expenses in the statement of activities. This is the amount by which depreciation exceeds capital outlays in the period.

	Capital outlays \$	864,625	
	Depreciation expense	<u>(50,333)</u>	814,292

Change in deferred outflows of resources. (22,437)

Repayment of bond principal is an expenditure in the governmental funds, but it reduces long-term liabilities in the statement of net position and does not affect the statement of activities. 320,000

Interest on long-term debt in the statement of activities differs from the amount reported in the governmental funds because interest is recorded as an expenditure in the funds when it is due, and thus requires the use of current financial resources. In the statement of activities; however, interest expense is recognized as the interest accrues, regardless of when it is due. The interest reported in the statement of activities is the net result of the decrease in accrued interest on bonds payable. 3,223

Changes in Net Position of Governmental Activities \$ 1,036,794

City of Traverse City and Charter Township of Garfield Recreational Authority

NOTES TO FINANCIAL STATEMENTS

NOTE A - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Introduction

City of Traverse City and Charter Township of Garfield Recreational Authority (the "Authority") is a conservation Authority created under the Recreational Authorities Act of 2000, which permits two or more municipal bodies to form a joint authority for the purposes of acquiring, constructing, operating, maintaining or improving public parks, a public recreation center, a public auditorium, a public conference center, a public museum, or a public historic farm.

The accounting policies of the Authority conform to generally accepted accounting principles as applicable to governments. The Authority is considered to be a local government unit.

The accounting and reporting framework and the more significant accounting principles and practices of the Authority are discussed in subsequent sections of this note. The remainder of the notes are organized to provide explanations, including required disclosures, of the Authority's financial activities for the fiscal year ended June 30, 2015.

The Financial Reporting Entity

The Authority is a conservation Authority created in accordance with Michigan State statutes. The Authority is governed by a volunteer board whose members are appointed for three year terms in accordance with State statutes. The financial reporting entity includes the Authority as the primary government and its component units; i.e., legally separate organizations for which the primary government is financially accountable and any other organizations which management has determined, based on the nature and significance of their relationship with the Authority, must be included to prevent the Authority's financial statements from being misleading. Based on criteria established in Governmental Accounting Standards Board ("GASB") Statement No. 14, as amended, management has not identified any component units.

Government-Wide and Fund Financial Statements

Government-Wide Financial Statements

The statement of net position and statement of activities display information about the Authority as a whole. Individual funds are not displayed.

The statement of activities reports the expenses of a given function offset by program revenues directly connected with the functional program. A function is an assembly of similar activities and may include portions of a fund or summarize more than one fund to capture the expenses and program revenues associated with a distinct functional activity. Program revenues include: (1) charges for services which report fees, fines and forfeitures, and other charges to users of the Authority's services; (2) operating grants and contributions which finance annual operating activities including restricted investment income; and (3) capital grants and contributions which fund the acquisition, construction or rehabilitation of capital assets. These revenues are subject to externally imposed restrictions to these program uses. Taxes and other revenue sources not properly included with program revenues are reported as general revenues.

NOTES TO FINANCIAL STATEMENTS - Continued

Fund Financial Statements

The balance sheet and statement of revenues, expenditures and changes in fund balances (i.e., fund financial statements) for the Authority's governmental funds are presented after the government-wide statements. These statements display information about major funds individually for governmental funds. Major funds are generally those that represent 10% or more of governmental fund assets, liabilities, revenues or expenditures.

Measurement Focus, Basis of Accounting and Financial Statement Presentation

The financial statements of the Authority are prepared in accordance with generally accepted accounting principles ("GAAP"). The Authority's reporting entity applies all relevant GASB pronouncements.

The government-wide statements report using the economic resource measurement focus and the accrual basis of accounting generally including the reclassification or elimination of internal activity (between or within funds). Reimbursements are reported as reductions to expenses. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Property taxes are recognized in the year for which they are levied, while grants are recognized when grantor eligibility requirements are met.

Governmental fund financial statements report using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized when they are both measurable and available. Available means collectible within the current period or soon enough thereafter to pay current liabilities. The Authority considers revenues to be available if they are collected within 60 days of the end of the fiscal year. Expenditures are recorded when the related fund liability is incurred, except for general obligation bond principal and interest which are reported as expenditures in the year due.

Major revenue sources susceptible to accrual include property taxes, franchise fees, licenses, charges for service, interest income and intergovernmental revenues. In general, other revenues are recognized when cash is received.

Fund Types and Major Funds

Activities in Major Funds

The General Fund is the general operating fund of the Authority. It is used to account for all financial resources except those required to be accounted for in another fund.

The Debt Service Fund is used to account for the accumulation of resources for, and the payment of, bond principal, interest and related costs.

The Capital Projects Fund is used to account for financial resources to be used for the acquisition or construction of major capital facilities.

NOTES TO FINANCIAL STATEMENTS - Continued

Cash and Equivalents

The Authority's reporting entity considers highly liquid investments (including restricted assets) with an original maturity of three months or less when purchased to be cash equivalents.

Capital Assets

Capital assets are recorded at cost or, if donated, the fair value at the time of donation. Capital assets are depreciated over their estimated useful lives ranging from 10 to 40 years. The Authority generally capitalizes assets with costs of \$1,000 or more and over one year of useful life. No depreciation is recorded on land or construction-in-process. Expenditures for major renewals and betterments that extend the useful lives of the capital assets are capitalized. Expenditures for maintenance and repairs are charged to current expenditures as incurred. Depreciation is computed using the straight-line method. When capital assets are disposed, the cost and applicable accumulated depreciation are removed from the respective accounts and the resulting gain or loss is recorded in operations.

Estimated useful lives, in years, for depreciable assets are as follows:

Buildings	40 years
Infrastructure	40 years
Equipment	10 years
Land improvements	10 years

Long-Term Debt and Bond Discounts/Premiums

In the government-wide financial statements, outstanding debt is reported as a liability. Bond discounts and premiums are deferred and amortized over the life of the bonds. Bond issuance costs are expensed as incurred.

In the fund financial statements, governmental fund types recognize bond premiums and discounts, as well as bond issuance costs, during the period in which the bonds were issued. The face amount of debt issued is reported as other financing sources. Premiums received on debt issuances are reported as other financing sources while discounts are reported as other financing uses. Issuance costs are reported as debt service expenditures.

Deferred Outflows of Resources

The Statement of Financial Position includes separate financial statement elements for deferred outflows and deferred inflows of resources. Deferred outflows of resources represent a consumption of net position that applies to a future period and so will not be recognized as an outflow of resources (expense/expenditure) until then. Deferred inflows of resources represent an addition to net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until then.

The Authority has a deferred loss on debt refunding reported in the government-wide statement of net position, which qualifies for reporting as a deferred outflow of resources. A deferred loss on refunding results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt.

NOTES TO FINANCIAL STATEMENTS - Continued

Fund Equity

Governmental fund equity is classified as fund balance. Fund balance is further classified as nonspendable, restricted, committed, assigned or unassigned. Nonspendable fund balance cannot be spent because of its form. Restricted fund balance has limitations imposed by creditors, grantors or contributors, or by enabling legislation or constitutional provisions. Committed fund balance is a limitation imposed by the Authority Board through approval of resolutions. Assigned fund balances is a limitation imposed by a designee of the Authority Board. Unassigned fund balance in the General Fund is the net resources in excess of what can be properly classified in one of the above four categories. Negative unassigned fund balance in other governmental funds represents excess expenditures incurred over the amounts restricted, committed or assigned to those purposes.

Spending Policy

When both restricted and unrestricted fund balances are available for use, it is the Authority's policy to use restricted fund balance first, then unrestricted fund balance. Furthermore, committed fund balances are reduced first, followed by assigned amounts and then unassigned amounts when expenditures are incurred for purposes for which amounts in any of those unrestricted fund balance classifications can be used.

Allocation of Expenses

The Authority reports each function's direct expenses, those that are specifically associated with a service, program or department and, thus, are clearly identifiable to a particular function.

The Authority has elected to not allocate indirect expenses.

Use of Estimates in the Preparation of Financial Statements

The preparation of financial statements, in conformity with generally accepted accounting principles, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual amounts could differ from those estimates.

NOTES TO FINANCIAL STATEMENTS - Continued

NOTE B - ACCOUNTING CHANGES / CORRECTION OF AN ERROR

For the year ended June 30, 2015, the Authority implemented the provisions of Governmental Accounting Standards Board Statement No. 65 ("GASB 65"), *Items Previously Reported as Assets and Liabilities*. In addition, the Authority recorded adjustments for a correction of an error.

As a consequence of adoption of GASB 65, net position was restated as follows:

Net position at June 30, 2014, <i>as originally stated</i>	\$ 2,214,237
Expensing of unamortized bond issuance costs	(27,674)
Amortization of loss on debt refunding	(18,697)
Net change in deferred loss on refunding	<u>239,158</u>
Net position at June 30, 2014, <i>as restated before correction of error</i>	2,407,024
Addition to bonds payable	(270,000)
Adjustment to interest payable	<u>20,534</u>
Net position at June 30, 2014, <i>as restated</i>	<u>\$ 2,157,558</u>

NOTE C - BUDGETARY POLICY AND PRACTICE

The General Fund is under formal budgetary control. Budgets shown in the required supplementary schedules for the major funds were prepared on a basis not significantly different from the modified accrual basis used to reflect actual results and consist only of those amounts contained in the formal budget approved and amended by the Authority.

In the body of the financial statement and the required supplementary schedules, the Authority's actual and budgeted expenditures for the budgetary funds have been shown on a functional basis. The approved budgets for these funds were adopted to the activity or cost center level. For budgetary purposes appropriations lapse at fiscal year end.

NOTES TO FINANCIAL STATEMENTS - Continued

NOTE D - CASH

At June 30, 2015, the Authority's cash balance included the following:

	<u>Cash</u>
Bank deposits	<u>\$ 892,574</u>

Custodial Credit Risk - Deposits

In the event of a bank failure, the Authority's deposits may not be returned to it. As of June 30, 2015, \$250,000 of the Authority's deposits were insured. The remaining balance of \$642,809 was exposed to custodial credit risk because it was uninsured and uncollateralized.

NOTE E - RECEIVABLES, UNCOLLECTIBLE ACCOUNTS AND UNEARNED REVENUE

Property Taxes Receivable, Unearned Revenue and Property Tax Calendar

Property taxes are levied each December 1 on the taxable valuation of property located in the City of Traverse City and Garfield Township as of the preceding December 31, the lien date. Property taxes are payable without penalty and interest through February 15; as of March 1 of the succeeding year, unpaid real property taxes are sold to and collected by Grand Traverse County. Assessed values are established annually by the government, and subject to acceptance by the County, are equalized by that State at an estimated 50 percent of current market value. The Authority's general operating and debt tax rate for the year ended June 30, 2015 was .0994 and .3000 mills respectively. Revenue from these millages was \$154,885 in the General Fund and \$475,876 in the Debt Service Fund.

NOTE F - INVESTMENTS IN CAPITAL ASSETS

Investments in capital assets consist of the following:

	<u>June 30, 2014</u>	<u>Additions</u>	<u>Retirements</u>	<u>June 30, 2015</u>
Land improvements	\$ 6,865	\$ 10,000	\$ -	\$ 16,865
Buildings and infrastructure	1,341,621	854,625	-	2,196,246
Equipment	<u>1,780</u>	<u>-</u>	<u>-</u>	<u>1,780</u>
Total depreciable assets	1,350,266	864,625	-	2,214,891
Less accumulated depreciation	(173,271)	(50,333)	-	(223,604)
Land	<u>5,567,462</u>	<u>-</u>	<u>-</u>	<u>5,567,462</u>
Total capital assets, net	<u>\$ 6,744,457</u>	<u>\$ 814,292</u>	<u>\$ -</u>	<u>\$ 7,558,749</u>

Depreciation expense was charged to the function in the statement of activities, as follows:

Recreation and culture	<u>\$ 50,333</u>
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NOTES TO FINANCIAL STATEMENTS - Continued

NOTE G - LONG-TERM LIABILITIES

Changes in long-term debt during the year ended June 30, 2015 were as follows:

	<u>Beginning Balance</u>	<u>New Debt</u>	<u>Payments</u>	<u>Ending Balance</u>	<u>Current Portion</u>
General obligation bonds	\$ 5,605,000	\$ -	\$ (320,000)	\$ 5,285,000	\$ 360,000
Long-term debt	<u>\$ 5,605,000</u>	<u>\$ -</u>	<u>\$ (320,000)</u>	<u>\$ 5,285,000</u>	<u>\$ 360,000</u>

Payments on general obligation bonds are made by the Debt Service Fund.

At June 30, 2015, the Authority's long-term debt consisted of the following:

2013 Unlimited Tax General obligation refunding bond; interest rate of 2.25%, matures 2025.	\$ 5,285,000
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Total annual requirements to amortize bonds outstanding as of June 30, 2015 are as follows:

<u>Years Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>
2016	\$ 360,000	\$ 115,373
2017	390,000	106,898
2018	425,000	97,689
2019	460,000	87,688
2020	500,000	76,840
2021-2025	<u>3,150,000</u>	<u>188,597</u>
	<u>\$ 5,285,000</u>	<u>\$ 673,085</u>

NOTE H - RISK MANAGEMENT

The Authority is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The Authority manages its risk exposures through the purchase of commercial insurance. There was no significant reduction of insurance coverage from prior years nor have the amounts of any settlements exceeded insurance coverage in any of the past three fiscal years.

NOTES TO FINANCIAL STATEMENTS - Continued

NOTE I - BALANCES AND TRANSFERS/PAYMENTS WITHIN THE REPORTING ENTITY

Transfers and Payments

Transfers and payments within the reporting entity are substantially for the purposes of subsidizing operating functions, funding capital projects and asset acquisitions or maintaining debt service on a routine basis. Resources are accumulated in a fund to support and simplify the administration of various projects or programs.

The government-wide statement of activities eliminates transfers as reported within the governmental activities column.

The following schedule reports transfers and payments within the reporting entity:

	<u>Transfers In</u>	<u>Transfers Out</u>
General Fund	\$ -	\$ 45,000
Capital Projects Fund	<u>45,000</u>	<u>-</u>
	<u>\$ 45,000</u>	<u>\$ 45,000</u>

NOTE J - RELATED PARTY TRANSACTIONS

The Charter Township of Garfield (the "Township"), a related party (by virtue of common Board members and management), provides services on behalf of the Authority. These services include, but are not limited to snow plowing, general management, maintaining financial records and financial reporting. In return for these services, the Township received fees from the Authority in the amount of \$5,933 during the year ended June 30, 2015.

Land Information Access Association ("LIAA"), a related party (by virtue of management), provides services on behalf of the Authority. These services include, but are not limited to, general management and financial reporting. In return for these services, LIAA received fees from the Authority in the amount of \$81,084 during the year ended June 30, 2015.

REQUIRED SUPPLEMENTARY INFORMATION

City of Traverse City and Charter Township of Garfield Recreational Authority

BUDGETARY COMPARISON SCHEDULE FOR THE GENERAL FUND

Year Ended June 30, 2015

	Budgeted Amounts		Actual (GAAP Basis)	Variances - Positive (Negative)	
	Original	Final		Original to Final	Final to Actual Total
Revenues					
Property taxes	\$ 152,000	\$ 152,000	\$ 154,885	\$ -	\$ 2,885
Interest	200	200	375	-	175
Grants and contributions	200,000	200,000	61,382	-	(138,618)
Barns Park rentals	20,000	20,000	47,750	-	27,750
Total revenues	372,200	372,200	264,392	-	(107,808)
Expenditures					
Recreational and cultural					
Office supplies	2,500	2,500	2,304	-	196
Professional services	392,500	377,500	203,861	15,000	173,639
Utilities and maintenance/Hickory					
Meadows Work Plan	20,000	20,000	19,948	-	52
Insurance and bonds	4,000	4,000	3,186	-	814
Travel	2,000	2,000	51	-	1,949
Capital outlay	40,000	10,000	10,000	30,000	-
Total expenditures	461,000	416,000	239,350	45,000	176,650
REVENUE OVER (UNDER) EXPENDITURES AND OTHER FINANCING SOURCES (USES)	(88,800)	(43,800)	25,042	45,000	68,842
Other financing sources (uses)					
Operating transfers out	-	(45,000)	(45,000)	(45,000)	-
REVENUES OVER (UNDER) EXPENDITURES AND OTHER FINANCING SOURCES (USES)	(88,800)	(88,800)	(19,958)	-	68,842
Fund balance, beginning of year	302,915	302,915	302,915	-	-
Fund balance, end of year	<u>\$ 214,115</u>	<u>\$ 214,115</u>	<u>\$ 282,957</u>	<u>\$ -</u>	<u>\$ 68,842</u>

City of Traverse City and Charter Township of Garfield Recreational Authority

BUDGETARY COMPARISON SCHEDULE FOR THE DEBT SERVICE FUND

Year Ended June 30, 2015

	<u>Budgeted Amounts</u>		Actual (GAAP Basis)	<u>Variance - Positive (Negative)</u>	
	<u>Original</u>	<u>Final</u>		<u>Original to Final</u>	<u>Final to Actual Total</u>
	Revenues				
Property taxes	\$ 460,000	\$ 460,000	\$ 475,876	\$ -	\$ 15,876
Total revenues	<u>460,000</u>	<u>460,000</u>	<u>475,876</u>	<u>-</u>	<u>15,876</u>
Expenditures					
Principal	320,000	320,000	320,000	-	-
Interest and fiscal charges	<u>125,569</u>	<u>125,569</u>	<u>125,312</u>	<u>-</u>	<u>257</u>
Total expenditures	<u>445,569</u>	<u>445,569</u>	<u>445,312</u>	<u>-</u>	<u>257</u>
REVENUES OVER EXPENDITURES	14,431	14,431	30,564	-	16,133
Fund balance, beginning of year	<u>402,655</u>	<u>402,655</u>	<u>402,655</u>	<u>-</u>	<u>-</u>
Fund balance, end of year	<u>\$ 417,086</u>	<u>\$ 417,086</u>	<u>\$ 433,219</u>	<u>\$ -</u>	<u>\$ 16,133</u>

City of Traverse City and Charter Township of Garfield Recreational Authority

BUDGETARY COMPARISON SCHEDULE FOR THE CAPITAL PROJECTS FUND

Year Ended June 30, 2015

	Budgeted Amounts		Actual (GAAP Basis)	Variances - Positive (Negative)	
	Original	Final		Original to Final	Final to Actual Total
Revenues					
Interest	\$ 20	\$ 20	\$ 81	\$ -	\$ 61
Grants and contributions	<u>700,000</u>	<u>767,000</u>	<u>720,734</u>	<u>67,000</u>	<u>(46,266)</u>
Total revenues	<u>700,020</u>	<u>767,020</u>	<u>720,815</u>	<u>67,000</u>	<u>(46,205)</u>
Expenditures					
Capital outlay	815,000	882,000	854,625	(67,000)	27,375
Other	<u>1,100</u>	<u>1,100</u>	<u>80</u>	<u>-</u>	<u>1,020</u>
Total expenditures	<u>816,100</u>	<u>883,100</u>	<u>854,705</u>	<u>(67,000)</u>	<u>28,395</u>
REVENUES OVER (UNDER) EXPENDITURES AND OTHER FINANCING SOURCES (USES)	(116,080)	(116,080)	(133,890)	-	(17,810)
Other financing sources (uses)					
Operating transfers in	<u>-</u>	<u>45,000</u>	<u>45,000</u>	<u>45,000</u>	<u>-</u>
REVENUES OVER (UNDER) EXPENDITURES AND OTHER FINANCING SOURCES	(116,080)	(71,080)	(88,890)	45,000	(17,810)
Fund balance, beginning of year	<u>117,099</u>	<u>117,099</u>	<u>117,099</u>	<u>-</u>	<u>-</u>
Fund balance, end of year	<u><u>\$ 1,019</u></u>	<u><u>\$ 46,019</u></u>	<u><u>\$ 28,209</u></u>	<u><u>\$ 45,000</u></u>	<u><u>\$ (17,810)</u></u>



Thomas E. Gartland, CPA
Brad P. Niergarth, CPA
James G. Shumate, CPA
Robert C. Thompson, CPA
Michael D. Shaw, CPA
Mary F. Kranz, CPA
Shelly K. Bedford, CPA
Heidi M. Wendel, CPA
Shelly A. Ashmore, CPA
James M. Taylor, CPA

**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN
ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS***

Board of Directors
City of Traverse City and Charter Township of Garfield Recreational Authority

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of the governmental activities, each major fund and the aggregate remaining fund information of *City of Traverse City and Charter Township of Garfield Recreational Authority* (the "Authority") as of and for the year ended June 30, 2015, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements, and have issued our report thereon dated December 28, 2015.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control.

Our consideration of internal control was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. However, as described below, we identified deficiencies in internal control over financial reporting that we consider to be material weaknesses.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Authority's financial statements will not be prevented, or detected and corrected on a timely basis. We consider the deficiencies described below to be a material weakness:

Segregation of Duties

Criteria: Adequate segregation of duties for the Authority is necessary to minimize the likelihood that fraud or errors could occur and not be detected.

Condition: The Authority has not achieved a complete segregation of duties among employees who have both access to assets and accounting responsibilities.

Cause: The small size of the office staff creates an inherent lack of segregation of duties.

Effect: As a result of this condition, the Authority lacks proper segregation of duties and is exposed to an increased risk of misstatement of its financial statements.

Management's Response: The Authority has evaluated the manner in which they segregate duties and has implemented certain measures. However, the cost associated with adding additional staff to achieve a complete segregation is not justified by the expected benefits.

Preparation of Financial Statements

Criteria: The preparation of financial statements is the responsibility of the Authority management and requires internal controls over both (1) recording, processing and summarizing financial data (i.e., maintaining internal books and records) and (2) reporting this financial data in the form of financial statements, including all related note disclosures (i.e., external financial reporting).

Condition: As is the case with many small nonprofits, the Authority is relying on their independent external auditors to assist with the preparation of the financial statements and related note disclosures as part of its external financial reporting process.

Cause: This condition was caused by the Authority's decision that it is more cost effective to outsource the preparation of its annual financial statements to auditors than to incur the time and expense of obtaining the necessary training and expertise required for the Authority to perform this task internally.

Effect: The Authority's ability to adjust its books and records and prepare financial statements is based, in part, on its reliance on its external auditors who cannot, by definition, be considered a part of the Authority's internal controls.

Management's Response: The Authority has evaluated the cost vs. benefit of establishing internal controls over the preparation of financial statements in accordance with GAAP, and determined that it is in the best interests of the Authority to outsource this task to its external auditors and to carefully review the draft financial statements and notes prior to approving them and accepting responsibility for their content and presentation.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Authority's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Dennis, Gartland & Niergarth

December 28, 2015

The City of Traverse City and Charter Township of Garfield

Communication to the Recreational Authority

FOR THE MEETING OF MARCH 2, 2016

DATE: THURSDAY, FEBRUARY 25, 2016

FROM: MATT COWALL, EXECUTIVE DIRECTOR

SUBJECT: CONSIDERATION OF A DRAFT COOPERATIVE AGREEMENT
WITH THE CITY OF TRAVERSE CITY CONCERNING
HICKORY MEADOWS AND HICKORY HILLS

As the Board is aware, fundraising efforts are in full swing to support the first phases of renovations at the city-owned Hickory Hills property adjacent to Hickory Meadows. The attached draft Cooperation Agreement between the city and the Authority was prepared by the Preserve Hickory group to assist with its grantseeking efforts on behalf of Hickory Hills. Essentially, a demonstrated cooperative atmosphere between the adjacent park properties would be looked upon favorably by potential funders moving forward, beginning with a grant application that is due April 1 of this year.

The two park properties have naturally collaborated since Hickory Meadows was established in 2005, and it's safe to say that park users enjoy both areas without much regard for property boundaries between the two. More recently, both jurisdictions have expressed at least general support for coordinated infrastructure such as trails, though the details of which remain to be determined and are not likely to be jointly acted upon anytime soon as Hickory Hills focuses on projects within its own bounds.

For its part, the Hickory Meadows Advisory Committee (HMAC) is focused on making sure that any commitments pertaining to the Meadows remain faithful to the original public intent for the park (as expressed in the public ballot initiative) and to the park's adopted management plan. The HMAC will be meeting prior to Wednesday to review the draft Cooperation Agreement and make its own recommendations to the Board. I also expect representatives of Preserve Hickory to be in attendance on Wednesday night to speak to the agreement and answer your questions.

Continued →

If any edits are desired by the Board, I will send a revised document to the city for its review. The degree of any changes would then determine whether or not the document would have to return to the City Commission. If it pleases the Board, the following sample motions would be appropriate to confirm a cooperative agreement:

Approved as is:

That the Chair be authorized to execute the Cooperation Agreement with the City of Traverse City regarding Hickory Hills and Hickory Meadows.

Approved with changes:

That the Chair be authorized to execute the Cooperation Agreement as amended with the City of Traverse City regarding Hickory Hills and Hickory Meadows.

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Cooperation Agreement

The City of Traverse City, the City of Traverse City and Garfield Township Recreational Authority and Preserve Hickory
Cooperation Agreement for
Hickory Hills and Hickory Meadows

The Parties enter into this Cooperation Agreement on the basis of the following:

1. Hickory Hills, a public park, is owned and operated by the City of Traverse City. Hickory Hills encompasses approximately 125 acres of parkland, portions of which host a downhill ski park, trails, a disc golf course and wooded recreational parkland.
2. Hickory Meadows, a public park, is owned and operated by the Joint Recreational Authority. Hickory Meadows encompasses approximately 125 acres of parkland, consisting of meadows and wooded recreational parkland that host recreational trails.
3. Both parks were established for public recreation.
4. Hickory Hills and Hickory Meadows are adjacent, sharing a border on the eastern boundary of the Hills and the western boundary of the Meadows.
5. The City and Preserve Hickory are invested in preserving and improving the Hickory Hills through the implementation of the Hickory Hills Master Plan ("Plan"), adopted by the City and Garfield Township by joint resolution on August 18, 2015.
6. The Traverse City City Commission pledged \$1.5 million from the Brown Bridge Trust Parks Improvement Fund to implement the Hickory Hills Master Plan. Preserve Hickory, a 501(c)(3) non-profit with the goal of preserving the Hickory Hills, has embarked on a capital campaign with a phase 1 goal of \$1.6 million to raise the required, Brown Bridge match.
7. The Hickory Hills Master Plan anticipates a new lodge, new parking, outdoor bathroom facilities and a picnic area to be located on Hickory Hills' property close to the shared border of Hickory Hills and Hickory Meadows. The infrastructure on the site will be designed and located in a manner that provides for desired trail connections between the two parks and serves users of both properties.
8. The Parties understand that the Hickory Hills Master Plan, while adopted, is conceptual in nature and may be modified with fundraising, design, engineering, site development and additional public and park user input as the project progresses.
9. In April 2015, Preserve Hickory engaged the design services of Morton Trail Design to develop a conceptual trail design for Hickory Hills incorporating trail connections between the two parks so that Hickory Hills infrastructure could be located for potential future, inter-park trail connection and development. With permission from the Recreational Authority through its Hickory Meadows Advisory Committee, Morton Trails designed and flagged potential trail routes connecting the two parks while providing running, Nordic ski and walking trails.
10. The Hickory Meadows' Management Plan, attached hereto as Ex A, anticipates trail expansion and connections between Hickory Meadows' and Hills' trails and other regional trail systems accommodating hikers, trail runners, mountain bikers, nature enthusiasts, dog owners and cross country skiers (pg. 4 of Plan).

- 11. With the implementation of the Hickory Hills Master Plan, significant opportunity exists to plan for and improve both parks and potentially connect and expand the trails within Hickory Hills and Meadows. The infrastructure anticipated by the Plan, attached hereto as Ex. B, will benefit users of both parks.

The Parties agree as follows:

- 1. The new lodge, parking, lighting, outdoor-access restrooms and park entrance to be built with the implementation of the Hickory Hills Master Plan will serve, benefit and be shared by both parks and users of both parks.
- 2. The development of trails connections between Hickory Hills and Meadows and the expansion of trails within both parks and connections to other trail systems are shared, common goals of the parties.
- 3. The parties wish to cooperate in exploring, planning, developing and fundraising for trail connections and expansion between and within Hickory Hills and Meadows and authorize Preserve Hickory to develop concepts for presentation to the City and Recreational Authority consistent with these goals.
- 4. The parties agree the November 10, 2015 Hickory Hills Trails Concept developed by Morton Trails for Hickory Hills and Hickory Meadows (attached hereto as Ex. C and incorporated herein) shall be a blueprint for future trail development and potential trail expansion on both properties.
- 5. The parties understand that as trail design becomes more refined with cooperation and public input, trail development within Hickory Hills and Meadows, consistent with the management and operation plans of both municipalities, will likely be phased over a period of years.
- 6. When Preserve Hickory's two-phased fundraising goals for Hickory Hills have been met, the non-profit will assist in fundraising efforts for trails within Hickory Meadows based on the November 10, 2015 Hickory Hills Trails Concept for Hickory Hills and Hickory Meadows.
- 7. The City and the Recreational Authority will independently seek government grants where appropriate to develop trails and will cooperate to support the fundraising efforts of all parties.
- 8. The parties agree to support the project and potential trail development and communicate with supporters, public and private partners, donors, prospective donors, and the public.
- 9. The parties will work in good faith to establish, maintain and manage the trails as a first-rate, comprehensive trail system

The parties may amend this agreement from time to time. Upon notice, either party may withdraw from this agreement at any time. The parties have executed this Memorandum on the date indicated below:

City of Traverse City: _____
 Martin Colburn, City Manager Date _____

The City of Traverse City and Garfield Township
 Recreational Authority : _____
 NAME/TITLE Date _____

Preserve Hickory: _____
 Laura Ness, President Date _____

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 will be focused on two primary areas: providing passive recreation opportunities and protecting natural features. To this end, management activities will be minimal and needed only for user amenities and activities needed to maintain the integrity of natural features on the property. Annual work plans will be created and approved to address specific management tasks needed on the property.

Property History

The Hickory Meadows property originally contained upland forest and wooded swamp wetlands before European settlement. The vegetation was unspoiled 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, an 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 shows 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 city limits, was owned (in 1905), separately, by G. W. McWethey, G. Pubus, and Anna Koenig. 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, the 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

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.

Administration

Governing Body

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

Advisory Committee

The Recreation Authority authorized the creation of a seven member advisory committee in 2005. The advisory committee will make management recommendations to the Recreation Authority for final approval. The Recreation Authority shall appoint members of the advisory committee and review appointments on an annual basis.

Maintenance

A property manager appointed by the Recreation Authority shall perform or oversee, all maintenance required at Hickory Meadows. This person or entity shall prepare an annual maintenance report for submittal to the advisory committee. A scope of services for the property manager is listed under Schedule A in the appendix.

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 law. Pet owners are required to clean up after their pets.
5. Hunting and trapping is not allowed on the property. Fishing is allowed in accordance with the laws of the State and the rules of the Michigan Department of Natural Resources.
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 and household trash.
8. No person shall damage, deface, or destroy any public owned property within Hickory Meadows.
9. Glass containers and alcoholic beverages are prohibited at Hickory Meadows.

Enforcement

The rules for Hickory Meadows should be approved by the advisory committee and submitted to the Recreation 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 access will be provided at the parking areas. Access to the meadows on the property shall also be provided for emergency vehicles. Emergency service agencies shall be provided with a key to any locked gates on the property.

Publicity

Because of the use Hickory Meadows already sustains and due to its proximity to the well-known Hickory Hills ski area, it is unlikely that a publicity campaign is needed at this time. However, trail maps and brochures should be distributed at locations throughout the area such as the Chamber of Commerce and the Visitors Bureau.

Future Property Acquisitions

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 Trails, several parcels of land or trail easements would need to be acquired to accomplish this. It is recommended that the advisory committee and the Recreation Authority pursue any opportunities to acquire these parcels.

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 recreation, in this case, is defined as non-consumptive of the resource and non-organized. The opposite of passive is active recreation, which includes improvements such as soccer and baseball fields. Hickory Meadows will accommodate many low impact users including but not limited to:

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

No fees will be assessed to individual users of Hickory Meadows. Fees may be charge for commercial or organized group use of the property. Motorized bike, ORV, and horse traffic is not allowed within the Hickory Meadows unless required for management/maintenance activities. Paintball is also prohibited at Hickory Meadows.

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. Relevant contact information is provided at each trailhead.

Current Trails

The current trail system is well established and winds through most of the cover types present on the property.. There are three primary trails currently used at Hickory Meadows. The first runs from east to west across the large meadow, roughly paralleling Randolph Street at the southern end of the property. The second trail runs along the north edge of the pine plantation, then turns north and leads to the barn on M-72. There is also a loop trail that runs around the perimeter of the large meadow at the west end of the property. (See map) This trail was designated and groomed as a ski trail during the winter months for several years. However foot and pet traffic rendered the grooming largely ineffective and this effort eventually stopped.

Proposed Trail System

At some point it may be desirable to reconfigure the existing M-72 spur trail into a loop. This loop could pass through the Hickory Hills property and may have substantial elevation changes. Because the upland soils on this site are prone to erosion, any trail will need to be constructed and monitored carefully to ensure erosion does not become a problem. That being said, loop trails are almost always preferable to “out and back” trails and this would provide views and elevation changes not available at other locations at Hickory Meadows.

Future Trail Construction

Future trail construction should be kept to a minimum and done in manner that minimizes environmental impact and disruption to user activities. If new trails become established by frequent visitor use, these new trails should either be blocked or properly marked and maintained to prevent erosion and provide a safe user experience.

Trail Surfaces

Trail surfaces should be designed first and foremost to limit erosion. Secondly, they should be easily maintained and provide an enjoyable experience for all user groups. Woodchips are an easily renewable and inexpensive way to surface trails. Wood chips should be used where necessary to prevent erosion, and trail surfaces should be left “natural” when practical. However, when practical, ADA compliant trails with improved surfaces should be constructed in order to make the property more accessible to those with limited mobility.

Adjacent Lands and Trail Considerations

As noted above, it may be desirable for a future trail at Hickory Meadows to pass through the adjoining Hickory Hills property. A partnership with Traverse City Parks and recreation will help ensure that recreational opportunities and management efficiencies are maximized.

It is possible that in the future Hickory Meadows could be connected to other trail systems such as TART trails, or the trails at the Commons. These connections should be encouraged, as they will add valuable recreation opportunities for users. Partnerships with other organizations such as TART or Traverse City may prove valuable for sharing trail-grooming costs.

Trailheads & Parking

Parking areas and corresponding trailheads will be established at the following locations in Hickory Meadows.

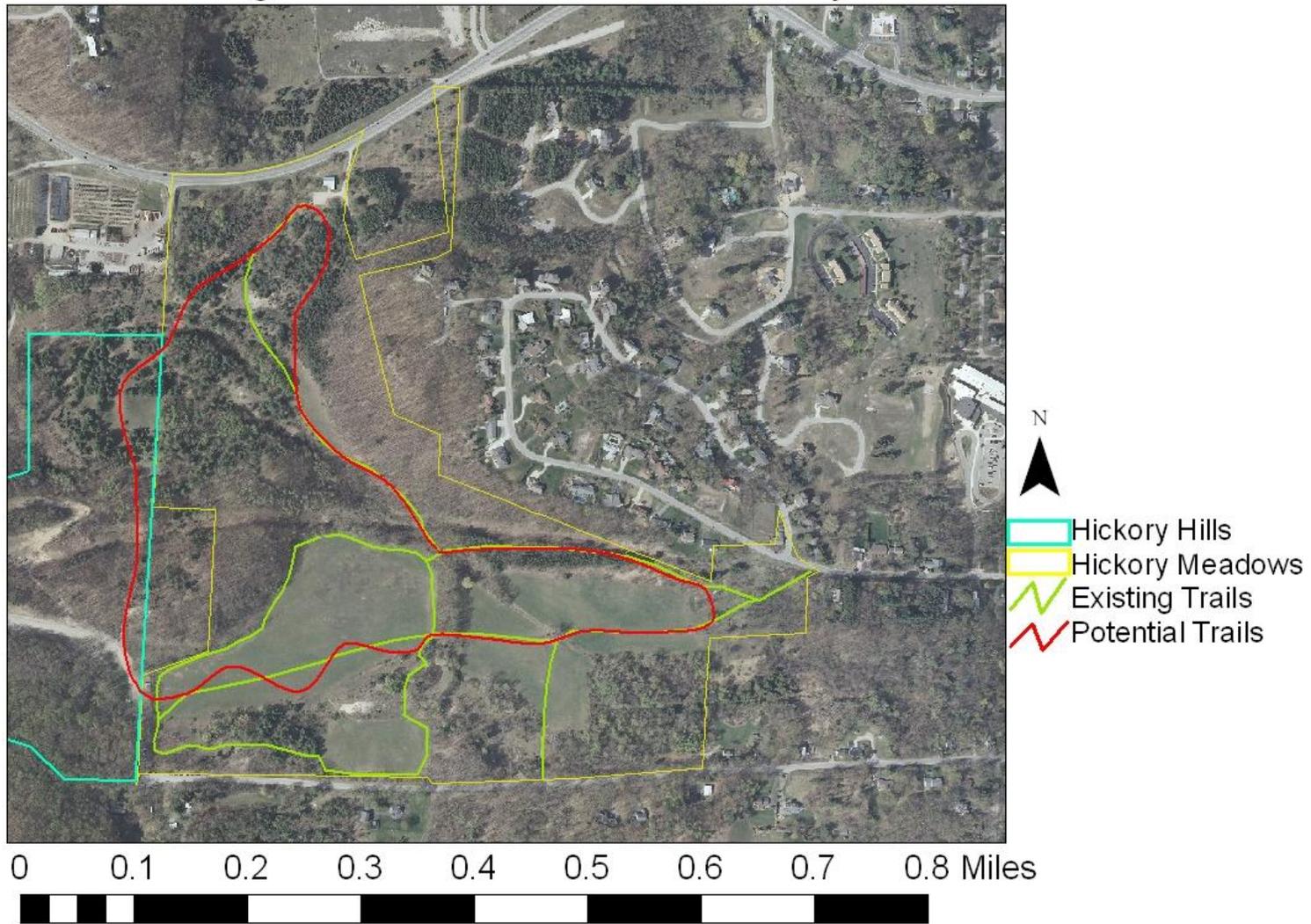
1. Randolph Street at the southwest corner of the property.
2. Wayne Street along the east side of the property (on street parking only)
3. At the barn on M-72 on the north end of the property.

Each trailhead/parking area shall have a garbage bin, as well as, an information station/kiosk. The parking areas should be bordered by fence or large rocks to clearly delineate their bounds and prevent vehicles from entering the meadows. Parking areas should be sized according to expected demand and spatial limitations. The existing parking at Randolph Street should be expanded as this parking lot is shared with users of the popular Hickory Hills disc golf course. During the warmer months cars often spill out of the parking lot and line up along Randolph Street.

Restrooms and Other Facilities

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 Rec-Authority's permission.

Existing and Potential Trails at Hickory Meadows



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. 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, Northern Mesic 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 have been practiced on the property for many years.

Timber Harvesting

Timber harvesting for monetary gain is not recommended. Harvesting for uses within the property (e.g. fencing, erosion cribs, etc.) may be useful. Harvesting for this purpose shall be conducted only with approval of the Advisory Committee. Management should be granted the right to harvest trees in order to keep the integrity of the forest from deteriorating or if the safety of the visitor is in question. The removal of dead trees along trails is an important issue. However, dead trees (standing and fallen) are important to the ecological health of the natural area and should be retained if not deemed hazardous by the manager.

Insect and Disease Control

Damage from insects and diseases can be extremely serious to the health of a forest. However, there are no known problems existing at Hickory Meadows. 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:

- Gypsy Moth – An exotic from Europe, the gypsy moth is the main defoliator of forests in the Northeastern U.S.
- Emerald Ash Borer – Another non-native species, emerald ash borers originally come from East Asia. As its name implies, it only harms ash trees.

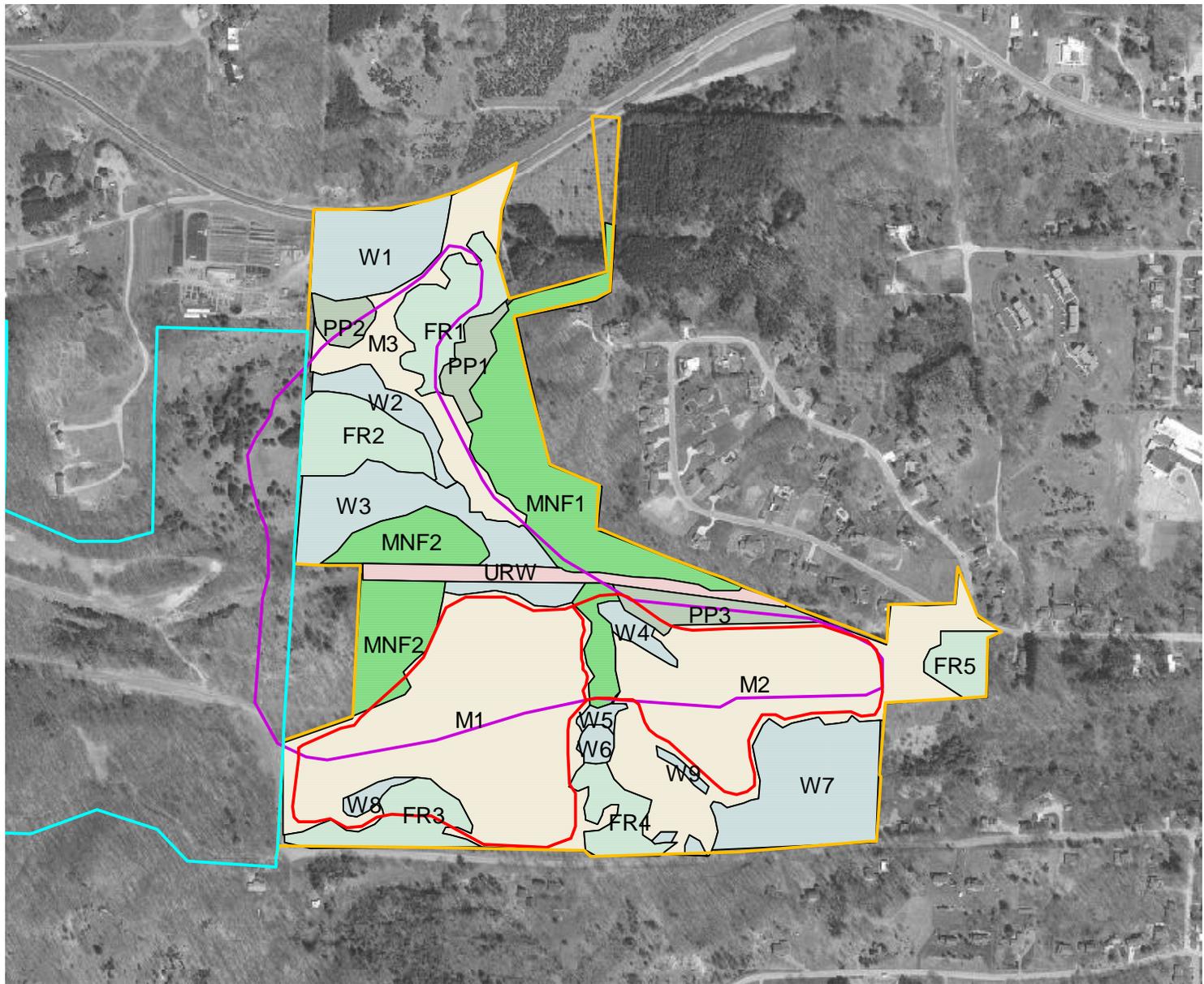
Diseases:

- 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 so in Hickory Meadows because sandy soils are more conducive to this type of spread.

Non-Native Plant Control

Where practical the manager should remove non-native invasive species. The two species of most concern at Hickory Meadows are scotch pine and autumn olive. While there are significant amounts of these species established, it should be relatively easy to remove them over time.

Hickory Meadows Management Units



- Hickory Hills
- Hickory Meadows
- Ski Trail
- Hiking Trail
- Management units.shp**
- Forest Regeneration
- Meadow
- Mesic Northern Fores
- Pine Plantation
- Utility Right of Way
- Wetland



Wildlife Management

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

In general, the feeding of wildlife on the property should be discouraged.

Hunting and Trapping:

- A. 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” species known to reside on the Hickory Meadows property. However, the Hickory Meadows property includes habitat suitable for several of these species. As mentioned above, a comprehensive inventory of wildlife on the property should be completed to identify any “endangered” or “special concern” 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 stream, which flows from northwest to southeast across the property. Trails and other recreational resources should be planned and maintained in such a way that minimizes impacts to these water features.

Fishing

Fishing may be allowed within Hickory Meadows. It shall be conducted according to all state and MDNR rules and regulations. Introducing fish into the tributaries 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 Rec Authority should work closely with adjacent landowners to minimize negative impacts from these lands.

Education/Interpretation

Signs

1. 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.

2. Interpretive Signs

The Advisory Committee or property manager shall decide on topics for interpretive signage. Interpretative signage will be limited to the trailhead kiosks at parking areas.

All signage, with the exception of trail identification markers, should be limited to parking areas and trailheads.

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 and etiquette.

Group Use

Group use will be welcomed at Hickory Meadows. Organized groups of more than 50 people should contact the Hickory Meadows manager before use of the property.

Research

Research regarding the natural and recreational qualities of Hickory Meadows should be encouraged. The Advisory Committee shall review and make recommendations to the Recreational Authority for prior approval of all research projects. This research will be beneficial to the ongoing management and improvement of the Hickory Meadows property



HICKORY HILLS SKI PARK & RECREATION AREA
 CONCEPT B - WINTER PLAN

0 50 100 200
 Feet
 0 50 100 200
 Feet

SE GROUP

[15]

SE GROUP

Exhibit B

WINTER CONCEPT B

Concept B takes a fresh look at the park and establishes a new center or "heart" for Hickory Hills. While utilizing the existing facilities, Concept B expands terrain, improves circulation, finds efficiency in the operations, and establishes an improved guest experience. Concept B also has the potential to build a stronger connection with Hickory Meadow due to the location of the facilities.

The facility improvements and recreational offerings take advantage of the site's unique terrain, harness opportunities to attract residents and visitors, and respond to the desires of the community. The end result would allow Hickory Hills to gradually work towards financial stability by improving the guest experience and increasing the per-ticket yield. Key elements include:

- A. The Drop Off and Parking provide an intuitive arrival for the visitor. An entry road leads to a drop off and offers parking at a convenience. Walkways, seating, lighting, and landscaping present an arrival that allows families to find one another and new guests to feel welcome and comfortable.
- B. The New Lodge would house all guest services in one building including additional seating for tubing guests. The Lodge would be two-story and have views up the valley towards the learning terrain, terrain parks, and race terrain. The new lodge provides adequate space for all guests (marking the high end of the space use requirements) and includes a large outdoor deck to enjoy the afternoon sun.

A benefit of Concept B is the existing lodge can remain in place; providing historical architectural nostalgia and serve as storage and/or warming hut.
- C. Terrain Expansion and Circulation for skiers/riders including terrain park and features, learning terrain, recreational terrain, and glades. Concept B offers the best of Hickory's terrain and captures the circular circulation that will make Hickory feel big.

D. New surface lifts provide improved circulation and offer a new lift option—a platter tow. The platter tow takes guests out of the base area, offers new round trip ski/ride opportunities, and meets the requests of the community. A handle tow is recommended for the new learning area. No additional personnel are needed as the lift operations remain constant (no net increase in surface lifts).

With the surface lifts and terrain expansion, the overall capacity of the ski area would modestly increase allowing for potential visitation increase.

- E. Snow Tubing (warming hut would be shared use with the new lodge, increasing food and beverage sales). As an alternative to snow tubing, a small community sledding hill is located near the park entry. This area would have a pavilion area and be great for families who want to enjoy Hickory but do not ski/ride. A sledding hill may be an activity to implement prior to snow tubing to better measure the communities interest in coming to hickory for a winter activity other than skiing/riding without expending the capital necessary for snow tubing.
- F. The Nordic Trail network includes approximately 3.4 km of new trails for a total trail network length of 4.0 km. Integrating nordic trails with existing ski terrain during race events would comfortably accommodate a 5 km course.
- G. Snowshoe trails could be expanded beyond the existing trail network today.

At this point, the trail layout for Snowshoe and Nordic is conceptual. As design refinement continues, trail layouts should consider other networks/uses (walk, run, bike, disc golf) to avoid user conflicts.

Note: Locations and alignments of activities shown on the plan are conceptual with the goal of providing feasibility and establishing parameters for pricing. Further design refinement/development will be required for each individual improvement.



HICKORY HILLS MASTER PLAN

[18]

Exhibit B

Hickory Hills Trails Concept
DRAFT November 10, 2015

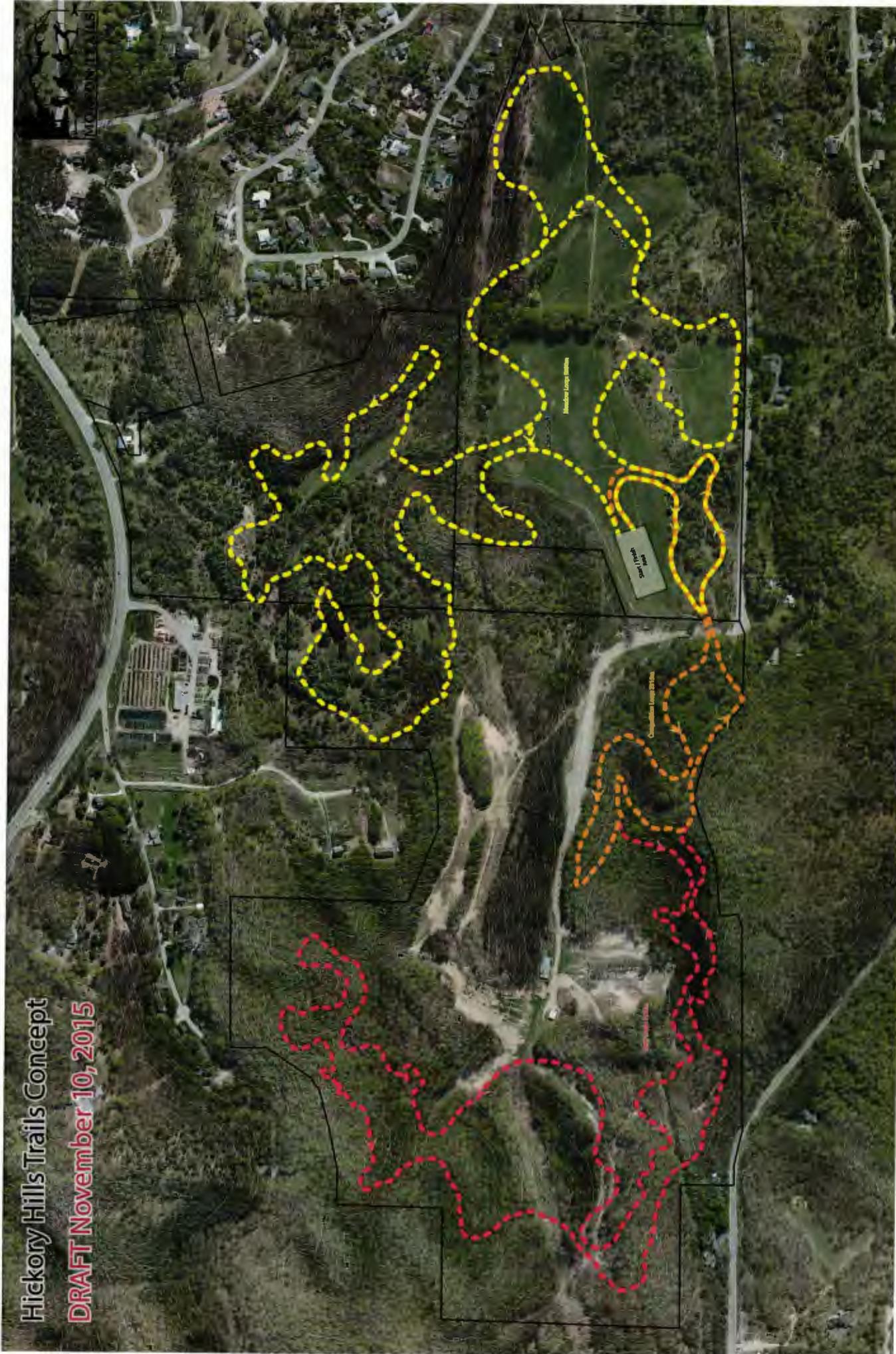


Exhibit C

The City of Traverse City and Charter Township of Garfield

Communication to the Recreational Authority

FOR THE MEETING OF MARCH 2, 2016

DATE: THURSDAY, FEBRUARY 25, 2016

FROM: MATT COWALL, EXECUTIVE DIRECTOR

SUBJECT: PRESENTATION OF THE ENERGY FARM MASTER PLAN FOR
HISTORIC BARNS PARK

SEEDS has completed work on the Energy Farm Master Plan for Historic Barns Park and has asked for this agenda item to present the Plan to the Authority. For the purposes of the meeting, they have provided the attached executive summary. I will also include the full master plan report in the electronic version of the meeting packet; let me know individually if you would also like a hard copy of the full report. I want to once again thank and acknowledge Rotary Charities of Traverse City and the Grand Traverse Regional Community Foundation for their support of this effort.

If it pleases the Board, the following motion would be appropriate to accept the plan:

That the Historic Barns Park Conceptual Design for Energy Action Planning be accepted.

Executive Summary of Historic Barns Park Conceptual Design for Energy Action

The Historic Barns Park (HBP) is establishing itself as a regional farm and garden destination, wedding and event hosting venue, community space, recreational park, and now an energy demonstration site. The Park is undergoing a tremendous period of regrowth, repurposing buildings and grounds from a near-fallow state and amplifying both activity and energy and material consumption at the facility.

The HBP Business Plan formally addresses the concept of the “Energy Farm”. Achieving this vision would place the HBP on a leadership trajectory in two areas: 1) modeling for the community use of energy efficiency as a tool for cost savings and 2) showcasing energy management and technologies both for educational benefit and as a draw for additional visitors to HBP.

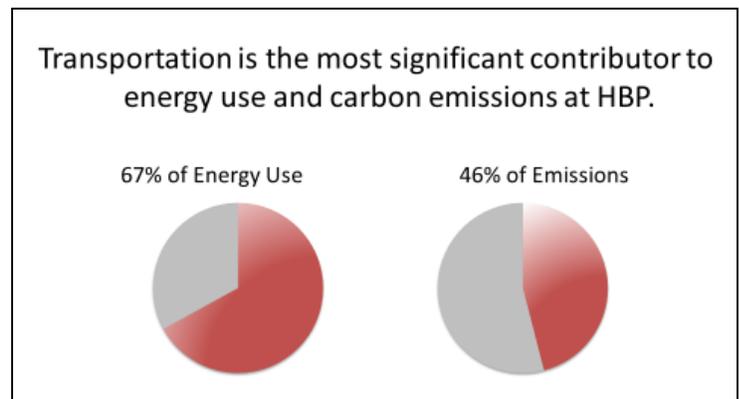
The purpose of this study and plan design is to 1) analyze the energy resources necessary to sustain this growth and 2) outline a process for engaging park visitors in energy conservation and production practices in furtherance of this goal.

ESTABLISHING A BASELINE

To develop a plan for energy farm investment and development, initiate a sound cycle of responsible energy management and to track progress toward energy goals, we first establish a baseline of energy use and impacts. Starting with the year 2015, we have evaluated energy use and greenhouse gas emissions associated with

- The current use of buildings,
- Vehicles and equipment used on site,
- The transportation of visitors to the site
- Supplies and materials used and
- Waste generated by park activities.

Additionally, we have estimated the current carbon sequestration value of existing park lands to understand how changes in land use may impact the property’s ability to mitigate the emissions associated with the energy use.



From this baseline, forecasts of energy and emissions two and five years into the future were developed based on the HBP 5-year Business Plan, the Master Site Plan developed for the Botanic Gardens by Nelson, Byrd, Woltz, updated transportation plans, and interviews with park partners. These projections are considered the “business-as-usual” estimates and include energy usage associated with average levels of transportation and building energy efficiency, standard material consumption and average waste management practices. Taken together, this Business-As-Usual model shows site energy use, transportation energy and total greenhouse gas emissions would all increase about 5-fold over 5 years.

SETTING INTENTIONAL TARGETS

To ground the design of this Energy Action Plan in the community and to insure its relevance, we first interviewed project partners, neighboring stakeholders, other regional stakeholders, and a cohort of expert advisors. These interviews offered insight into how the Energy Farm concept might weave through the operations and aspirations of each organization and the potential developing an Energy Farm demonstration project holds as resource and catalyst for advancing regional interest, dialog, and action on energy concepts, technologies, and practices.

Park partners identified their priority drivers essentially as

- Running park operations efficiently and cost effectively over the long term;
- Creating avenues for new philanthropic and other resource development;
- Current high priorities for development of irrigation, pathway lighting and roads; and
- Bringing new visitors to this one-of-a-kind park.

The four expert advisors contributing to this analysis each identified a principal challenge:

1. **Debbie McKeon**, *co-architect of the HBP Business Plan as former Executive Director of NorthSky Nonprofit Network (a program of Rotary Charities of Traverse City) and current Senior Vice President with the Council of Michigan Foundations:*
 - This conceptual design phase is the place and time to dream big.
2. **Skip Pruss**, *former Director of the Michigan Department of Energy and current Principal of 5 Lakes Energy, LLC:*
 - Aim for Net-Zero environmental impact minimizing the footprint of all activities.
3. **Jim MacInnes**, *member of the Institute of Electrical and Electronics Engineers and President and Co-Owner of Crystal Mountain Resort and Spa*
 - Make every energy flow accessible to learners of all ages.
4. **Tim Pulliam**, *Co-Founder of Keen Technical Solutions*
 - Focus on kids as the most critical and important audience to reach.

To answer to these challenges we crafted an Energy Action Plan identifying 10 strategies that, if fully implemented, would realize net-zero site energy consumption and mitigate 66% of the full carbon footprint of the Park's activities.

This analysis also considers energy and capital costs. If fully implemented the prescribed ten strategies would decrease energy costs over the next 5 years, compared to business as usual (BAU), and would ultimately become cash positive. Coupling energy efficiency strategies that have a rapid payback with longer term investments in onsite renewable technologies for energy generation is conservatively projected to yield a modestly cash positive 7.9% internal rate of return over 30 years, with a 19 year simple payback, independent of incentives, grants, or tax credits.

Credit should also be prominently given to an unprecedented collaboration of co-funding leadership for the geothermal system for the Barns and Visitor Center; this can be considered the first project of the Energy Farm. Each of the local electric utilities, Consumers Energy, Cherryland Electric and Traverse City

Light & Power, participated, including the two who do not serve this parcel, demonstrating that the Energy Farm concept is already tested and supportive of further implementation.

PRINCIPLES

We have identified five organizing principles as a conceptual umbrella to define a general approach to manifest the vision for HBP.

1. **FOCUS ON ENERGY EFFICIENCY FIRST:** Two renovated buildings on the campus were already designed to achieve high efficiency standards. This is great! However, to achieve a net-zero energy campus in a manner as cost effective as possible, deeper energy efficiency standards need to be achieved on the remaining renovations and all new construction and infrastructure should be implemented with the most reliably efficient technologies available. Long-term investments in efficiency continue to outpace the economics of renewable energy installations and efficiency is key to positive ecological impacts. This would also include zero-waste principals and policies.

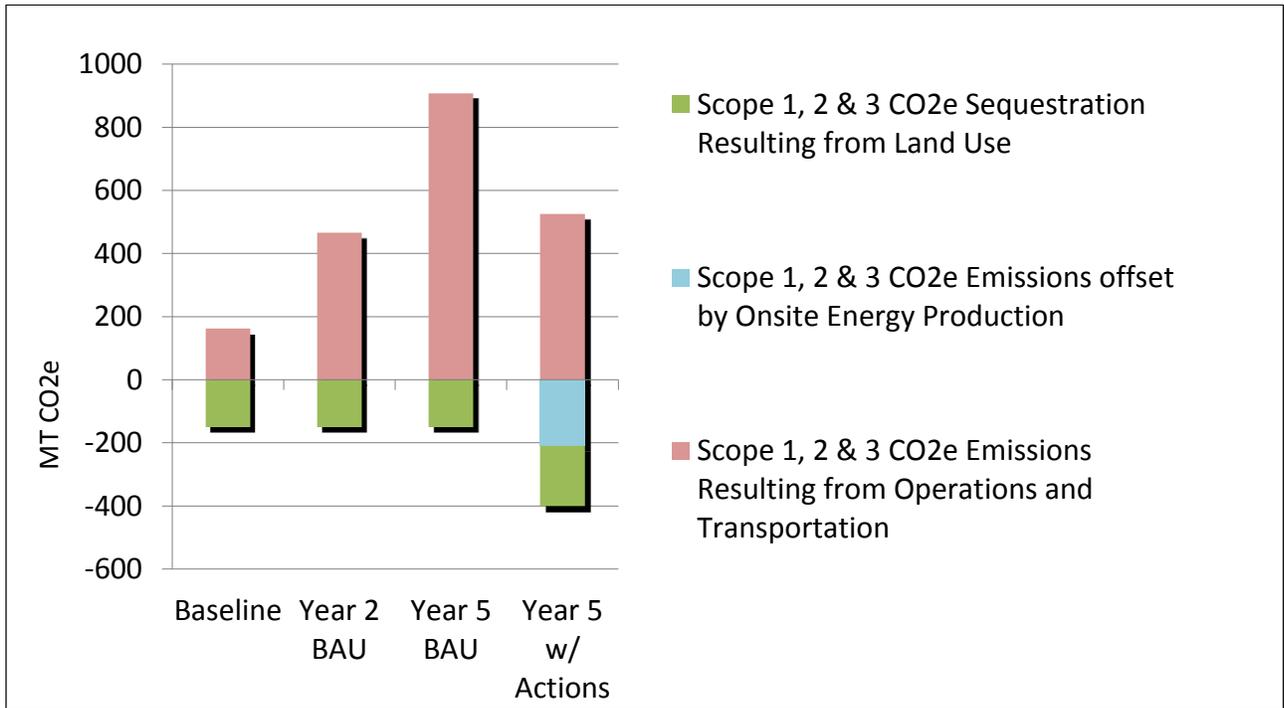
2. **SHARE RESOURCES:** Already a high priority for all project partners, there are more great opportunities to share energy and infrastructure resources within the campus and with campus neighbors. Considerable energy and cost savings and behavior change opportunities exist by establishing partnerships with neighbors. Sharing opportunities include parking facilities and districting energy supply and backup on campus. For example, sharing parking facilities and setting up EV car / shuttle stations to encourage the maximum number of park users are among several options available in which resources can be conserved through creative cooperation.

3. **PRODUCE 100%+ RENEWABLE ENERGY ON SITE:** If the remaining three building renovations are completed to the highest energy efficiency retrofit standards, the current flat roof space of the Pavilion, 221 Classroom, and 223 Garage collectively hold sufficient area to meet 100% of the estimated on site energy demand using grid-tied solar arrays. Other locations across the campus hold additional opportunity for more geothermal, solar, wind, passive solar (e.g. hot water), biomass and other demonstrations of renewable energy technologies and opportunities to offset greenhouse gas (GHG) emissions.

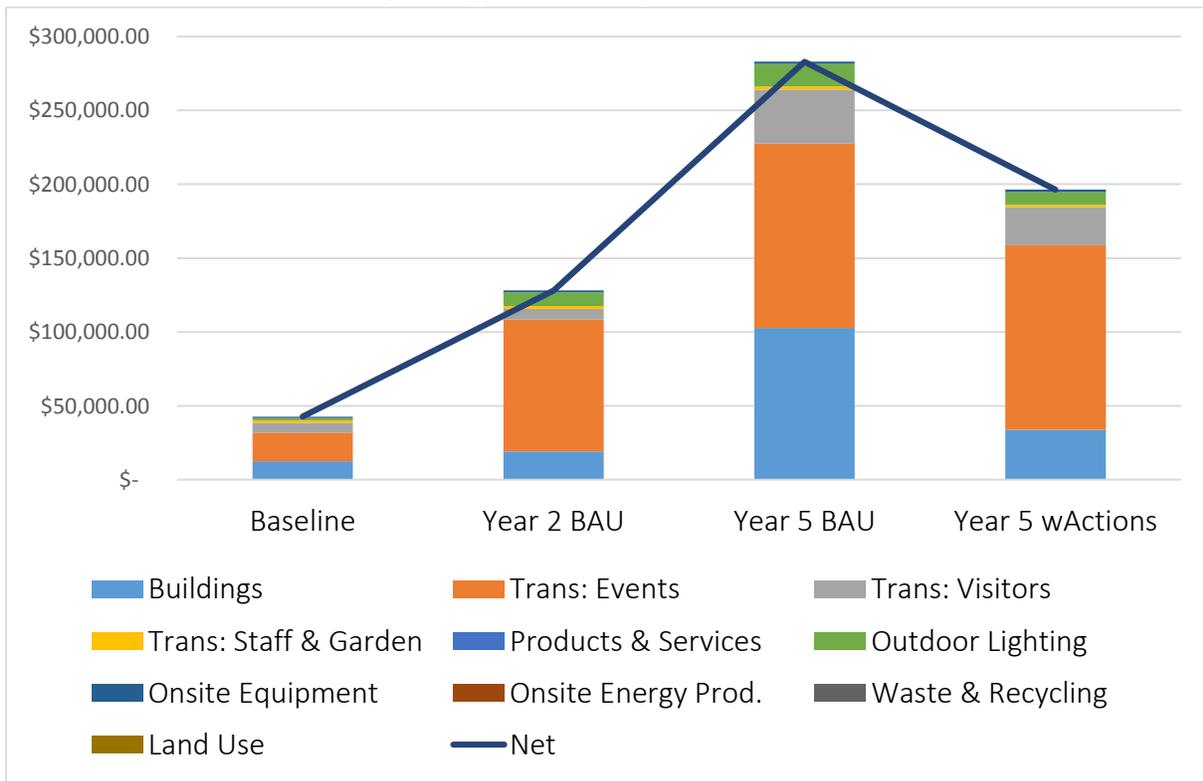
4. **FARM CARBON:** With the Park's landscape priorities, pursuing best practices to preserve and even enhance the landscape's ability to sequester carbon is an attractive strategy. More than half of the 56 acre campus is intended for agriculture or active garden management – some or all of which can be planted and managed to maximize carbon sequestration capacity, further offsetting GHG emissions.

5. **EDUCATE WITH EVERYTHING** Each build-out and installation provides a tremendous teaching and learning opportunity for all users of the park. To make this learning environment possible, equipment and controls should be monitored and networked for performance optimization and used to publicly illustrate systems at work. Engaging visitors and the region in a fun, informative and beautiful parkland setting is an unparalleled opportunity to demonstrate the complex interconnections of energy at work in our lives.

Forecast of Emissions Compared to Business-As-Usual



Forecast of Energy Costs Compared to Business-As-Usual



TOP STRATEGIC ACTIVITIES

SEEDS investigated and analyzed data on more than fifty strategies ranging from operating a small gasification plant to participating in carbon markets in order to quantifying a top selection against multiple criteria including:

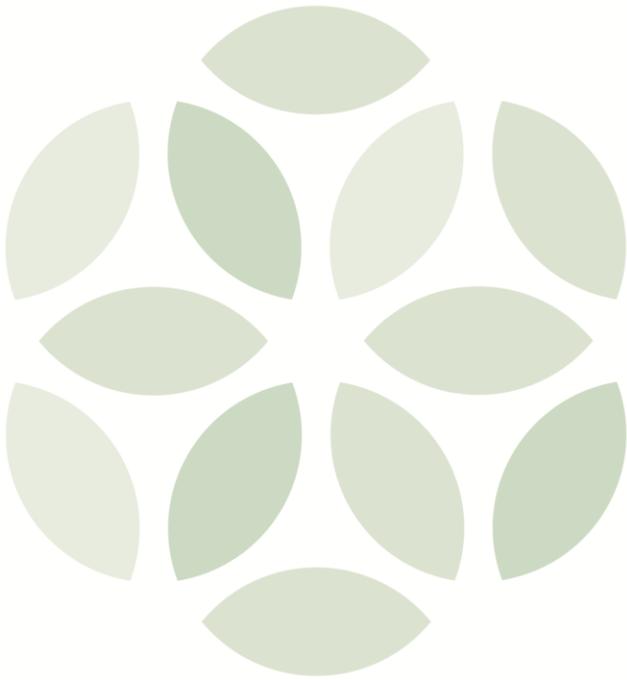
- Capital cost
- Annual savings
- Rate of simple payback in years (based on a % rate of return)
- Greenhouse gas reductions

We identified ten strategies that, if fully implemented, would realize net-zero site energy consumption and mitigate 66% of the full carbon footprint of the Park’s activities. The collective 10 strategies would decrease energy costs over the next 5 years, compared to a “Business-As-Usual” scenario, and would ultimately be cash positive independent of incentives, grants, or tax credits.

Strategy	Capital Cost of Strategy	Capital Cost of Conventional Alternative	Annual Savings (\$)	Simple Pay Back (yrs)	Annual Scope 1 & 2 GHG Reduced (MT CO2e)	Annual Scope 3 GHG Reduced (MT CO2e)
Zero Waste Events	\$2,500	\$1000	\$1,000	2.5	NA	133
Hybrid/EV/Carpool Priority Parking	\$800	NA	NA	NA	NA	14
Solar LED Street Lighting	\$173,200	\$114,000	\$4,382	13.5	26	NA
Solar LED Path Lighting	\$293,700	\$278,300	\$1,436	10.8	12	NA
Grid-Tied PV 140kw / ~10,000ft2	\$416,000	NA	\$20,402	20.4	123	NA
Campus Electric Transport Vehicles	\$46,000	\$140,000	\$1,923	(48.9)	5	NA
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Reforest 4.5 acres	\$4,500	NA	NA	NA	7	NA
Grid-Tied Wind	\$50,000	NA	\$880	56.8	8	NA
16 EV Charging Stations	\$60,000	NA	NA	NA	NA	11
Total	\$4,552,100	\$3,687,100	\$45,839	18.9	441	157
66% Scope 1,2&3 Emissions Reduced at full implementation					147%	26%

SEEDS

Ecology + Education + Design



Historic Barns Park Conceptual Design for Energy Action Planning

Commissioned by the Recreational Authority of
Traverse City & Garfield Township

Prepared by SEEDS, Inc.

Funded through the generosity of Rotary Charities of
Traverse City & the Grand Traverse Regional
Community Foundation

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Background

The Historic Barns Park (HBP) is establishing itself as a regional farm and garden destination, wedding and event hosting venue, community space, recreational park, and now an energy demonstration site. The Park is undergoing a tremendous period of regrowth, repurposing buildings and grounds from a near-fallow state and amplifying both activity and energy and material consumption at the facility.

The HBP Business Plan formally addresses the concept of the “Energy Farm”. Achieving this vision would place the HBP on a leadership trajectory in two areas: 1) modeling for the community use of energy efficiency as a tool for cost savings and 2) showcasing energy management and technologies both for educational benefit and as a draw for additional visitors to HBP.

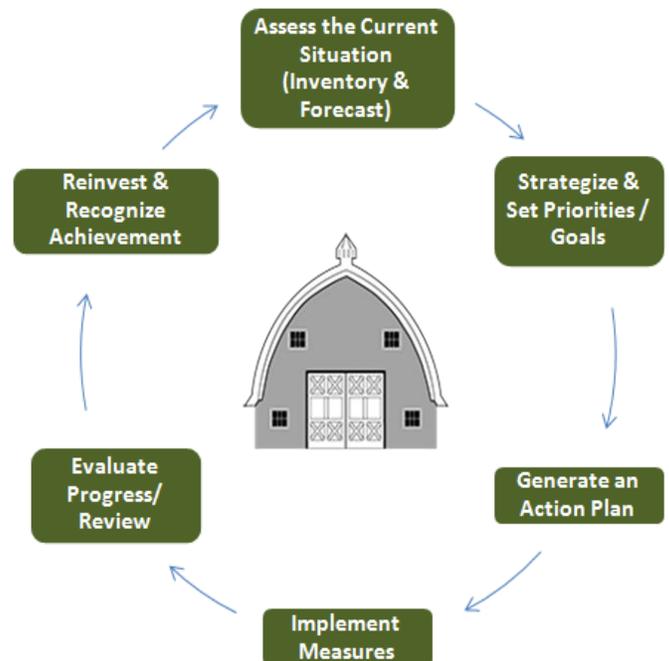
The purpose of this study and plan design is to 1) analyze the energy resources necessary to sustain this growth and 2) outline a process for engaging park visitors in energy conservation and production practices in furtherance of this goal.

Establishing a Baseline

The energy action planning process is an iterative cycle that begins with a commitment and an expression of leadership or vision. An objective plan must then be built on a factual understanding of the current conditions from which to target goals for improvement or achievement.

As such, a critical first step in the action planning process is to establish a baseline of energy use, emissions, and costs. The baseline and any forecasted changes from it aid in focusing strategy and action development to the energy sources and operations that represent the greatest opportunity for impact. The plan becomes a logical sequence of actions to implement. The cycle is repeated when the impact of the implemented actions is measured, and the success and savings are leveraged for deeper investment towards the plan’s goal.

To develop a plan for Energy Farm investment and development, initiate a sound cycle of responsible energy management, and track progress toward energy goals, we first establish a baseline of energy use and impacts.



Why Create an Energy Baseline?

An energy baseline is a measurement of the energy consumed at a point in time based on a combination of measures including historical metered data and engineering calculations. Energy baselines and the resulting target projections can account for variable energy factors like weather, growth, development or changes in use.

The energy baseline is a starting point from which to set targets and to make and test choices about the future. The baseline is used to monitor progress toward goals by comparing energy performance before and after a change is made to a site or system.

Starting with the year 2015, we have evaluated energy use and greenhouse gas emissions associated with:

- The current use of buildings
- Vehicles and equipment used on site
- The transportation of visitors to the site
- Supplies and materials used
- Waste generated by park activities

Additionally, we have estimated the current carbon sequestration value of existing park lands to understand how changes in land use may impact the property's ability to mitigate the emissions associated with the energy use.

Understanding the Three Scopes of Consumption

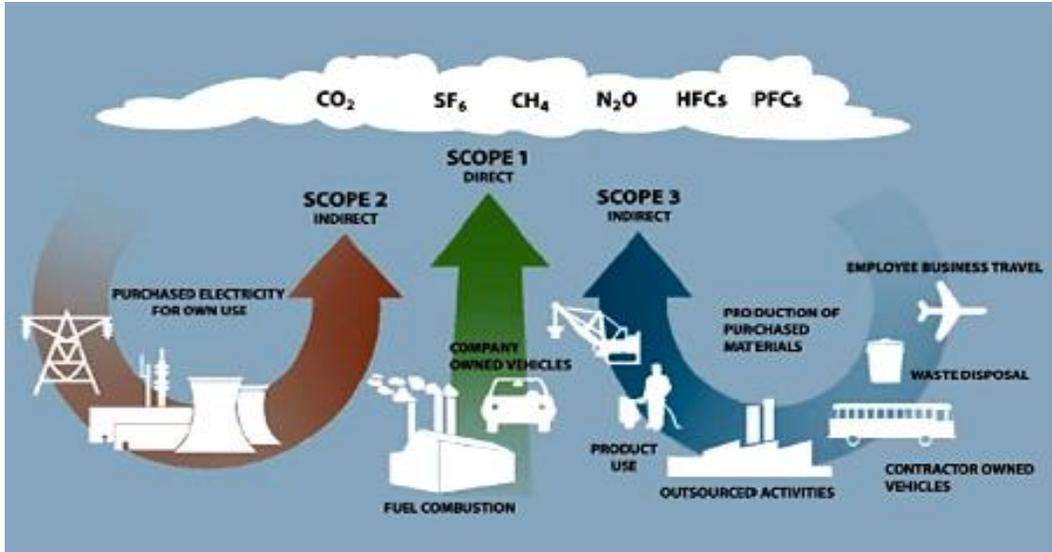
From a position of leadership, demonstration, and education it is important to take a holistic view of energy use across the many operations and activities occurring at the Park. Following standard international protocols for analysis of energy and associated greenhouse gas emissions, we have three scopes of energy use and associated greenhouse gas (GHG) emissions according to the level of control the Recreational Authority (RA) and HBP partners jointly hold.

Scope 1 refers to *direct* combustion of fuels by facilities and vehicles owned or operated by the RA and HBP partners at the Park as well as the carbon implications associated with land management practices.

Scope 2 refers to the *indirect* consumption associated with energy purchased from elsewhere for use on the site – most notably electricity delivered by the utility grid.

Scope 3 refers to the *indirect* consumption associated with all other activities that are the result of operations at HBP, some of which may be difficult for the RA and HBP partners to directly control. Scope 3 can include employee travel, event participant travel and purchased materials and services like catering, cleaning products, office supplies and more.

We use these three scopes to guide our consideration of strategies in relation to the target of net-zero emissions.



Forecasting Energy Consumption: Business-As-Usual (BAU) Scenario

From this baseline, forecasts of energy and emissions two and five years into the future were developed based on the HBP 5-year Business Plan; the Master Site Plan developed for the Botanic Gardens by Nelson, Byrd, Woltz; updated transportation plans; and interviews with park partners. These projections are considered the BAU estimates and include energy usage associated with average levels of transportation and building energy efficiency, standard material consumption, and average waste management practices. Taken together, this BAU model shows that site energy use, transportation energy, and total greenhouse gas emissions would all increase about 5-fold over 5 years. More details on these findings follows.

Regional Climate & Energy Planning Context

We are increasingly examining and talking about energy production and consumption for clear and compelling reasons: how we produce, access, and consume energy affects our ability to power and heat our homes, fuel our vehicles, and support our region's economy. Indeed, energy issues touch the most personal and foundational aspects of our lives while simultaneously carrying profound economic and environmental implications at the local, regional, state, national, and even global levels.

Our region consumes trillions of units of energy each year in commercial, residential, transportation, and industrial sectors. A significant percentage of the energy that is being consumed—and paid for—is lost or wasted. Much of that waste is connected to the delivery of imported electricity, but energy waste is also closely connected to the design and function of our communities, homes, and transportation systems.

While these challenges have deep roots that extend beyond the influence of local and individual stakeholders, there are many local actions, policies, and programs that can impact our energy usage patterns. Everyone has a part to play in minimizing unnecessary costs and enhancing our ability to bounce back from disasters and protect our ecosystems.

To better understand and communicate how energy issues affect northwest lower Michigan, a local group of diverse energy-interested stakeholders identified four primary factors we use to consider the impacts of various policies and initiatives. These factors, together known as the **REAL Framework for Energy Excellence**, are as follows:

RELIABILITY – Does it turn on when I want it to?

ECOLOGY – Does its use negatively impact other species?

AFFORDABILITY – Can I reasonably pay for it?

LOCAL ECONOMY – Who actually gets the dollars I spend?

Historic Barns Park is uniquely situated to host opportunities for public energy engagement and demonstration. The property literally sits at the nexus of three electric utilities as well as the regional natural gas supplier. This is especially relevant when one notes the fact that the Utility Business Model is in active evolution across the nation with public outreach and customer services increasingly central to their planning efforts.

There are large numbers of dollars at stake along with significant positive ecological impacts that can be captured by planning for efficiencies, and the solutions available are multiplying rapidly. There also remains a lot of market confusion about energy and energy solutions. Historic Barns Park is well-positioned to take a leadership role shedding light on a variety of practical solutions for many different types of stakeholder and visitor.

Visions and Principles for Intentional Targeting

VISION

To ground the design of this Energy Action Plan in the community and to insure its relevance, we first interviewed project partners, neighboring stakeholders, other regional stakeholders, and a cohort of expert advisors. These interviews offered insight into how the Energy Farm concept might weave through the operations and aspirations of each organization and the potential developing an Energy Farm demonstration project holds as resource and catalyst for advancing regional interest, dialog, and action on energy concepts, technologies, and practices.

Park partners identified their priority drivers essentially as

- Running park operations efficiently and cost effectively over the long term
- Creating avenues for new philanthropic and other resource development
- Current high priorities for development of irrigation, pathway lighting, and roads
- Bringing new visitors to this one-of-a-kind park

The four expert advisors contributing to this analysis each identified a principal challenge:

1. **Debbie McKeon**, *co-architect of the HBP Business Plan as former Executive Director of NorthSky Nonprofit Network (a program of Rotary Charities of Traverse City) and current Senior Vice President with the Council of Michigan Foundations:*
 - This conceptual design phase is the place and time to dream big.
2. **Skip Pruss**, *former Director of the Michigan Department of Energy and current Principal of 5 Lakes Energy, LLC:*
 - Aim for Net-Zero environmental impact minimizing the footprint of all activities.
3. **Jim MacInnes**, *member of the Institute of Electrical and Electronics Engineers and President and Co-Owner of Crystal Mountain Resort and Spa*
 - Make every energy flow accessible to learners of all ages.
4. **Tim Pulliam**, *Co-Founder of Keen Technical Solutions*
 - Focus on kids as the most critical and important audience to reach.

To respond to these challenges and priorities we crafted an Energy Action Plan identifying ten strategies that, if fully implemented, would realize net-zero site energy consumption and mitigate 66% of the full carbon footprint of the Park's activities (Scopes 1, 2 & 3).

This analysis also considers energy and capital costs. If fully implemented the prescribed ten strategies would decrease energy costs over the next 5 years, compared to business as usual (BAU), and would ultimately become cash positive. Coupling energy efficiency strategies that have a rapid payback with longer term investments in onsite renewable technologies for energy generation is conservatively projected to yield a modestly cash positive 7.9% internal rate of return over 30 years, with a 19 year simple payback, independent of incentives, grants, or tax credits.

Credit should be prominently given to an unprecedented collaboration of co-funding leadership for the geothermal system for the Barns and Visitor Center; this can be considered the first project of the Energy Farm. Each of the local electric utilities participated, including the two who do not serve this parcel, demonstrating that the Energy Farm concept is already tested and supportive of further implementation. Cherryland Electric Cooperative provided thought leadership and communications with the Michigan Public Service Commission. In addition to the lion's share of capital, Consumers Energy also offered a great deal of due diligence reviewing concepts and business modeling. Traverse City Light & Power also offered due diligence and capital, as did HBP management. The leadership of these energy companies and their collaboration to benefit the region is important to hold up as a new model of working "outside the box" and thinking big.

PRINCIPLES

We have identified five organizing principles as a conceptual umbrella to define a general approach to manifest the vision for HBP.

1. FOCUS ON ENERGY EFFICIENCY FIRST: Two renovated buildings on the campus were already designed to achieve high efficiency standards. This is great! However, to achieve a net-zero energy campus in a manner as cost effective as possible, deeper energy efficiency standards need to be achieved on the remaining renovations and all new construction and infrastructure should be implemented with the most reliably efficient technologies available. Long-term investments in efficiency continue to outpace the economics of renewable energy installations and efficiency is key to positive ecological impacts. This would also include zero-waste principals and policies.

2. SHARE RESOURCES: Already a high priority for all project partners, there are more great opportunities to share energy and infrastructure resources within the campus and with campus neighbors. Considerable energy and cost savings and behavior change opportunities exist by establishing partnerships with neighbors. Sharing opportunities include parking facilities and districting energy supply and backup on campus. For example, sharing parking facilities and setting up EV car / shuttle stations to encourage the maximum number of park users are among several options available in which resources can be conserved through creative cooperation.

3. PRODUCE 100%+ RENEWABLE ENERGY ON SITE: If the remaining three building renovations are completed to the highest energy efficiency retrofit standards, the current flat roof space of the Pavilion, 221 Classroom, and 223 Garage collectively hold sufficient area to meet 100% of the estimated on site energy demand using grid-tied solar arrays. Other locations across the campus hold additional opportunity for more geothermal, solar, wind, passive solar (e.g. hot water), biomass and other demonstrations of renewable energy technologies and opportunities to offset greenhouse gas (GHG) emissions.

4. FARM CARBON: With the Park's landscape priorities, pursuing best practices to preserve and even enhance the landscape's ability to sequester carbon is an attractive strategy. More than half of the 56 acre campus is intended for agriculture or active garden management – some or all of which can be planted and managed to maximize carbon sequestration capacity, further offsetting GHG emissions.

5. EDUCATE WITH EVERYTHING: Each build-out and installation provides a tremendous teaching and learning opportunity for all users of the park. To make this learning environment possible, equipment and controls should be monitored and networked for performance optimization and used to publicly illustrate systems at work. Engaging visitors and the region in a fun, informative and beautiful parkland setting is an unparalleled opportunity to demonstrate the complex interconnections of energy at work in our lives.

These five principals are worth taking up in formal discussion by each of the Park partner entities as well as the collective to consider when forming plans, strategies and policies. If adopted, these principals set a clear direction for the future and form the basis for communications with prospective funders, partners and other supporters.

Educational framework

The Energy Farm will provide information about the energy use, production, storage, and potential for Park visitors of all ages. As an answer to the challenges of making every energy flow at Historic Barns Park visible and focusing on youth as our most critical audience, SEEDS is developing an internal educational framework that prescribes educational and interpretive best practices as well as a design process for the development of the Energy Farm concept. This framework will be shared with park partners for input and approvals.

The education framework is being developed around these five inclusivity objectives:

- 1. All-ages and all-abilities:** Interactions designed so that there is a take-away for people of all ages and abilities. Signage and exhibits follow universal / inclusive design principles.
- 2. All encompassing:** Exhibits and installations are intended eventually to make every (existing and potential) use of energy on the site visible and accessible.
- 3. Sensory, experiential and playful:** Exhibits will engage all senses to communicate the story of energy. Exhibits are intended to be interactive and compelling. Acknowledging the value of creative play, incorporating a “10% whimsical” mantra into the experience of the Park helps put this into perspective.
- 4. Shared design process:** The community at-large and specific affinity groups are involved at some level with design and use of each exhibit or installation with a special focus on direct design engagement with youth populations.
- 5. Planned continuity:** Exhibits will continue to “make sense” as they are installed by following a standardized system of signage and a design ethic that encourages hands-on interaction.

Model Case Study

Art + Energy Camp

Land Art Generator Initiative, Pittsburgh, PA

The Land Art Generator Initiative (LAGI) brings together artists, architects, scientists, landscape architects, engineers, and others in a first of its kind collaboration. The goal of the Land Art Generator Initiative is to see to the design and construction of public art installations that uniquely combine aesthetics with utility-scale clean energy generation.



Art+Energy Camp was a unique six-week summer camp in a Neighborhood of Pittsburgh coordinated by the LAGI. The program gave 20 kids an education in energy science, climate science, art, design, and solar power installation. The final outcome was Renaissance Gate, a public artwork utilizing solar panels to generate energy designed by the campers.



The solar artwork now provides clean electricity to help offset the demand load of the Homewood Renaissance Association facilities and provides a unique cultural amenity for the community.

The Energy Action Plan

BASELINE REVIEW

Beginning with baseline data showing what we are using today we get the following information about each facility in active use (Table 1).

Table 1. Active Use Building Data—Baseline Data

Facility	Visitor Center	Cathedral Barn	Building 223
Data Source	Utility Records	Estimated w/ Target Finder w/ adjustment for geothermal	Utility Records
Floor Space (sf)	2,760	12,200	5,944
Occupancy (%)	100%	50%	5%
Site Energy Use Intensity (kBtu/sf)	36.1	38.9	2.2
Est. Lighting & Plug Load Electric (kWh)	18,750	33,903	3,908
Est. HVAC (kWh)	10,500	24,341	0
Est. Natural Gas (therms)	0	0	0
Total Energy Costs	\$4,367	\$8,695	\$809

Adding additional information related to outdoor lighting, equipment used on the site (e.g. mowers), events and transportation patterns for staff and visitors we get the following:

- Total energy use in *Millions of British Thermal Units (MMBtus)* (Chart 1)
- Associated energy costs (Chart 2)
- Resultant greenhouse gas emissions in *Metric-Tons of Carbon Dioxide Equivalents (MTCO_{2e})* (Chart 3).

Chart 1.

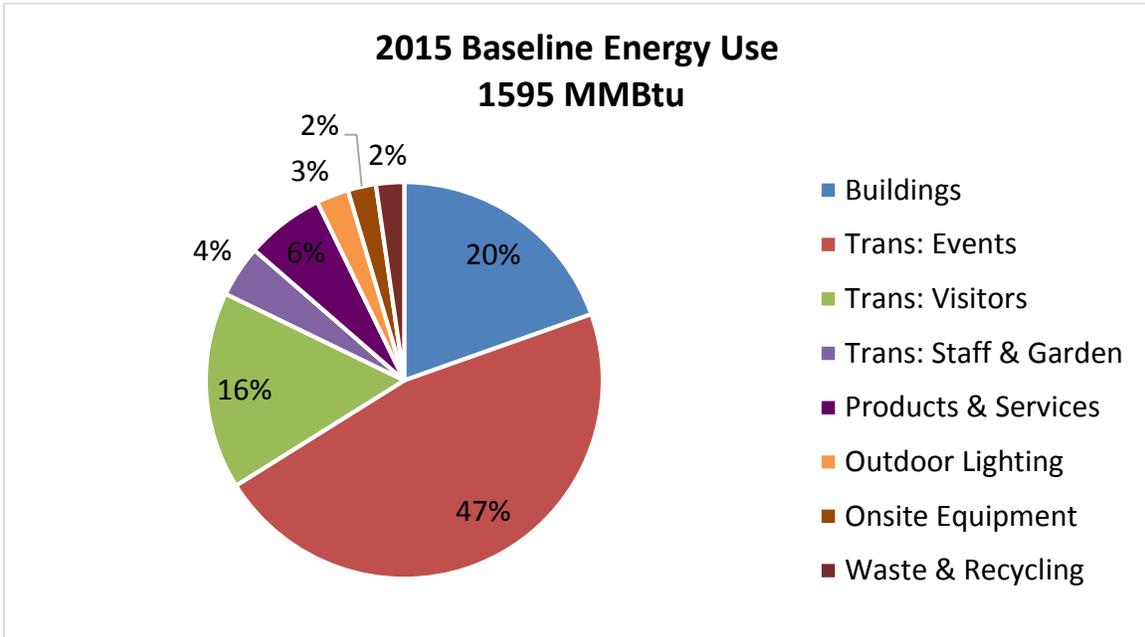


Chart 2.

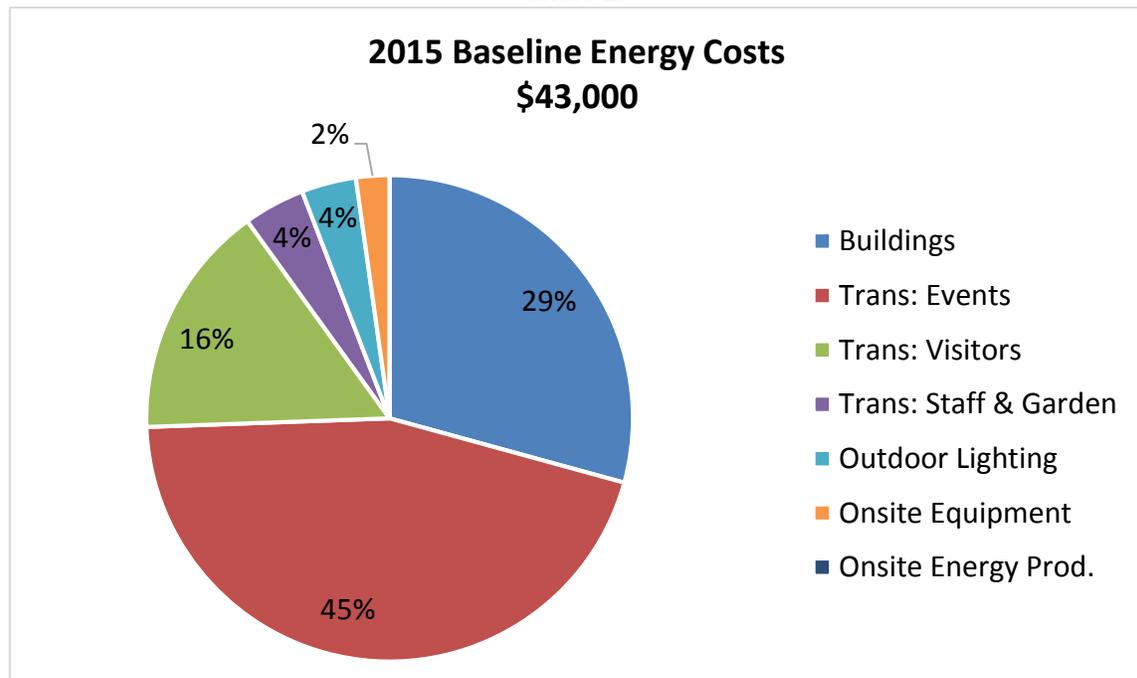
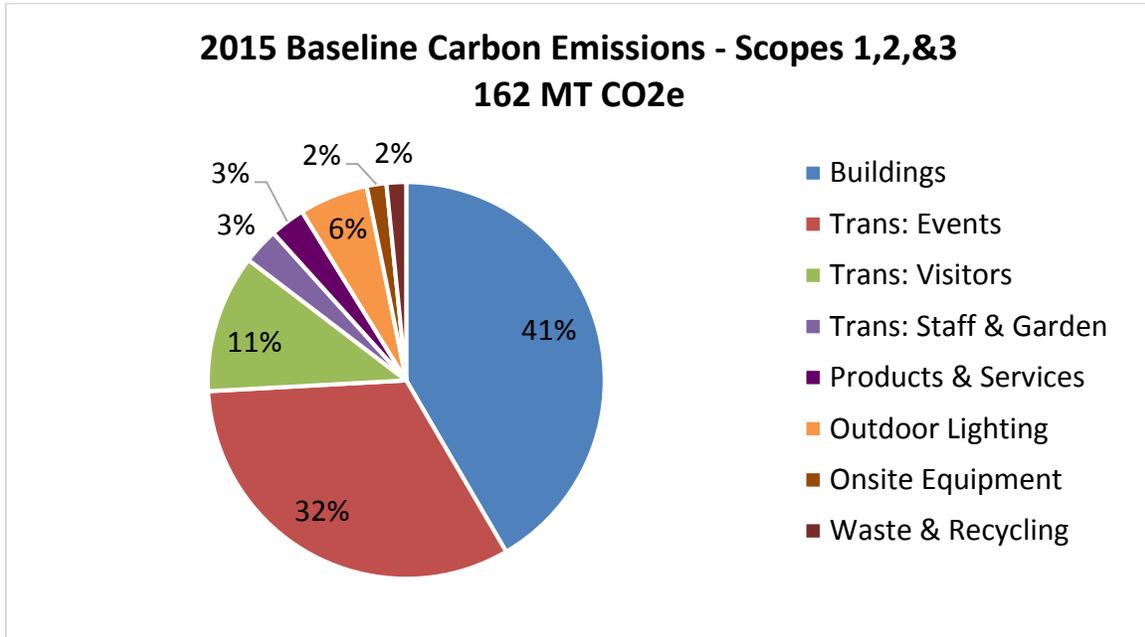


Chart 3.



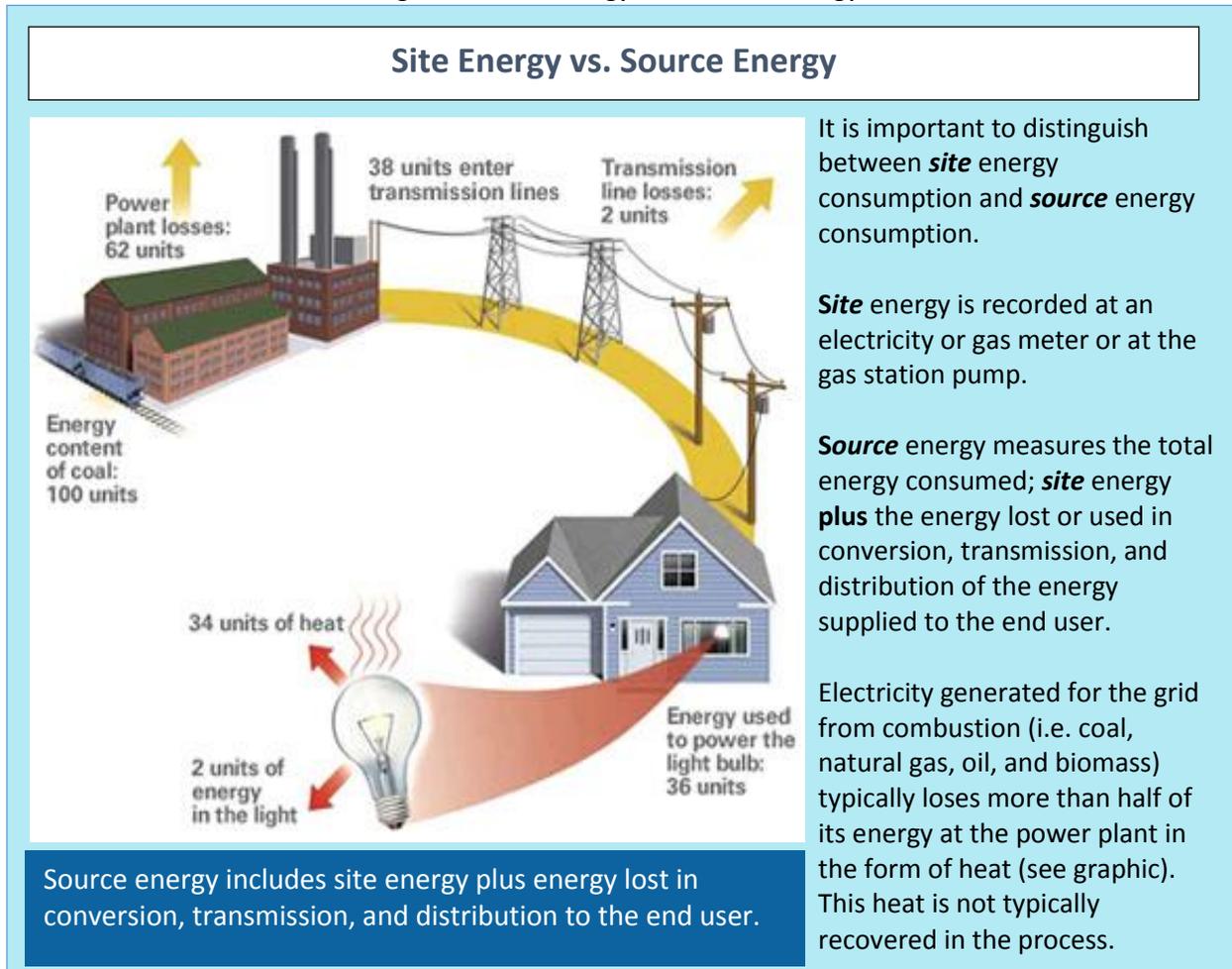
For context, the Scope 1,2, and 3 baseline carbon emissions of 162 MT CO₂e are equivalent to the emissions produced by 15 homes in one year or the carbon sequestered by 133 acres of forest in one year.

Focusing on increasing building energy efficiency alone will not necessarily result in decreased greenhouse gas emissions. To address the carbon footprint of the site we need to look broadly at the Park's activities and target additional strategies that significantly impact carbon, such as transportation efficiency and reforestation.

SITE ENERGY VS. SOURCE ENERGY—AN IMPORTANT DISTINCTION FOR ELECTRICITY

It is worth noting that the use of geothermal and energy efficiency standards for the renovation of the Cathedral Barn and the Visitors Center mean that the building and site-systems are relatively energy efficient. However, because they rely heavily on electricity, including for heating and cooling, the source energy is entirely determined by the host utility and results in significant greenhouse gas implications. Currently, our electric grid both relies heavily on petroleum products and also creates significant energy loss. Nationally, almost two-thirds of the fuel burned to generate electricity is lost in the generation and delivery process.

Figure 1. Site Energy vs. Source Energy



Electricity purchased from the current grid results in greenhouse gas emissions produced during the combustion of fossil fuels—such as coal, oil, and natural gas—to produce electricity. In 2013, the electricity sector was the largest source of U.S. greenhouse gas emissions, accounting for about 31% of the U.S. total. Greenhouse gas emissions from electricity have increased by about 11% since 1990 as electricity demand has grown and fossil fuels have remained the dominant source for generation. Additionally, we account for the emissions lost in transmission. The U.S. Energy Information Administration (EIA) estimates that electricity transmission and distribution losses average about 6% of the electricity that is transmitted and distributed annually in the United States.

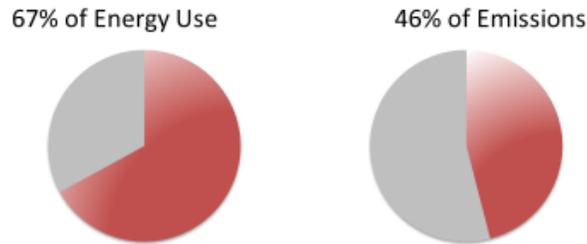
CONSIDERING TRANSPORTATION

Also worth noting is that a significant proportion of the current and projected emissions for HBP are derived from visitors traveling to and from the Park (Chart 4). In fact, transportation is the most significant contributor to both energy use and carbon impact. Understanding that it is the explicit goal of Park partners to welcome an increasing number of visitors to the site, this presents a fruitful opportunity to open a broader energy dialog. It also shines additional light on

current conundrums related to traffic flow and parking, offering a whole host of reasons to attack the issue with creativity. The Park is clearly not the only parcel in the neighborhood facing these challenges; there may be unique solutions presented through innovative partnership.

Chart 4. Relative Contribution of Transportation to Energy Use and Emissions

Transportation is the most significant contributor to energy use and carbon emissions at HBP.



FORECASTING: BUSINESS AS USUAL (BAU) VERSUS FULL 10-STRATEGY IMPLEMENTATION

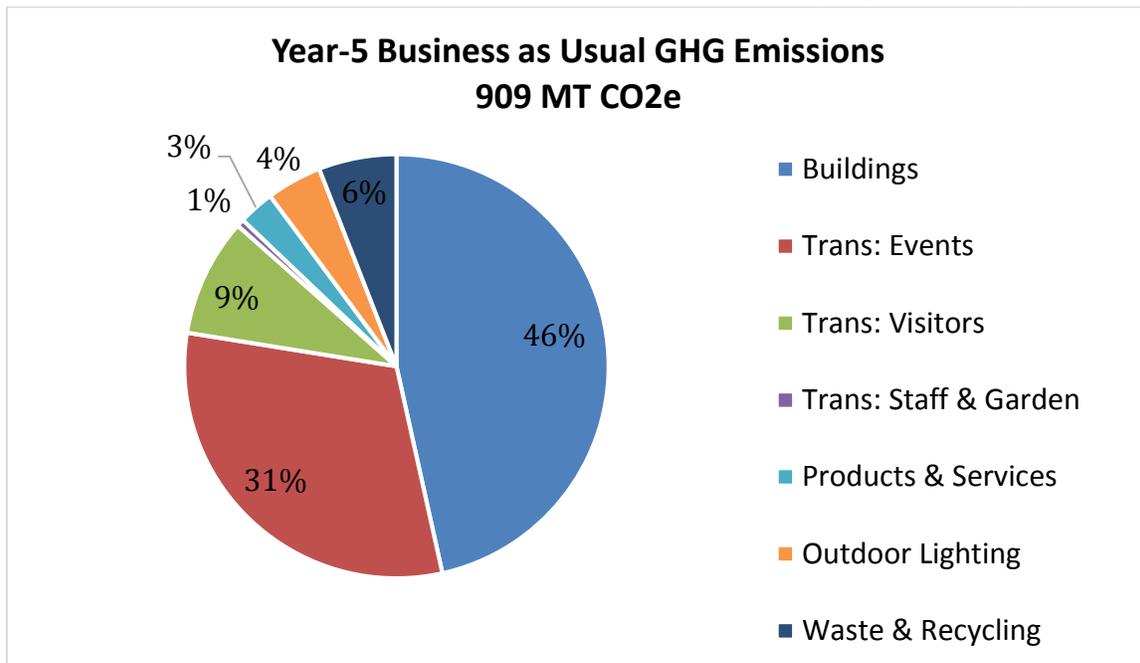
The next step in this plan development process is forecasting changing uses over the next five years based on current plans. In the “business as usual” (BAU) projection of energy usage five years from now (Table 2), we forecast an increased usage to 640,000 kWh annually and \$85,000 in utility costs. This additional usage combined with proposed outdoor lighting and increased transportation, waste, etc. is associated with emissions of 909 MTCO₂e annually.

Table 2. Annual Building Energy Use - 5 Year Projection, Business-as-Usual (BAU)

Facility	Visitor Center	Cathedral Barn	Second Historic Barn	Building 223	Building 221
Floor Space (sf)	2,760	12,200	13,800	5,944	2,000
Occupancy (%)	100%	100%	100%	100%	100%
Site Energy Use Intensity (kBtu/sf)	34.1	38.9	83.0	31.5	72.1
Est. Lighting & Plug Load Electric (kWh)	18,750	45,205	215,574	32,925	23,358
Est. HVAC (kWh)	10,500	48,682	126,837	21,950	16,905
Est. Natural Gas (therms)	0	0	0	0	0
Est. Total Energy Costs	\$4,367	\$13,552	\$49,424	\$10,283	\$7,545

Viewing total consumption patterns forecast for the year 2020, we get a projection of GHG emissions and their sources (Chart 5) expected with an average or business-as-usual scenario.

Chart 5. Year 5 BAU Total Greenhouse Gas Emissions (Scopes 1, 2 & 3)



These data, together with the Vision and Principles, led to the analysis and prioritization of a variety of strategies. The target goal of decreasing the site’s ecological footprint applies pressure on all campus operations and each has its own potential impacts on annual costs and carbon emissions.

Of the dozens of strategies analyzed, the top ten most impactful *and* practical strategies were selected. They illustrate a path for development of an Energy Demonstration Park that can provide net-zero site energy consumption, net-zero Scope 1&2 greenhouse gas emissions and an 66% reduction or offset of *total* GHG emissions (Scopes 1, 2 & 3). At 19 years, we see the capital investments paid off through their own cost savings at a 7.9% internal rate of return.

It is anticipated that some strategies will be more appealing in the shorter term than others and also that some strategies will resonate more strongly with some Park partners more than others. It is up to each partner organization *and also* the collective to set specific plans of action and then monitor success over time!

Projecting 100% implementation in the next five years, the following summary of projected greenhouse gas emissions and costs emerges as compared with the Business-as-Usual projections (Charts 6 & 7).

Chart 6. Forecast of Emissions Compared to BAU

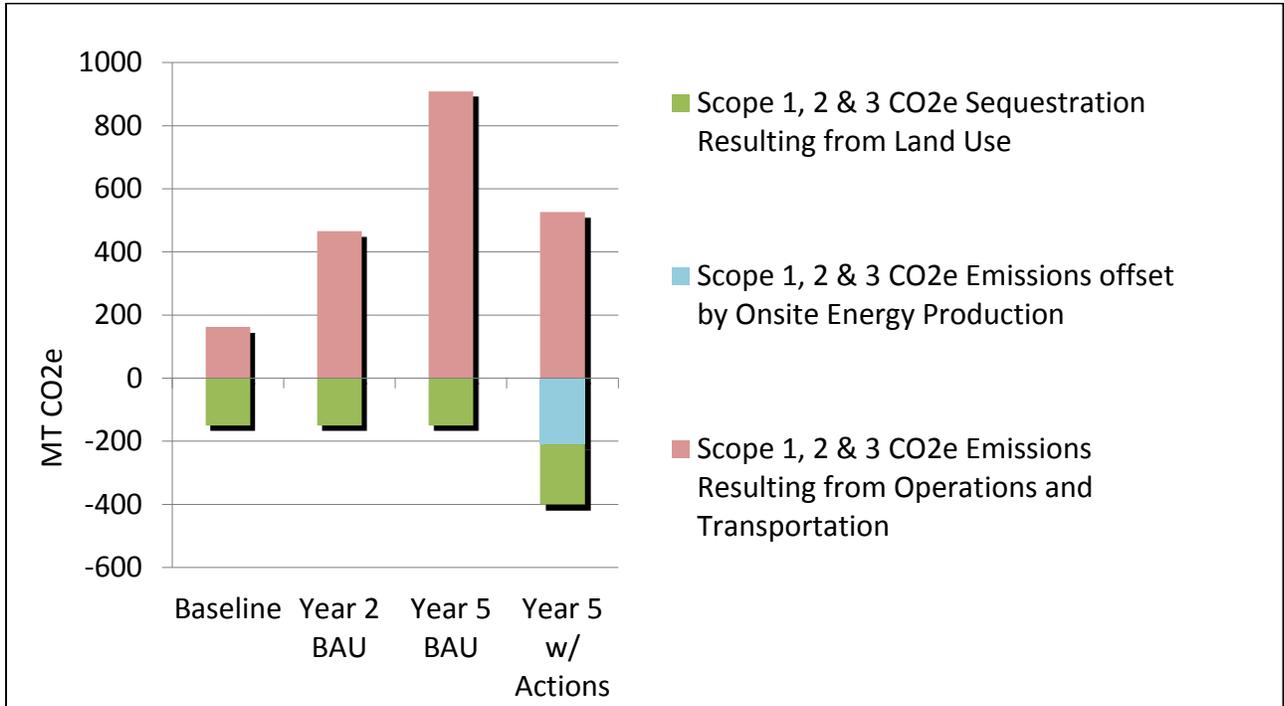
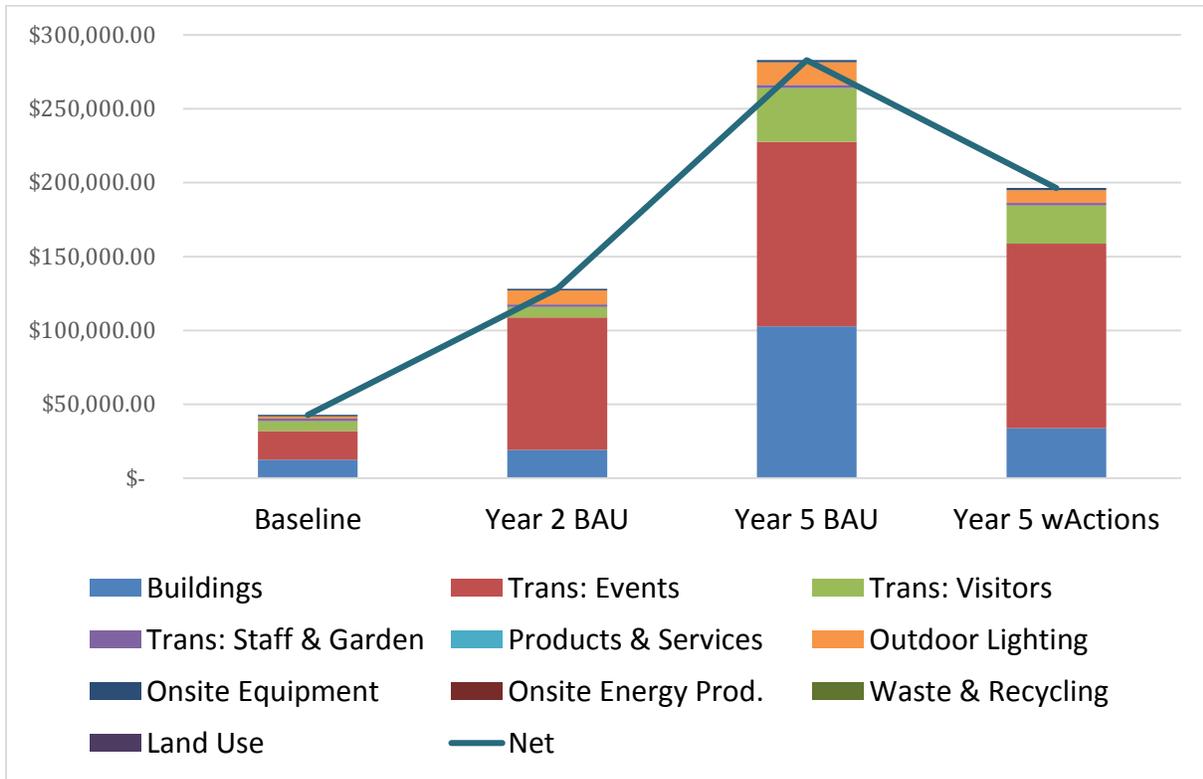


Chart 7. Forecast of Energy Costs Compared to BAU



Top Ten Key Strategies

SEEDS investigated and analyzed data on more than fifty strategies ranging from operating a small gasification plant to participating in carbon markets in order to quantifying a top selection against multiple criteria including:

- Capital cost
- Annual savings
- Rate of simple payback in years (based on a % rate of return)
- Greenhouse gas reductions

We identified ten strategies that, if fully implemented, would realize net-zero site energy consumption and mitigate 66% of the full carbon footprint of the Park's activities. The collective 10 strategies would decrease energy costs over the next 5 years, compared to BAU, and would ultimately be cash positive independent of incentives, grants, or tax credits. If this is a future in which we wish to collectively invest it will be important to establish clear processes for commitments and investing in quality control through monitoring. Also important is regular re-evaluation of strategies as park usage and available technologies continue to evolve over time.

The ten impactful strategies identified by this investigation are summarized in Table 3 below and detailed on the following pages.

Table 3. Summary of Top Ten Key Action Strategies

Strategy	Capital Cost of Strategy	Capital Cost of Conventional Alternative	Annual Savings (\$)	Simple Pay Back (yrs)	Annual Scope 1 & 2 GHG Reduced (MT CO2e)	Annual Scope 3 GHG Reduced (MT CO2e)
Zero Waste Events	\$2,500	\$1000	\$1,000	2.5	NA	133
Hybrid/EV/Carpool Priority Parking	\$800	NA	NA	NA	NA	14
Solar LED Street Lighting	\$173,200	\$114,000	\$4,382	13.5	26	NA
Solar LED Path Lighting	\$293,700	\$278,300	\$1,436	10.8	12	NA
Grid-Tied PV 140kw / ~10,000ft²	\$416,000	NA	\$20,402	20.4	123	NA
Campus Electric Transport Vehicles	\$46,000	\$140,000	\$1,923	(48.9)	5	NA
Passive House / EnerPhit Retrofits (un-renovated bldgs)	\$3,505,400	\$3,154,900	\$15,596	22.5	260	NA
Reforest 4.5 acres	\$4,500	NA	NA	NA	7	NA
Grid-Tied Wind	\$50,000	NA	\$880	56.8	8	NA
16 EV Charging Stations	\$60,000	NA	NA	NA	NA	11
Total	\$4,552,100	\$3,687,100	\$45,839	18.9	441	157
66% Scope 1,2&3 Emissions Reduced at full implementation					147%	26%

Zero Waste Events



Slowing or halting the dominant consumerist and wasteful behavior we have been taught can only be achieved through awareness and a viable alternative offering. Looking at the greenhouse gas emissions associated with Business-as-Usual scenarios gives some insight into the cradle-to-grave impacts of the supplies and consumables at HBP. Though it is still a struggle, there are an increasing number of allies and community businesses who can help HBP recycle and reduce waste streams to a negligible amount.

Initial Cost: +\$1,500 over conventional
Annual Savings: \$1,000
Simple Payback: 2.5 Years
Annual Carbon Reduction: 133 MT CO₂e
Carbon Reduction Compared to BAU: 15%

Phasing Considerations:

- Encouraging and even enforcing zero-waste events is a policy choice rather than a capital investment and can therefore be implemented at any time or over time.
- This strategy is the least capital intensive method for significantly reducing the Park's carbon footprint.
- Our region is familiar with zero waste events. Local contractors and service providers already exist who can presently help implement this strategy. Incentivizing the selection and use of preferred vendors who understand and are invested in triple-net-zero goals can ensure events fully contribute to Park goals by establishing common systems such as policy on sourcing and offsetting foods and flora for events.



Case Study:

- This document would be very useful while planning on promoting zero waste events or planning one from scratch.
[Thttp://sevendgenerationsahead.org/images/work/zerowaste/SGA_ZW_Event_Planning_Guide_FINAL.pdf](http://sevendgenerationsahead.org/images/work/zerowaste/SGA_ZW_Event_Planning_Guide_FINAL.pdf)
- BARC 2020 Vision. <https://vimeo.com/147130770?ref=fb-share>

Hybrid/EV/Carpool Priority Parking



Transportation is generally the most significant contributor to energy use and emissions at Historic Barns Park, currently accounting for 67% of total energy use and 46% of total emissions. Visitors traveling to and from Historic Barns Park are projected to account for 16% of energy use and 11% of emissions within five years.

By prioritizing hybrid and electric vehicle use as well as encouraging the practice of carpooling, visitors can be incentivized to use less energy intensive means of transportation to arrive at the park.

Initial Cost: \$800

Annual Savings: 0

Annual Carbon Reduction: 14 MT CO₂e

Carbon Reduction Compared to BAU: 2%

Phasing Considerations:

- Encouraging and even enforcing priority parking is a no-cost policy choice and can therefore be implemented at any time or over time.
- Like zero waste events, this strategy is a method for reducing the Park's carbon footprint is not capital intensive.

Case Study:

- This article describes how the creation of 18 public EV parking spots have increased demand, led to the planned development of additional spaces, created community, and reduced emissions in Ann Arbor, Michigan: http://www.mlive.com/news/ann-arbor/index.ssf/2013/09/high_voltage_ann_arbors_electr.html



Solar-LED Street Lighting



Solar powered lights with light emitting diode (LED) technology will bring beauty and security across the Park while reducing negative impacts of electricity—namely the utility bill and the associated greenhouse gas emissions. LEDs are the most efficient light in the marketplace, beating high-pressure-sodium street lights by 40%.

Installing these fixtures is scalable and surprisingly cost effective in a new installation situation, as the savings associated with not needing trenches for grid-tied wiring is significant.

The IDA (International Dark Sky Association) has certified that many of these efficient fixtures prevent light pollution and preserve visitors' experience of the night sky as well as nocturnal animal habitat. Another excellent opportunity to educate the public!

Initial Cost: +5% over conventional
Annual Savings: \$4,400
Simple Payback: 13.5 Years
Annual Carbon Reduction: 26 MT CO₂e
Carbon Reduction Compared to BAU: 3%



Phasing Considerations:

- Street lighting is proposed for the existing and proposed campus streets and parking areas. Red Drive, the new Entry Drive, and 50 onsite parking spaces collectively require about 70,000 sf or 2700 linear feet of lighting
- The initial capital investment is very manageable when compared to the costs of trenching a grid-tied system into the landscape.
- Additionally, this project is easily phased in over time as each fixture is an independent component. A great donor naming opportunity!

Case Study:

- A Michigan based company that has won the 2015 Idea Gold Award that specializes in Sustainable and efficient landscaping products: <http://www.landscapeforms.com/en-us/Pages/default.aspx>

Solar-LED Street & Pathway Lighting



Similar to solar powered street lights, solar powered path lighting will provide superior illumination along pathways while reducing utility bills and greenhouse gas emissions.

Many of these fixtures have also been certified by IDA (International Dark Sky Association) and will prevent light pollution. IDA-certified fixtures will allow light to be directed where it is needed while preserving views of the night sky and reducing light pollution.

Initial Cost: +5.5% over conventional

Annual Savings: \$1,436

Simple Payback: 11 Years

Annual Carbon Reduction: 12 MT CO₂e

Carbon Reduction Compared to BAU: 1%

Phasing Considerations:

- Path lighting is proposed for the existing and proposed campus paths and walking trails.
- As with street lighting, initial capital investments are very manageable when compared to the costs of trenching a grid-tied system into the landscape.
- Additionally, this project is easily phased in over time as each fixture is an independent component. A great donor naming opportunity!
- Consider installations in conjunction with solar installation along the existing trail.

Case Studies:

- <http://www.landscapeforms.com/en-us/site-furniture/pages/MultipliCITYPathlight.aspx>
- Ember LED develops and markets high powered LED and solar powered LED lighting. They specialize in promoting architectural and commercial quality lighting systems to engineers, architects, electrical contractors and distributors. <http://www.emberled.com/case-studies.html>

Grid-Tied Photovoltaics (PV)

Many buildings are run by renewable technology systems, the most common of which is the solar photovoltaic array. Solar PV can be combined with other technologies to form an integrated system that is more resilient than most grid systems people are exposed to. A grid-tied system, though perhaps costly up front, substantially reduces energy bills and is one of the most effective ways to reduce greenhouse gas emissions associated with electricity. It is also helpful for demonstrating to students of all ages how to achieve Net-Zero with respect to carbon and energy. The current flat roof space of the Pavilion, 221 Classroom, and 223 Garage hold sufficient area to meet 100% of the estimated electricity demand of all campus buildings (after deep energy efficiency retrofits) using grid-tied solar arrays.



Initial Cost: \$416,000

Average Annual Savings: \$20,400

Simple Payback: 20 Years

Annual Carbon Reduction: 123 MT CO₂e

Carbon Reduction Compared to BAU: 14%

Phasing Considerations:

- Considering that the landmark buildings onsite are heavily electricity dependent, installing PV is among the most effective methods for reducing the carbon impacts of electricity usage.
- Solar capacity can be built over time. If a goal is set for the size of the final installation we can plan for scalability. For example, the existing solar panels that power the well pump and help irrigate the community garden could be doubled in size with no impact on the existing inverter.
- Site design will be important. Consider installations in conjunction with the existing trail. These figures reflect a 140kW fixed mounted panels on 10,000 square feet of existing flat roof top and 15kW pole mounted tracking arrays
- The solar powered irrigation array is 2.5kw.

Case Studies:

- This article explains the value of solar for Michigan wine producers. Mark Clevey of the Michigan Energy Office says that the fixed electric rate can add stability in a sometimes volatile energy market: <http://michiganradio.org/post/making-michigan-wine-cheaper-solar-energy#stream/0>
- Cromwell Solar division has designed and installed solar energy systems since the 1980s. They offer solar design and installation services throughout Kansas and Missouri: <http://www.powertomorrow.com/casestudies/>
- Whitman College's Solar Installation in WA: http://www.alpha.com/download/pdf/Whitman-College_case%20study.pdf
- Clean Energy Design's Commercial PV case studies: <http://cleanenergydesign.com/gallery-renewable-energy-installations/case-studies/commercial-case-studies/>



Campus Electric Transport Vehicles



Electric Vehicles (EV) are a reliable way to invest, especially if an organization is considering shuttling many people back and forth frequently. They not only help in substantially reducing carbon emissions by completely avoiding petroleum but they can provide a higher quality transportation experience, giving people the chance to enjoy the aesthetics and natural tranquility of the surroundings by doing away with engine noise and other vehicular clattering. There are vehicle options that are also legal to drive on the street.

Initial Cost: (\$94,000) less than conventional alternative

Annual Savings: \$1,923

Simple Pay Back: Immediate

Annual Carbon Reduction: 5 MT CO₂e

Carbon Reduction Compared to BAU: 1%

Phasing Considerations:

- Considering that the landmark buildings onsite are heavily electricity dependent, installing PV is among the most effective methods for reducing the carbon impacts of electricity usage.
- With the right policies in place, utilities are uniquely positioned to help oversee the vast network of charging stations, set prices, and structure and manage various EV incentive programs; this is a good arena for cooperation.
- From the start this option is more cost effective than a gasoline powered alternative. EVs are less costly to purchase and maintain than similar gasoline powered vehicles at the park.

Case Studies:

- The 2013 Operation Plug-In campaign is aimed at promoting electric vehicle education and outreach by improving signage, finding and improving charging station signs as well as finding information on EVs and EV policies on campus.
 - University of Maryland: <http://marylandev.org/resources/case-studies/operation-plug-in/university-of-maryland-college-park-operation-plug-in-case-study/>
 - Johns Hopkins University: <http://marylandev.org/resources/case-studies/operation-plug-in/johns-hopkins-university-operation-plug-in-case-study/>
- EV Infrastructure Planning at Georgia Tech: http://transportation.ce.gatech.edu/sites/default/files/files/electric_vehicle_infrastructure_final_report.pdf

Passive House Construction & EnerPHit Renovation Standards



Certified Passive Houses are those buildings (commercial included) that use airtight insulation and appropriate materials to minimize heat loss in order to conserve energy. Although retrofitting an existing building to Passive House standards (called EnerPHit) can be a challenge, it is not out of the ordinary. In the long run, Passive House buildings require minimal heating and cooling. They also make use of natural lighting and passively take up as much of the sun's heat as possible to further reduce the need for additional heating input.

Initial Cost: +10% over conventional

Annual Savings: \$15,596

Simple Payback: 23 Years

Annual Carbon Reduction: 260 MT CO₂e

Carbon Reduction Compared to BAU: 29%

Phasing Considerations:

- This strategy applies to future building renovations and new construction of occupied spaces on the site.
- Existing remodeled buildings (BGS Visitor Center and the Cathedral) are not being considered as part of this strategy.
- This is an efficiency first strategy. The more efficient a building the less energy it uses and the less emissions it creates regardless of where it gets that energy.
- A campus building energy performance goal of EnerPHit / Passive House standards would bring the Park's buildings to the upper quartile of campus building performance nation-wide. Even if the Passive House standard is not adopted in full, Passive House guidelines are instructive of better building practices in general and can be used as a guide for increasing building energy efficiency.

Case Studies:

- Passive House Institute:
<http://www.phius.org/media/W1siZiIsIjIwMTMvMDYvMDEvMTVfMDIifNTFfOTMzX2dsYXNzd29vZF9jb21tZXJjaWFsX0hfSC5wZGYiXV0?sha=4532e775>
- Zero Energy Design: <http://zeroenergy.com/energy-consulting-and-mechanical-design.html>
- US DEA Lawrence Berkeley National Laboratory:
http://apps1.eere.energy.gov/buildings/publications/pdfs/building_america/ns/eemtg082011_c9_deep_retrofits_california.pdf

Reforestation

Intentional reforestation and support of natural forest succession on the site will increase the amount of carbon sequestered by the Park's open space. While the existing open meadow and younger forest succession already sequester carbon, allowing succession to continue will have increased positive impact on site carbon. Mature late succession forests hold vast quantities of carbon in their wood, in the understory they shelter, and in their undisturbed soil.



Initial Cost: \$1,000/acre

Annual Carbon Reduction: 7 MT CO₂e

Carbon Reduction Compared to BAU: 1%

Phasing Considerations:

- Forest succession is already happening naturally on open areas of the site. We can choose to work with this natural process and capture value.
- The figures here project reforestation of 30% of the existing 15 acres of existing fallow grasslands (4.5 acres).
- Monitoring Carbon Sequestration Capacity provides both an excellent educational opportunity and an accurate emissions offsetting mechanism by encouraging projects and practices that offer net benefits to the campus and to the community.

Case Study:

- This report from the Michigan DNRE describes the importance of forest succession for carbon storage in Michigan: https://www.michigan.gov/documents/dnr/Strategic_457570_7.pdf
- http://www.cinram.umn.edu/publications/landowners_guide1.5-1.pdf
- <https://www.purdue.edu/htirc/pdf/publications/AfforestationinthecentralhardwoodforestregionoftheUSA.pdf>

Grid-Tied Wind



Grid-tied wind power has similar advantages to that of grid-tied solar, in particular, reliability. A battery-based grid-tied system allows for backup power from the grid if there isn't sufficient wind and also creates a power source if there is a power shortage from the grid itself. In this way it is similar to any institution with a backup generator. On the other hand, net metering can offset future utility use directly on the bill.

Wind turbines can also be found in a variety of aesthetically pleasing, sculptural forms.

Initial Cost: \$50,000

Annual Savings: \$1,100

Simple Payback: 46 Years

Annual Carbon Reduction: 8 MT CO₂e

Carbon Reduction Compared to BAU: 1%

Phasing Considerations:

- A more detailed site analysis needs to be performed before planning an effective wind installation. Such analysis can take a full year or more to accurately understand potentials.
- Wind is frequently deployed on a small scale in association with solar powered street and path lighting (including in Traverse City) and could similarly be deployed with solar at the park.

Case Studies:

- A Case for Wind Farm Construction:
http://www.windsystemsmag.com/media/pdfs/Articles/2009_September_October/WFconstruction_1009.pdf
- World Steel Association Case Study:
<https://www.worldsteel.org/dms/internetDocumentList/case-studies/Wind-energy-case-study/document/Wind%20energy%20case%20study.pdf>
- This article describes how Paris, France has deployed wind turbine shaped like trees that both generate alternative energy generation and function as sculptural installations:
<http://www.newsweek.com/new-tree-shaped-wind-turbine-be-installed-streets-paris-296591>
- Sgurr energy: <http://www.sgurrenergy.com/renewable-case-studies/>
- AWEA (American Wind Energy Association):
<http://www.awea.org/Issues/Content.aspx?ItemNumber=4300&navItemNumber=758>



Electric Vehicle (EV) Charging Stations



Public EV charging stations are located all over the country as well as in various parts of Europe, Asia and North America. Many of them are powered by grid-tied solar panels. Tesla Motors has always spearheaded innovation with their fleet of electric vehicles. Their ‘Superchargers’ (charging stations) are located all over the country as well as in various parts of Europe, Asia, and North America, and they provide them at a nominal cost to the installer when compared to other EV charging technologies.

Superchargers are capable of replenishing half a charge in just 20 minutes, all free of cost to the Tesla customer. They are now the largest fast-charging network on the planet and allow various organizations to set up charging stations that are compatible with not just Tesla, but a variety of non-Tesla EVs as well. Tesla recommends a ratio of 1 Supercharger to 3 other brand EV chargers.

Initial Cost: \$2,000-\$10,000 each

Annual Carbon Reduction: 11 MT CO₂e

Carbon Reduction Compared to BAU: 1%



Phasing Considerations:

- It is possible to earn revenue from vehicles charging similar to other parking meters.
- EV is a fast growing market and hosting charging stations literally gets you on the radar of an affinity market through media including smart phone apps dedicated to this. The installation of EV charging stations can be paired with EV priority parking to further address Scope 3 energy use by facilitating less energy intensive ways to arrive at the park.
- Because EV charging stations can be powered by grid tied solar the installation of EV charging stations could be paired with solar installations. For example, the existing grid tied solar installation already produces excess power that is being fed back onto the grid and could be used to help power an EV charging station.
- These figures assume displacing 25% of visitor transport, which is aggressive in a 5-year framework, yet likely has increasingly good odds over time. If you build it they will come!

Case Study:

- This paper describes how parking policies influence behavior and transportation choices: http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=7297998&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxppls%2Fabs_all.jsp%3Farnumber%3D7297998

The City of Traverse City and Charter Township of Garfield

Communication to the Recreational Authority

FOR THE MEETING OF MARCH 2, 2016

DATE: THURSDAY, FEBRUARY 25, 2016

FROM: MATT COWALL, EXECUTIVE DIRECTOR

SUBJECT: EXPENDITURES APPROVED BY EXECUTIVE DIRECTOR

General Operating Fund:

Traverse Magazine	My North Weddings - 2016 half-page ad	\$ 1,185.00
DTE	December gas service	\$ 46.80
RW Popp Excavating	December plowing	\$ 134.00
TCAPS	Meeting nameplate - Gary Howe	\$ 3.40
Elmer's	Road grading and 80 tons of gravel	\$ 1,496.00
At Your Service Cleaning	Clean up at after Jan. 2 event	\$ 200.00
Northwoods Business Forms	Checks for operating fund, #2750 -3249	\$ 76.60
DGN	Audit progress billing	\$ 4,835.00
City of Traverse City	Water/Sewer for December	\$ 87.00
GT Conservation District	Management Services – Jan-March 2016	\$ 4,750.00
GT Conservation District	Tools, trash, dogipot litter bags (6000), kiosk repair - Dec	\$ 361.37
Two B Events LLC	Event services - Jan-Feb 2016	\$ 4,166.67
LIAA	Adjustment to November	\$ 167.50
LIAA	December management services	\$ 4,463.75
LIAA	Printing	\$ 17.05
American Waste	Trash For February	\$ 26.00
Popp Excavating	January plow services	\$ 2,013.99
Consumers Energy	January electric service	\$ 779.85
City of Traverse City	Water/sewer for January	\$ 87.00
Two B Events LLC	Toilet paper	\$ 20.48
Two B Events LLC	Event services – Feb-March 2016	\$ 4,166.67
Two B Events LLC	Hand soap, ice melt	\$ 14.81
DTE	January gas service	\$ 47.13
Smith Haughey Rice & Roegge	January legal services	\$ 155.65
LIAA	January printing, postage	\$ 72.92
LIAA	January management services	\$ 3,333.75
American Waste	Trash/recycling service, March	\$ 26.00
At Your Service Cleaning	Cleaning after Feb. 15 event	\$ 200.00
Northern A-1	EPA cleanup grant expenses	\$ 118,589.45
Northern A-1	EPA cleanup grant expenses	\$ 5,190.00
SEEDS	Energy Farm Master Plan	\$ 4,750.00

Continued →

Debt Service Fund:

Capital One	April 1 interest payment	\$ 55,652.50
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City of Traverse City and Charter Twp of Garfield Recreational Authority
Operating Fund
Statement of Activities
July 2015 through February 2016

	<u>Jul 15 - Feb 16</u>	<u>Annual Budget</u>	<u>Budget Variance</u>
Revenues			
500 · Tax Revenue - Operating	\$ 139,432.33	\$ 170,000.00	\$ (30,567.67)
615.1 · EPA Cleanup Grant	114,117.79	51,000.00	63,117.79
615.8 · Barns Park Rentals	44,040.00	70,000.00	(25,960.00)
· Rotary	-	5,000.00	(5,000.00)
664 · Interest Income	310.36	350.00	(39.64)
Total Revenues	<u>297,900.48</u>	<u>296,350.00</u>	<u>1,550.48</u>
Expenditures			
700 · Office Expense	488.41	2,500.00	(2,011.59)
805 · Professional Services			
Accounting	-	5,933.00	(5,933.00)
GTCD	14,250.00	19,000.00	(4,750.00)
Legal	2,150.25	5,000.00	(2,849.75)
Management	32,276.25	60,000.00	(27,723.75)
Other	12,400.00	30,067.00	(17,667.00)
Audit	4,835.00	5,000.00	(165.00)
EPA Clean Up	131,613.20	51,000.00	80,613.20
Events Manager	33,333.36	50,000.00	(16,666.64)
Total	<u>230,858.06</u>	<u>226,000.00</u>	<u>4,858.06</u>
806 · Event Marketing & Supplies	7,819.02	10,000.00	(2,180.98)
862 · Transportation	11.50	1,000.00	(988.50)
912 · Insurance & Bonds	3,286.00	4,000.00	(714.00)
920 · Utilities & Maintenance	13,765.97	30,500.00	(16,734.03)
920.3 - Hickory Meadows Work Plan	4,172.72	14,100.00	(9,927.28)
970 · Capital Projects	(5,047.70)	10,000.00	(15,047.70)
Total Expenditures	<u>255,353.98</u>	<u>298,100.00</u>	<u>(42,746.02)</u>
Net Change in Fund Balance	<u><u>\$ 42,546.50</u></u>	<u><u>\$ (1,750.00)</u></u>	<u><u>\$ 44,296.50</u></u>

Unaudited statement

City of Traverse City and Charter Twp of Garfield Recreational Authority

Debt Fund

Statement of Activities

July 2015 through February 2016

	<u>Jul 15 - Feb 16</u>	<u>Budget</u>	<u>Budget Variance</u>
Revenues			
Current Property Taxes	\$ 451,551.83	\$ 530,000.00	\$ (78,448.17)
Interest Income	7.32	-	7.32
Tax Tribunal Refund	(5,946.95)	-	(5,946.95)
Total Revenues	<u>445,612.20</u>	<u>530,000.00</u>	<u>(84,387.80)</u>
Expenditures			
Debt Service - Fees	173.18	300.00	(126.82)
Debt Service - Interest	115,373.00	115,375.00	(2.00)
Debt Service - Principal	360,000.00	360,000.00	-
Total Expenditures	<u>475,546.18</u>	<u>475,675.00</u>	<u>(128.82)</u>
Net Change in Fund Balance	<u><u>\$ (29,933.98)</u></u>	<u><u>\$ 54,325.00</u></u>	<u><u>\$ (84,258.98)</u></u>