

AGENDA
Huron-Clinton Metropolitan Authority
Board of Commission Meeting
July 12, 2018 – 10:30 a.m.
Kensington Metropark – Nature Center

1. Call to Order
2. Chairman's Statement
3. Public Participation
4. Approval – June 14, 2018 Regular Meeting and Closed Meeting Minutes
5. Approval – July 12, 2018 Full Agenda

Consent Agenda

6. **Approval – July 12, 2018 Consent Agenda**
 - a. Approval – June 2018 Financial Statements and Payment Registers
 - b. Approval – June 2018 Appropriation Adjustments **pg. 1**
 - c. Purchases
 1. Tractor, Wolcott Mill Farm Center **pg. 3**
 2. Rock Salt, Various Locations **pg. 4**
 - d. Report – Purchases Over \$10,000 **pg. 5**
 - e. Approval – 2018 Tax Levy Rate **pg. 6**
 - f. Report – Marketing/Media Stats **pg. 9**
 - g. Bids – Pool Heater Replacement, Willow Metropark **pg. 12**

Regular Agenda

7. Detroit Zoological Society Presentation – Scott Carter
8. **Reports**
 - A. *Administrative Department*
 1. Report – Foundation Sponsored Senior Day **pg. 14**
 2. Approval – Catering Services, All Locations **pg. 17**
 - B. *Planning Department*
 1. Report – Draft Huron Meadows Master Plan **pg. 18**
 2. Report – 2018 Count Day Initiative **pg. 67**
 - C. *Interpretive Department*
 1. Report – Interpretive Services Update **pg. 68**
 - D. *Natural Resources Department*
 1. Report – Black Creek Marsh Restoration Project Final Update, Lake St. Clair **pg. 69**
 - E. *Engineering Department*
 1. Approval – Professional Services Agreement for Storm Water Management Plan **pg. 72**
 2. Approval – Revised Cell Tower Lease Agreements, Stony Creek and Wolcott **pg. 115**
9. Other Business
10. Staff Leadership Update
11. Commissioner Comments
12. Motion to Adjourn

The next regular Metroparks Board meeting will take place <u>Thursday, Aug. 9, 2018 – 10:30 a.m.</u> Stony Creek Metropark – Nature Center
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HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners
From: Rebecca Franchock, Acting Chief of Finance
Subject: Approval – June Appropriation Adjustments
Date: July 5, 2018

Action Requested: Motion to Approve

That the Board of Commissioners' approve the June 2018 Appropriation Adjustments as recommended by Acting Chief of Finance Rebecca Franchock and staff.

Background: The Metroparks ERP system provides a work-flow process to facilitate departmental budget management. Requested transfers are initiated by department staff and routed to the appropriate department head/district park superintendent for review and approval. Finance provides a final review of the approved requests to verify that they do not negatively impact Fund Balance.

For the month of June, \$1,250,898 represents funds transferred within and between the departments to cover over budget accounts or to move funds to the correct account. There were no transfers done related to funds received from the Foundation this month. Finally, there were various adjustments to taxes receivable resulting in a net increase of \$42,976.

The net impact on Fund Balance is \$0 for the month of June.

Attachment: June Appropriation Adjustments

**Huron-Clinton Metropolitan Authority
June 2018 Appropriation Transfer Summary**

Expense Accounts

	Location	Increase	Decrease	Difference
Capital				
	Administrative Office	\$ 12,000	\$ 128,505	\$ (116,505)
	Lake St. Clair	12,535	13,300	(765)
	Kensington	27,316	1,010,000	(982,684)
	Lower Huron/Willow/Oakwoods	11,112		11,112
	Hudson Mills	8,312		8,312
	Stony Creek	63,919		63,919
	Lake Erie	3,086		3,086
	Wolcott Mill	104		104
	Huron Meadows	3,421		3,421
	Total	\$ 141,805	\$ 1,151,805	\$ (1,010,000)

Major Maintenance

	Lake St. Clair	\$ -	\$ 10,000	\$ (10,000)
	Kensington	1,000,000	-	1,000,000
	Stony Creek	-	14,380	(14,380)
	Wolcott Mill	14,000	14,000	-
	Huron Meadows	30,000	20,000	10,000
	Total	\$ 1,044,000	\$ 58,380	\$ 985,620

	Lake St. Clair	\$ 25,978	\$ 300	\$ 25,678
	Kensington	5,900	5,400	500
	Lower Huron	4,275	4,275	-
	Hudson Mills	8,100	7,000	1,100
	Stony Creek	16,240	1,360	14,880
	Indian Springs	4,000	3,500	500
	Huron Meadows	600	-	600
	Total	\$ 65,093	\$ 21,835	\$ 43,258

Administrative Office

	Administrative	\$ -	\$ 18,878	\$ (18,878)
	Total	\$ -	\$ 18,878	\$ (18,878)

Total Expense	\$ 1,250,898	\$ 1,250,898	\$ -
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June 2018 Foundation/Donation Transfer Summary

	Expenditure Increase	Revenue Increase	Net
Operations			
			-
Total	\$ -	\$ -	\$ -

June 2018 Net Tax Revenue Budget Adjustments

	Expenditure Increase	Revenue Increase	Net
Tax Revenue			
Current		\$ 1,438.0	\$ (1,438.0)
Prior		41,538	(41,538)
Total	\$ -	\$ 42,976	\$ (42,976)



HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners
 From: Heidi Dziak, Senior Buyer
 Project No: ITB 2018-042
 Project Title: Purchase – Tractor
 Location: Wolcott Mill Metropark Farm Center
 Date: July 5, 2018

Action Requested: Motion to Approve

That the Board of Commissioners' approve ITB 2018-042 to the low responsive, responsible bidder, Flint New Holland, Inc. of Burton, Michigan, for the purchase of one new tractor in the total amount of \$47,804 as recommended by Senior Buyer Heidi Dziak and staff.

Fiscal Impact: Funds will come from the Board approved 2018 Capital Equipment budget, which allowed \$60,000 for the purchase. The \$47,804 for the cost of the equipment is \$12,196 under budget.

Scope of Work: Furnish and deliver one (1) new tractor with a front loader, bale spear and skeleton bucket.

Background: The proposed purchase of the equipment was competitively bid and was posted on the Michigan Intergovernmental Trade Network (MITN) site, which provided notice of the solicitation to 82 vendors, of which 10 vendors downloaded the ITB.

The new equipment replaces unit 1083, a 1992 Case Tractor with 5,534 hours that will be sold at auction this year, and unit 686, a 1997 Ford Tractor with 3,300 hours that was sold at auction in 2016.

<u>Vendor</u>	<u>Location</u>	<u>Price</u>
Flint New Holland Inc.	Burton, MI	\$47,804.00*
Weingartz Supply	Utica, MI	\$48,865.00
Rosy Brothers Inc.	Dryden, MI	\$48,920.00

(*) indicates recommended award



HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners
 From: Heidi Dziak, Senior Buyer
 Project No: ITB-FH-17-18-2062 – City of Farmington Hills Contract
 Project Title: Rock Salt for Ice Control
 Location: Huron Meadows, Lake St. Clair, Stony Creek, Kensington, Indian Springs, Hudson Mills and Willow Metroparks
 Date: July 5, 2018

Action Requested: Motion to Approve

That the Board of Commissioners' award the 2018/2019 and 2019/2020 Rock Salt contract to the low responsive, responsible bidder, Detroit Salt of Detroit, Michigan, from the city of Farmington Hills Invitation to Bid (ITB) FH-17-18-2062 on behalf of the Michigan Intergovernmental Trade Network (MITN) Purchasing Group as recommended by Senior Buyer Heidi Dziak and staff.

Fiscal Impact: Metroparks staff estimates that 1,150 tons will be purchased per season. This estimate includes an additional 250 tons for Willow Metropark, which now has a salt storage building. The estimated costs per season are \$58,811 for 2018/2019 and \$60,570 for 2019/2020.

Scope of Work: Furnish and deliver rock salt as needed. Estimated purchase quantities per season are as follows: Hudson Mills Metroparks (100 tons), Lake St. Clair Metropark (100 tons), Huron Meadows Metropark (50 tons), Stony Creek Metropark (300 tons), Indian Springs Metropark (50 tons), Willow Metropark (250 tons) and Kensington Metropark (300 tons).

Background: The solicitation for rock salt was competitively bid by the city of Farmington Hills on behalf of 27 cities, townships and entities including the Metroparks that are members of the MITN Purchasing Group. The ITB was posted on the MITN web site, which provided notice of the solicitation to more than 100 vendors. Three bids were received.

<u>Vendor</u>	<u>City</u>	<u>Price/Ton 2018/2019</u>	<u>Price/Ton 2019/2020</u>
Detroit Salt Company*	Detroit, MI	\$51.14	\$52.67
Morton Salt	Chicago, IL	\$52.26	\$52.26
Compass Minerals America	Overland Park, KS	\$72.55	\$72.55

(*) recommended award



HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners
 From: Amy McMillan, Director
 Project Title: Report – Purchases over \$10,000.00
 Date: July 5, 2018

Action Requested: Motion to Approve

That the Board of Commissioners' receive and file the report for purchases over \$10,000, up to, and including \$25,000 as submitted by Director Amy McMillan and staff.

Background: On May 9, 2013, the Board approved the updated financial policy requiring the Director to notify the Board of purchases exceeding \$10,000, up to, and including \$25,000.

The following list is purchases exceeding the \$10,000 threshold:

<u>Vendor</u>	<u>Description</u>	<u>Price</u>
Systemic Fire Protection Inc.	Fire Pump Repair Wolcott Mill	\$13,659.99

The purchase is included in the 2018 Major Maintenance Budget for \$100,000 to replace fire suppression pump and piping at the Historic Center. Staff are obtaining quotes for other necessary repairs to the system.



HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners
 From: Rebecca Franchock, Acting Chief of Finance
 Subject: Approval – 2018/2019 Tax Levy Report
 Date: June 30, 2018

Action Requested: Motion to Approve

That the Board of Commissioners' (1) approve the 2018 Tax Rate Request forms at .2135 mills (formerly .2140 mills); and (2) approve the inclusion of "net" tax revenues of \$31,312,553 with an additional \$400,000 in Personal Property Tax Exemption Loss for a grand total of \$31,712,553 in the 2019 Budget as recommended by Acting Chief of Finance Rebecca Franchock and staff.

Background: Final 2018 Taxable Value figures used for the calculation of the Metroparks 2019 tax revenues have been received from the county treasurer's offices. At this time, it is necessary for the Board of Commissioners to certify the requested tax levy rate of .2135 mills for each county.

The calculation of the Metroparks tax levy millage rate is controlled by the "Headlee" Millage Reduction Formula (Michigan Compiled Law 211.34d) and Proposal A (1994 Public Act 415). Once the Metroparks tax levy rate is calculated, it is applied to the "taxable values" throughout the five counties of Livingston, Macomb, Oakland, Washtenaw and Wayne.

The Metroparks "taxable value" for the five counties for 2018 is \$150.2 billion, an increase of \$6.5 billion (4.58 percent) from the 2017 value of \$143.6 billion. The Metroparks taxable value showed an overall positive trend, with all five counties having increased from the previous year. Washtenaw showed the largest increase with over 5 percent. Livingston, Oakland, Macomb and Wayne had large increases, all over 4 percent. The overall 4.6 percent increase is favorable to long-term planning for the Metroparks.

In applying the 2018 taxable value figures to the Headlee Millage Reduction Factor calculation formula, with the permitted inflation rate multiplier of 1.021, the Metroparks will be permitted to levy .2135 mills for 2019. For the second time in 14 years, the Metroparks has to decrease the levy rate due to the MRF calculation reaching below 1.000. The Metroparks is levying 85 percent of the original authorized millage of .2500 mills and it should be noted that our reduction factor was just under 1.000 this year; the Metroparks will most likely be in a rollback situation for next tax year as well.

In applying the .2135 millage rate against the district's 2018 "taxable value" figures, anticipated "gross" tax revenues for 2019 will be \$32,067,553. The breakdown by county is as follows:

	2018/19 Levy	%	2017/18 Levy	%	Change
Livingston	\$ 1,895,483	5.9%	\$ 1,811,026	5.9%	4.5%
Macomb	\$ 5,781,704	18.0%	\$ 5,558,351	18.1%	3.9%
Oakland	\$ 12,220,508	38.1%	\$ 1,695,116	36.6%	4.3%
Washtenaw	\$ 3,546,514	11.1%	\$ 3,380,885	10.8%	4.7%
Wayne	\$ 8,623,344	26.9%	\$ 8,290,852	28.3%	3.9%
Total	\$ 32,067,553	100.0%	\$ 30,736,230	100.0%	4.2%

2018/2019 Tax Levy Report
Page Two

As the Metroparks has done for the last 10 years, staff recommends estimating the amount of “captured” tax revenues and potential tax refunds and adjust the anticipated gross tax revenues down at the start of the budget year. This is due to (1) the number of tax abatement programs, which include Downtown Development Authorities (DDA), Local Development Finance Authorities (LDFA), Tax Incremental Finance Authorities (TIFA), Brownfield, and Neighborhood Enterprise Zones; (2) the large number of communities that are utilizing them; and (3) the amounts of Metroparks tax revenue that is being captured and refunded.

By booking this adjustment at the beginning of the budget year, we are able to have a more accurate picture of the actual amount of tax revenue that should ultimately be collected in 2019. Based on trends from the last five years of data from the amount of Metroparks tax revenue captured and refunded, the following breakdown details the “net” tax revenues recommended to be used for the 2019 Budget.

	2018/19 Gross Tax Levy	Estimated Captured Taxes	2018/19 Net Tax Levy
Livingston	\$ 1,895,483	\$ (30,000)	\$ 1,865,483
Macomb	5,781,704	(20,000)	5,761,704
Oakland	12,220,508	(285,000)	11,935,508
Washtenaw	3,546,514	(70,000)	3,476,514
Wayne	8,623,344	(350,000)	8,273,344
Total	\$ 32,067,553	\$ (755,000)	\$ 31,312,553

The 2018 Budget was prepared based on anticipated net tax revenues of \$29,946,230. The recommended net tax revenue for 2019 is \$31,312,553, an increase of \$1,366,323. For 2019, the Metroparks budgeted revenue remains fairly close to the amount of tax revenues that were received in 2004, but still remain less than our peak year of 2009.

Staff is also recommending adding \$400,000 in the budget for Personal Property Tax Exemption Loss, which is money reimbursed for personal property tax on all operating millage's by the state of Michigan.

The Metroparks have received confirmation of the calculations of the 2018 tax millage rate and revenues from the state Department of Treasury, Assessment and Certification Division.

**Property Tax Levy
Historical Data 2012-2019
Huron-Clinton Metroparks Authority**

	2012	2013	2014	2015	2016	2017	2018	2019
Livingston County	1,595,451	1,565,732	1,594,749	1,621,383	1,693,299	1,728,341	1,776,026	1,865,483
% of Total	5.1%	5.3%	5.7%	5.8%	6.0%	5.9%	5.9%	6.2%
Macomb County	5,448,927	5,151,431	5,120,419	5,216,972	5,437,583	5,396,668	5,533,351	5,761,704
% of Total	17.3%	17.5%	18.2%	18.5%	19.1%	18.4%	18.3%	19.1%
Oakland County	10,477,821	10,054,927	10,146,651	10,321,459	10,766,960	11,010,893	11,395,116	11,935,508
% of Total	33.3%	34.2%	36.0%	36.7%	37.9%	37.6%	37.7%	39.7%
Washtenaw County	2,960,987	2,884,061	2,988,396	3,034,765	3,126,874	3,203,075	3,300,885	3,476,514
% of Total	9.4%	9.8%	10.6%	10.8%	11.0%	10.9%	10.9%	11.6%
Wayne County	8,612,450	8,257,786	8,060,251	7,943,130	7,997,144	7,893,747	7,940,852	8,273,344
% of Total	27.4%	28.1%	28.6%	28.2%	28.1%	26.9%	26.3%	27.5%
Total Adjusted Levy	\$ 29,095,637	\$ 27,913,938	\$ 27,910,467	\$ 28,137,710	\$ 29,021,861	\$ 29,232,725	\$ 29,946,231	\$ 31,312,554

**HURON-CLINTON METROPOLITAN AUTHORITY**

To: Board of Commissioners
From: Hilary Simmet, Marketing and Media Specialist
Subject: Report – Marketing/Media Stats
Date: July 5, 2018

Action Requested: Motion to Receive and File

That the Board of Commissioners' receive and file the Marketing and Media statistics report as recommended by Marketing and Media Specialist Hilary Simmet and staff.

Background: An overview of marketing and media efforts through May are attached for review.

Attachment: Marketing and Media Stats

2018 Marketing/Media Stats

PAID MEDIA

	Print Ads	Digital Ads
January	5	3
February	5	3
March	7	4
April	8	6
May	5	7

UNPAID MEDIA (ORGANIC)

	Total Online Mentions	Total Online Visitors	Total Online Value	Total TV Mentions	Total TV Visitors	Total TV Value
January	42	3,069,749	\$ 52,014			
February	69	3,931,997	\$ 41,378			
March	59	1,852,569	\$ 15,897			
April	136	57,158,304	\$ 1,719,057	10	73,132	\$ 3,883
May	158	8,257,067	\$ 85,827			

SOCIAL MEDIA - MAIN FACEBOOK

	Followers	Number of Posts	Total Post Reach	Total Impressions	Total Reactions, Comments, Shares	Total Post Link Clicks
January	8,563	19	59,277	97,572	840	186
February	8,610	24	69,948	106,430	944	268
March	8,696	25	91,953	131,049	1,704	198
April	8,888	22	76,442	106,259	1,617	230
May	9,199	26	132,824	199,158	2,230	1,623

SOCIAL MEDIA - TWITTER

	Followers	Number of Posts	Total Post Impressions	Total Post Engagement
January	1,821	28	16,346	598
February	1,861	25	14,509	647
March	1,895	35	21,362	854
April	1,926	39	27,445	1,179
May	1,960	26	26,083	2,714

SOCIAL MEDIA - INSTAGRAM

	Followers	Number of Posts	Total Post Likes	Total Post Comments
January	574	10	414	9
February	620	12	486	10
March	971	14	522	6
April	729	11	395	1
May	785	14	551	10

2018 Marketing/Media Stats

WEBSITE

	Page Views	Online Sales	Organic Search	Direct Search	Social Media Referral	Email
January	107,113	\$ 15,294	18,867	7,263	3,590	1,654
February	112,779	\$ 11,831	20,509	7,430	3,120	2,354
March	157,640	\$ 16,105	27,571	9,808	2,753	3,542
April	185,445	\$ 16,502	35,945	10,223	2,474	2,862
May	357,206	\$ 19,959	73,616	20,117	7,515	6,205

COMMUNITY OUTREACH

	Presentations	Cold Calls	Networking Meetings	One on One Meetings	Community Events (booth/table)
January	4	83	8	2	0
February	5	95	10	2	2
March	11	82	5	5	2
April	4	65	6	3	8
May	13	121	5	2	7



HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners
 From: Mike Henkel, Chief of Engineering Services
 Project No: 710-18-184
 Project Title: Bids – Pool Heater Replacement
 Project Type: Major Maintenance
 Location: Willow Metropark
 Date: July 5, 2018

Bids Received: June 27, 2018

Action Requested: Motion to Approve

That the Board of Commissioners' award Contract No. 710-18-184 to the low responsive, responsible bidder, Fraser Mechanical, Inc., in the amount of \$131,210 as recommended by Chief of Engineering Services Mike Henkel and staff.

Fiscal Impact: The repair was budgeted for \$80,000. Currently, Major Maintenance funds are available that were budgeted for under general repairs throughout the various parks to cover the additional cost of the project.

Scope of Work: The project includes removing both the main pool and bathhouse boilers. The work also includes the installation of the main pool pump and tankless water heaters with the associated piping.

Background: The existing boilers at the pool have been serviced on numerous occasions and are more than 19 years old. In addition to the boiler replacement, the pool pump and the boiler for the bathhouse needs to be replaced.

The sizing and the exhaust arraignment of the current boilers adds to inefficiencies and produces excess heat which degrades the units and has led to more extensive and ongoing repairs.

The boiler for the bathhouse will be replaced with a water heater due to the existing unit being oversized for the current use. The new boiler and water heating units and configuration will be more efficient than the current units.

The original pool, associated mechanical building and bathhouse was constructed in 1972 and the pool was reconstructed in 2009.

<u>Contractor</u>	<u>City</u>	<u>Amount</u>
Fraser Mechanical	Washington	\$131,210.00

**This project was publicly advertised but only one bid was received.*

Bids – Pool Heater Replacement

Page 2

Budget Amount for Contract Services	\$ 80,000.00
General Aquatic Repairs Willow Annual	\$ 21,000.00
General Repair Oakwoods	\$ 10,000.00
General Repair Lower Huron	\$ 15,000.00
General Repair Hudson Mills	\$ 5,210.00
Total	<u>\$131,210.00</u>
 Work Order Amount	
Contract Amount Fraser Mechanical Inc.	\$131,210.00
Contract Administration	<u>\$ 3,000.00</u>
Total Proposed Work Order Amount	\$134,210.00

Note: The following contractors downloaded documents but did not submit a bid; Whittaker Brothers, New York; Pearce Contracting Ortonville.

This project was reported and publicly advertised in the following construction reporting outlets: Construction Association of Michigan, Reed Construction Data, Construction News Corporation, Reprographics One DFS Plan Room, Construction News Service, HCMA Website, Builders Exchange of Michigan, McGraw Hill Dodge, Builders Exchange of Lansing and Central Michigan.

**HURON-CLINTON METROPOLITAN AUTHORITY**

To: Board of Commissioners
From: Julie Hein, CFRE, Chief of Foundation Services
Subject: Report – Foundation Sponsored Senior Day 2018
Date: July 5, 2018

Action Requested: Motion to Receive and File

That the Board of Commissioners' receive and file the Senior Day report as recommended by Chief of Foundation Services Julie Hein and staff.

Background: As part of our outreach to park patrons, the Metroparks Foundation partnered with Henry Ford Hospital of West Bloomfield and Health Alliance Plan (HAP) to present a Senior Day May 30, 2018 at Kensington Metropark to present informative health and wellness workshops to two Independent Living Centers – All Seasons of West Bloomfield and Abbey Park at Mill River of New Hudson.

The goal of the program was two-fold: find sponsors to support the day and educate seniors on healthy lifestyles and introduce them to the various programs that the Metroparks have to offer.

Learning about some of the Metroparks giving opportunities may lead to future gifts to the Metroparks Foundation. The day served as a nice cultivation tool for the residents. One of the participants has a bench at Kensington and we paid tribute to this 92-year-old woman and her beloved husband who have spent many years coming to Kensington with their family.

Programing included Diabetes and Sugar Awareness (Henry Ford West Bloomfield Hospital), Chair Yoga (ABC Yoga of Lyon Township), Good Form Walking (AARP), Make the Most of your Medicare Benefits, (HAP). Following the luncheon program sponsored by HAP, residents took an Island Queen Boat Tour of Kent Lake.

The event was sponsored by: HAP with \$1,500 to underwrite the day and luncheon, All Seasons of West Bloomfield was a program sponsor, Abbey Park at Mill River was a beverage and snack sponsor, Knotting Hill of West Bloomfield sponsored the Island Queen Boat tour. Total sponsorship funding was \$2,250.

Attachment: Senior Day Brochure



Our Mission:

The Huron-Clinton Metroparks Foundation's mission is to provide critical support to sustain the Metroparks for the enrichment of people and the environment in southeast Michigan.

The park system was established in 1942 to provide recreation opportunities and to preserve open space for residents. Based in Livingston, Oakland, Macomb, Washtenaw and Wayne counties, the 13 Metroparks cover nearly 25,000 acres for recreation, education and the stewardship of natural resources.

Launched in 2003, the Metroparks Foundation has worked to enhance, promote and support the parks, as well as provide funding for a variety of major projects. The Foundation has supported improvements to historic structures, educational opportunities for low-income students, renovated nature center exhibits, refurbished and restored trails and habitat for native species.

Contact Us!

Metroparks Foundation

13000 High Ridge Drive, Brighton, MI 48114

julie.hein@metroparks.com | 810-494-6041

www.metroparks.com

8-A-1-a



WELCOME SENIORS!



Presenting Sponsor



Senior Health & Fitness Day

May 30, 2018 | Kensington Metropark Nature Center

Event Schedule

9:30 a.m. - Coffee, Water and Snacks

9:30 a.m. - "Diabetes and Sugar Awareness" | Halle Saperstein, Henry Ford West Bloomfield Hospital

10:25 a.m. - "Chair Yoga" | Kymm Loch, ABC Yoga

10:50 a.m. - 15 Minute Break

11:05 a.m. - "Good Form Walking" | Kimberley Bishop, AARP

11:45 a.m. - **Lunch and Learn** - "Make the Most of your Medicare Benefits" | Chris Javor, Health Alliance Plan (HAP)

12:30 p.m. - Island Queen Boat Tour of Kent Lake

2:15 p.m. - Goodie Bags and departure

Speaker Biographies

Halle Saperstein, Clinical Dietitian, Henry Ford Hospital

Halle Saperstein, received her undergraduate and graduate degrees in Clinical Nutrition from Syracuse University. She has been practicing nutrition for more than 20 years in clinical and community settings. Saperstein has helped many individuals reach their personal nutritional goals, dramatically improving their health. She specializes in providing nutritional care for diabetes, weight management, maternal nutrition, cardiovascular disease, hyperlipidemia, digestive disorders and many other nutrition-related issues. Saperstein has been quoted in many publications, including Reader's Digest, Metro Parent, SEEN magazine, HAP Balanced Living and local community papers. She is a member of the American Dietetic Association, the Southeastern Michigan Association and various other dietetic practice groups.

Kymm Loch, Owner & Instructor, ABC Yoga

After years of running marathons, Loch turned to yoga to heal from an injury and, more recently, hip replacement. A trained massage therapist and reflexologist, Loch blends her understanding of anatomy and alignment to teach yoga classes that increase awareness, incorporate breath and movement and expand the mind and body in challenging ways. Her classes are spirited, interactive and stimulating. Loch also teaches yoga at South Lyon Recreation and South Lyon Center for Active Adults.

Kimberley Bishop, Associate State Director, AARP

Kimberley Bishop, earned a Bachelor of Science from Michigan State University and a Masters of Public Affairs from Western Michigan University. In her role as the Associate State Director at AARP Michigan, Bishop is responsible for planning and executing community outreach events. She, along with a team of dedicated volunteers, deliver free workshops and programs related to health, family caregiving, age-friendly communities, financial security, fraud prevention and personal fulfillment. Bishop has a personal interest in caregiving, as she is one of Michigan's two million unpaid family caregivers, navigating her mother's journey with dementia. Bishop learned about the Good Form Walking program after joining a Women's Couch to 5K program hosted by Playmakers Fitness Foundation. Though still at the "couch" stage, she utilizes the techniques to prevent injuries when walking for fitness.

Christopher Javor, Manager of Individual Medicare Sales, HAP

Christopher Javor is the Manager of Individual Medicare Sales at Health Alliance Plan in Detroit where he manages external and internal brokers. Javor graduated with a bachelor's degree in Kinesiology from Fort Lewis College and has more than 20 years of sales experience focusing on health care, Medicare and Medicaid. Javor is an active member of the National Association of Health Care Underwriters and he provides leadership and knowledge to his peers in the ever-changing world of health care.

Thanks to our Sponsors!

Presenting Sponsor



Medicare
Solutions

Program Sponsor



For the joys of independent senior living

Beverage & Snack Sponsor



Island Queen
Boat Tour Sponsor

NOTTING HILL
OF WEST BLOOMFIELD



HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners
 From: Heidi Dziak, Senior Buyer
 Subject: Approval – Catering Services, RFP 2018-020
 Location: All Locations
 Date: July 5, 2018

Action Requested: Motion to Approve

That the Board of Commissioners' award RFP 2018-020 to Crank's Catering of Shelby Township, Michigan for a contract, to begin Jan. 1, 2020 for a term of three (3) years, with up to one (1) two-year renewal option to provide catering services at the Metroparks as recommended by Senior Buyer Heidi Dziak and staff.

Fiscal Impact: The Metroparks will receive 17 percent commission on food and beverage sales from catered events held at the Indian Springs (Environmental Discovery Center), Lake St. Clair (Thomas Welsh Activity Center) and Stony Creek (Sunset Terrace Banquet Tent).

Additionally, in exchange for being identified as a preferred caterer, the Metroparks will receive 10 percent commission on food and beverage sales from catered events held elsewhere in the Metroparks, such as at picnic shelters and pavilions.

Scope of Work: Provide catering services for the Environmental Discovery Center, Thomas Welsh Activity Center, the Sunset Terrace Banquet Tent and other locations within the Metroparks.

Background: The Metroparks current contract for catering services will expire on Dec. 31, 2019. The proposed contract with Crank's Catering will begin on Jan. 1, 2020.

The RFP was posted on the Michigan Intergovernmental Trade Network (MITN) site, which provided notice of the solicitation to 33 vendors, of which nine vendors downloaded the RFP. In addition, staff emailed the RFP notice to six vendors.

Proposals were received from five vendors and staff evaluated the proposals based on the vendor's qualifications, experience, understanding of the work, methodology, approach and commission.

<u>Vendor</u>	<u>Location</u>	<u>Commission</u>	
		<u>For Venues</u>	<u>For Shelters</u>
Crank's Catering	Shelby Township	17%	10%
Kosch Hospitality LLC	Rochester	15%	10%
Soprano's Catering	Roseville	15%	15%
Two Unique Caterers & Event Planners	Royal Oak	10%	N/A
Zuccaro Banquets & Catering Corp.	Chesterfield	5%	5%

**HURON-CLINTON METROPOLITAN AUTHORITY**

To: Board of Commissioners
From: Nina Kelly, Chief of Planning and Development
Subject: Huron Meadows Master Plan Presentation
Date: July 5, 2018

Action Requested: Motion to Receive and File

That the Board of Commissioners' receive and file the draft Huron Meadows Master Plan as presented by Chief of Planning and Development Nina Kelly, and staff.

Following the meeting, the draft will be posted on the Metroparks website for public review and comment for a period of at least two weeks. Staff will request approval for the master plan at the Aug. 9, 2018 board meeting.

Attachment: Draft Huron Meadows Master Plan



8-B-1-a

HURON MEADOWS MASTER PLAN

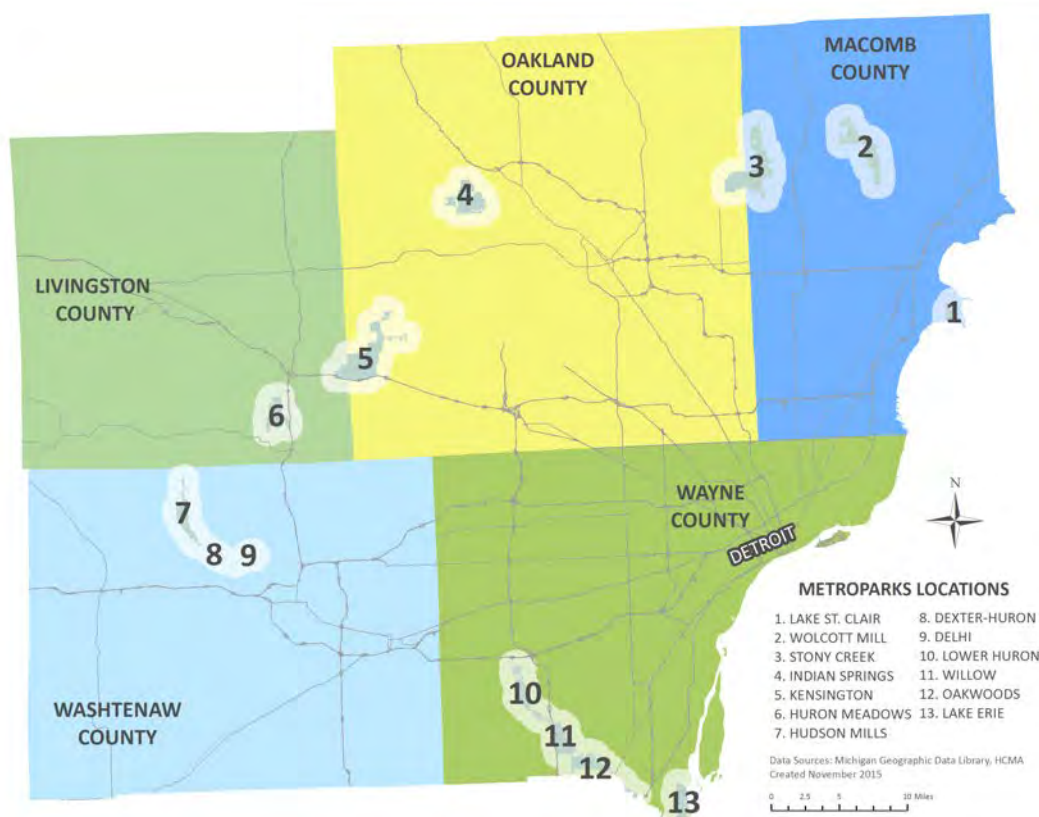


Table of Contents

INTRODUCTION	5
ABOUT THE METROPARKS	5
ADMINISTRATION & OPERATIONS	6
PLANNING PROCESS	7
HURON MEADOWS TODAY	8
CHARACTER	8
LOCATION	10
BIODIVERSITY AREAS	11
CULTURAL HISTORY	13
INFRASTRUCTURE	15
FACILITIES & CENTERS	18
LAND	20
WAYFINDING	22
TRAILS	23
ACCESSIBILITY	25
REVENUE	27
REVENUE SOURCES	27
VISITORS	28
PROGRAMS & EVENTS	29
COMMUNITY INFLUENCES	30
POPULATION	30
PROJECTS & INITIATIVES	32
PUBLIC INPUT	34
OUTREACH PROCESS	34
RESULTS	35
ACTION PLAN	38
NEEDS & OPPORTUNITIES	38
PROJECT LIST	39
PLANS, STUDIES, & INITIATIVES	43
KEY PROJECTS	46

INTRODUCTION

About the Metroparks

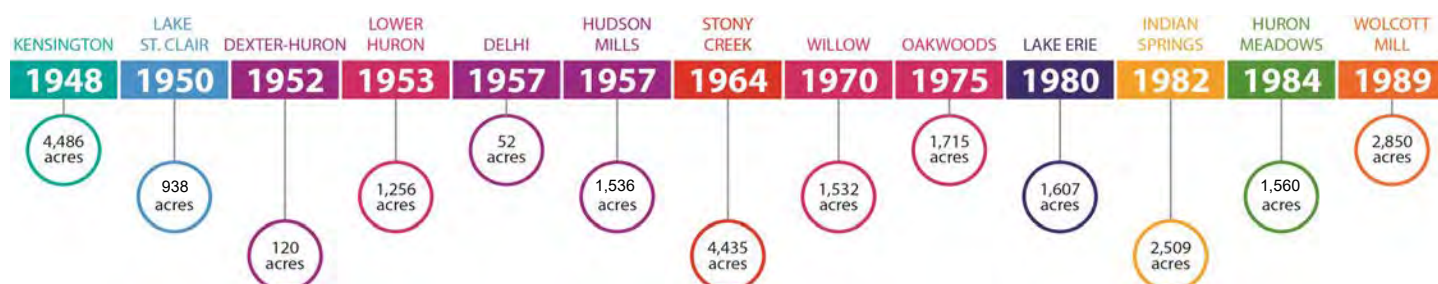


The Huron-Clinton Metropolitan Authority was sanctioned by the Michigan State Legislature in Act No. 147 of the Public Acts of 1939. Named after the two longest rivers within its boundaries, the Huron-Clinton Metropolitan Authority is a regional park agency consisting of 13 Metroparks encompassing approximately 25,000 acres of land within a five county area in southeast Michigan.

Much credit can be given to Henry S. Curtis and Harlow O. Whittemore for making the Metroparks a reality. The 1937 vision for a park system proposed a series of parks connected by a long parkway extending from Lake St. Clair along the Clinton and Huron rivers to Lake Erie below the mouth of the Detroit River.

Funding of the parks began in 1942 with a property tax levy, limited to one-quarter of one mill. The rate today has been adjusted to .2140 mills.

PARK DEVELOPMENT TIMELINE



Administration & Operations

Board of Commissioners

A seven-member Board of Commissioners governs the Huron-Clinton Metropolitan Authority. The Board of Commissioners meets the second Thursday of each month, where they make policy decisions for the Authority, including approving expenditures, acquiring land, planning of new parks and facilities, approving fees and charges, awarding contracts through competitive bidding and other matters necessary to provide regional recreation. The Board appoints staff officers for the Metroparks.

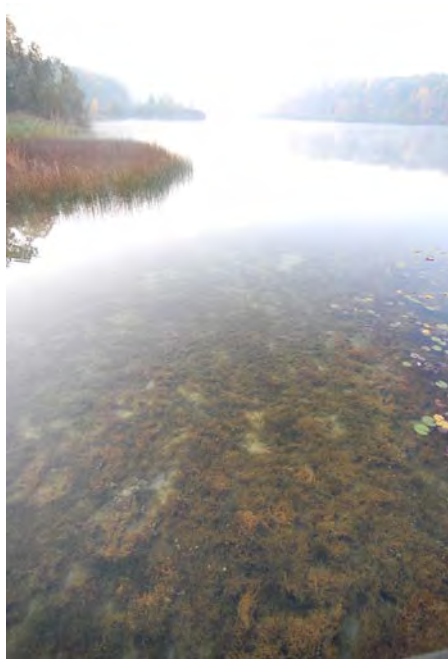
Two commissioners, appointed by the Governor of Michigan for a term of four years, serve as representatives at large. Five commissioners, one each to represent the counties of Wayne, Macomb, Oakland, Livingston and Washtenaw are appointed for a term of six years by the board of commissioners of the above-named counties.

Director is the Chief Executive Officer of the Metroparks, provides leadership and executive oversight of all administrative and operational activities.

Administrative Departments provide administrative support to operations and guide the organization towards its mission.

Operational Departments facilitate the day-to-day operations of the parks, making sure patrons have enjoyable and educational visits. They include Maintenance and Interpretive Services.

Metropark Police ensure that everyone can enjoy the parks in a safe and secure environment.



Introduction

Planning Process

Several factors contribute to the recommendations that will be proposed for Huron Meadows in the master plan. One of the most important is the public input collected through meetings, questionnaires and online comments. This reveals the public's hopes and expectations for the park and significantly influences plan recommendations. A master plan steering committee was formed to include park employees with exceptional knowledge of Huron Meadows and the surrounding community, who along with the experienced Metroparks department heads provide their professional opinions.

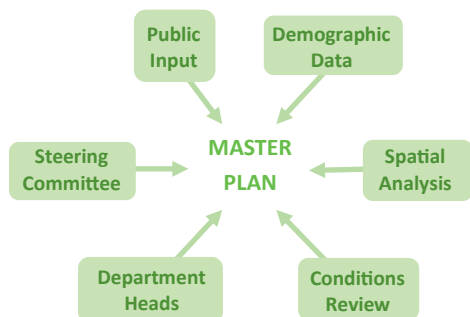
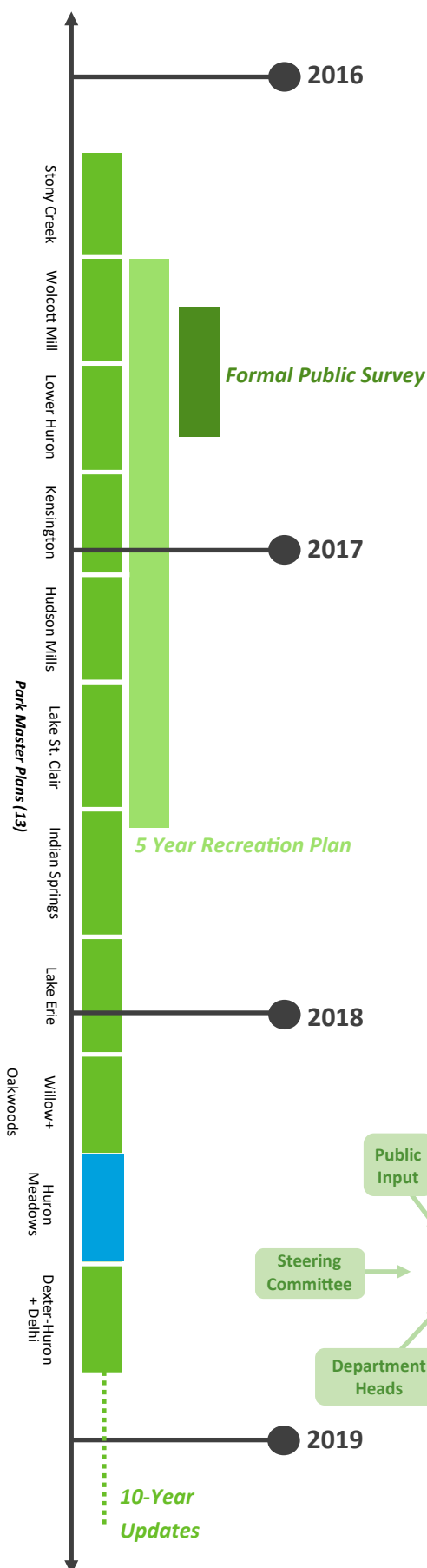
In 2016, the Metroparks Planning Department scheduled an aggressive timeline for completing all 13 park master plans in three years. Each park will be given a planning window of six months, with overlap between parks. Some master plan timelines may be extended or delayed if the Board of Commissioner's recommend further public input following their review of the draft plan. The order of the parks in the planning process was determined by staff based on current and planned park projects, planning need, geography and park popularity.

The Planning Department collects demographic and spatial data to inform master plan recommendations. Demographic data looks at the density, age, race, income, language and other factors of the regional population. Spatial data, usually analyzed through Geographic Information System software, looks at the physical location of the parks in relation to other recreation opportunities, transportation facilities, population centers, important natural resources and more. Finally, the Planning Department conducts a review of park conditions to identify areas needing improvement and areas experiencing success.

The master plans are intended to be living documents, modified as needed to reflect changing conditions in the parks. However, they focus on park developments over the following ten years and will be updated every decade through a formal planning process similar to the current one.



Public input gathered at the Huron Meadows Master Plan Open House on 4/7/2018



HURON MEADOWS TODAY

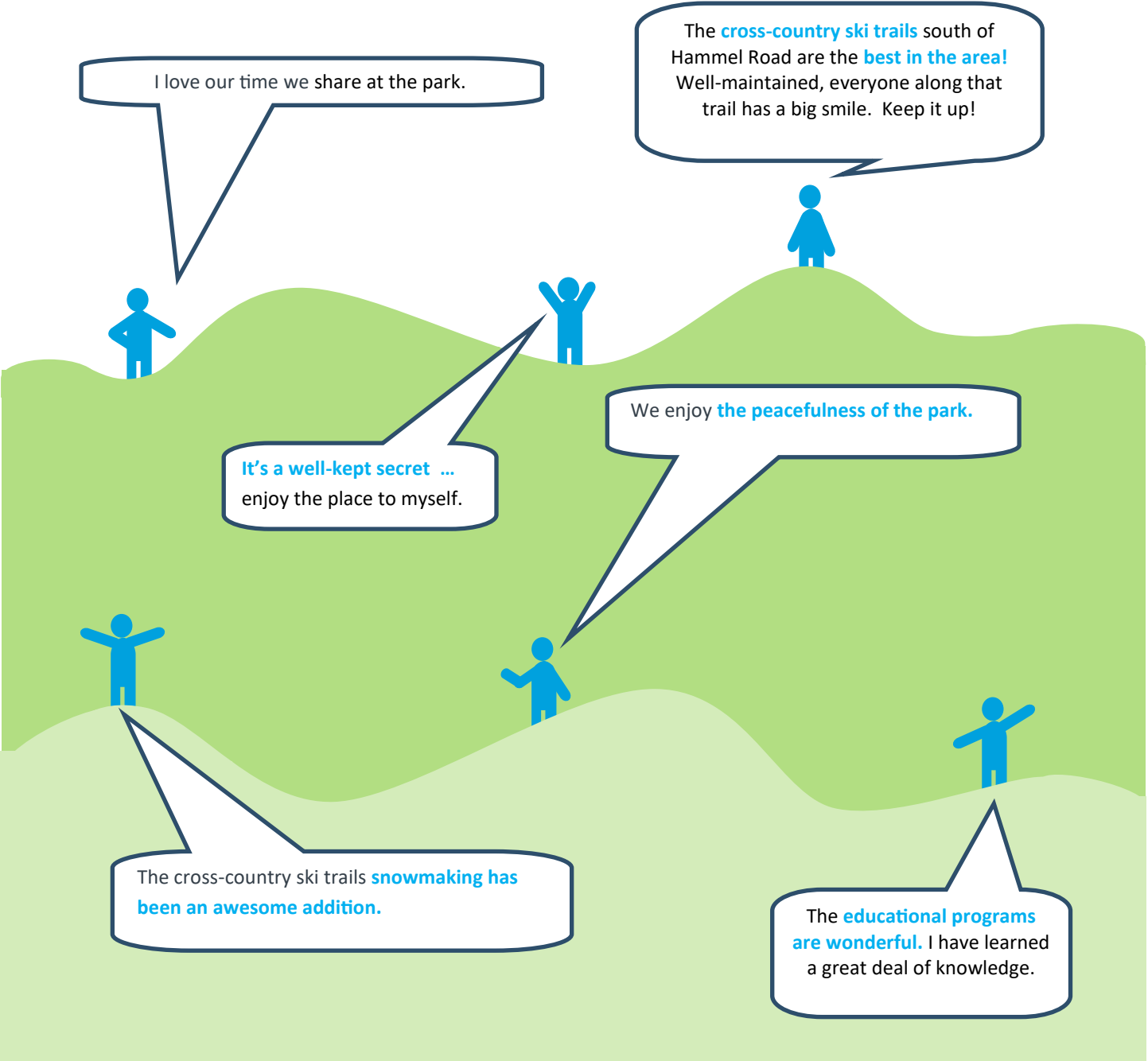
Character

The following responses to our questionnaire highlight the many facets of Huron Meadows that form a unique experience. Visitors appreciate the wide range of recreational activities available at the park, especially those related to the trails, natural resources and golf. They see it as contributing to the surrounding community.

NEEDS

- Continue to draw diverse range of visitors to the park
- Build on park character to attract new visitors

OPPORTUNITIES

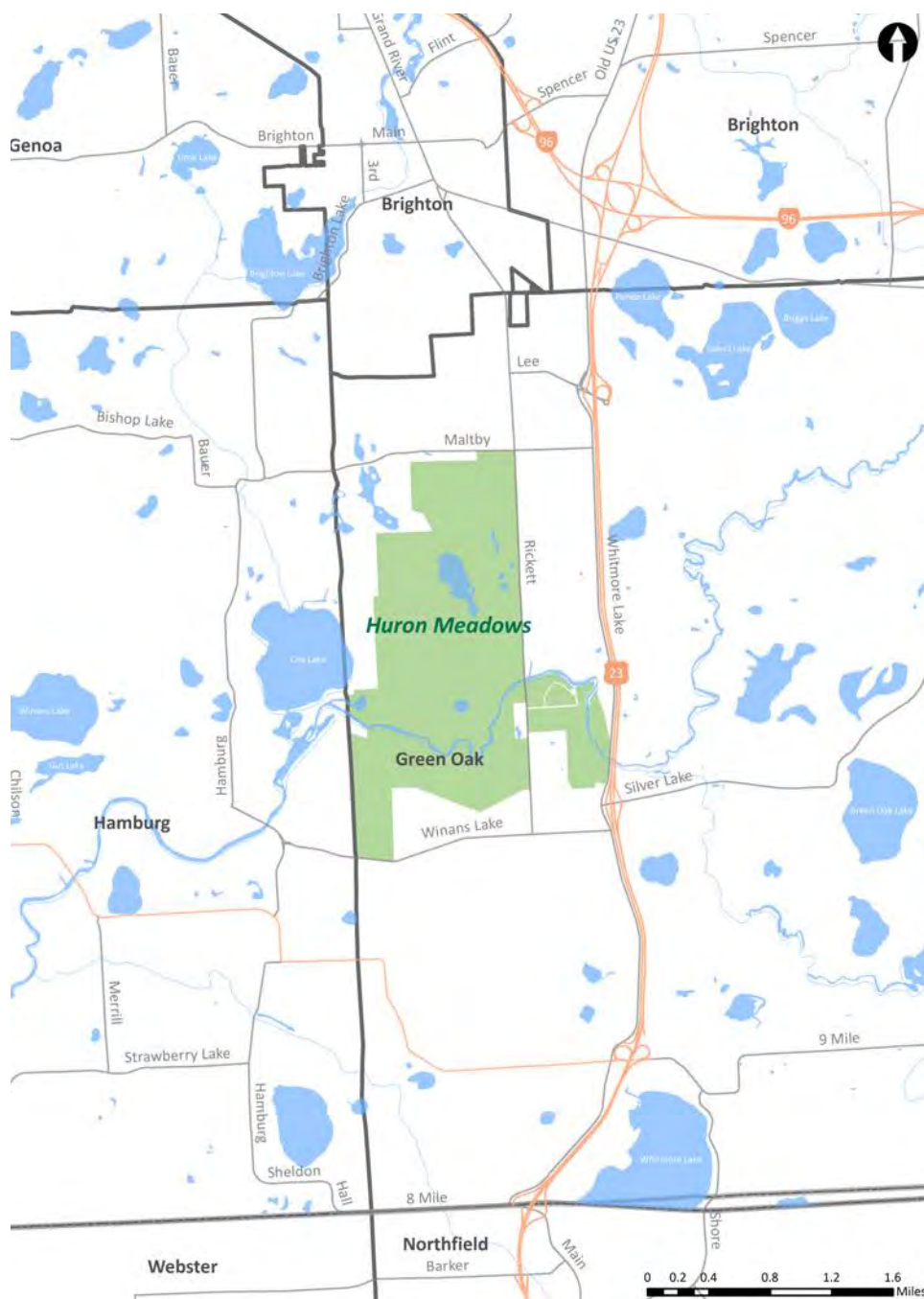




Location

Huron Meadows Metropark is located in Livingston County, near its southern border with Washtenaw County. All of the park is within Green Oak Township and it abuts Hamburg Township.

At its northernmost extent, Huron Meadows reaches Maltby Road. To the east, it borders Whitmore Lake Road and US-23. To the west, it extends about halfway between Rickett and Hamburg Roads. Its southern boundary is Winans Lake Road. The park is situated on the Chain of Lakes creekshed within the Huron River watershed.



Huron Meadows Today

NEEDS

Define and protect areas with important biodiversity features

Create a resilient network of biodiverse areas in the park

OPPORTUNITIES

Biodiversity refers to the variety of life present in a given area, often measured by number and distribution of species. It is important to preserve because it provides humans with ecological services such as clean water and oxygen, leads to greater resistance and resilience during natural and human-caused disturbances and reduces the risk of disease.

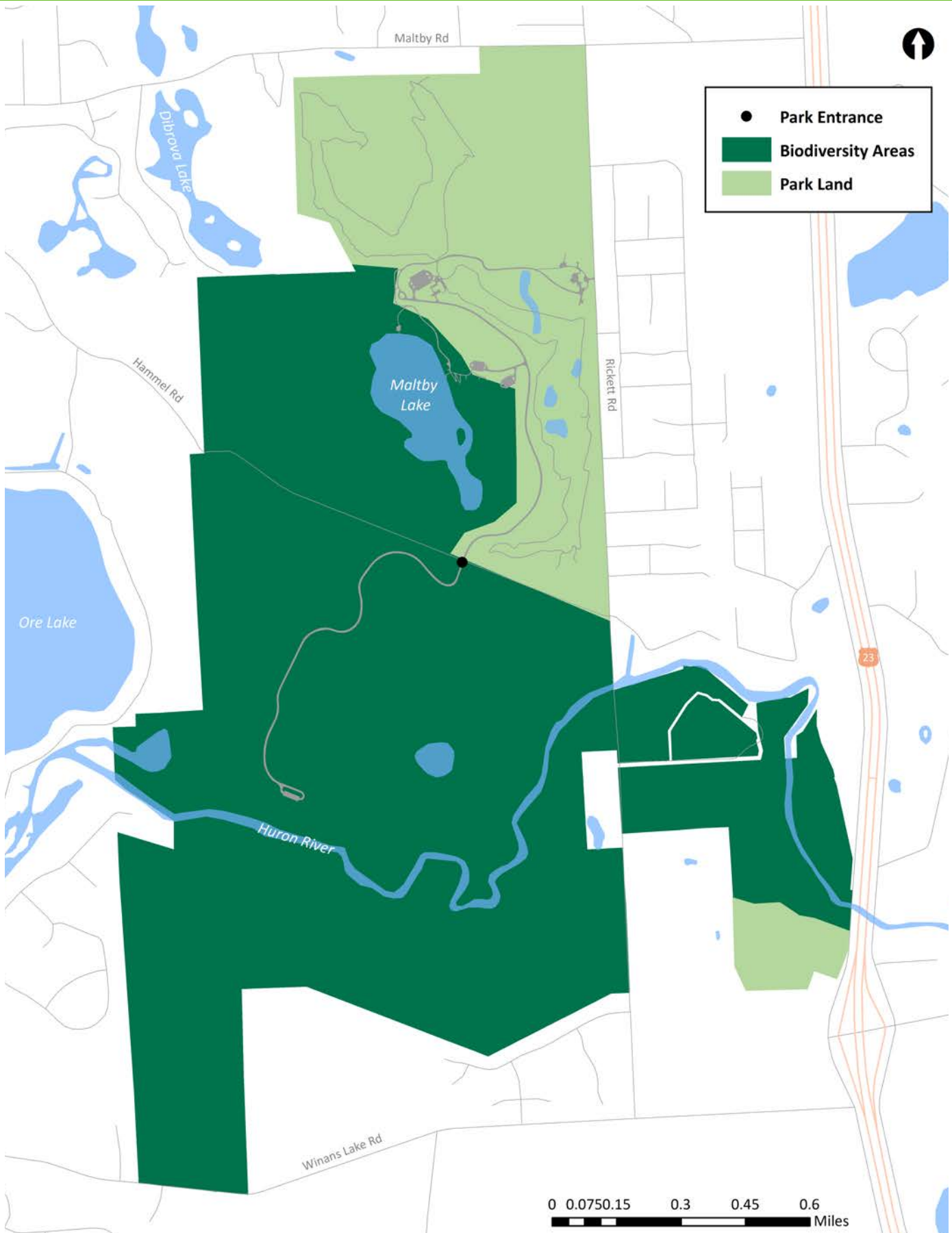


Biodiversity Areas

Identifying biodiversity areas can help inform the development of current and future park amenities, allowing the Metroparks to fulfill its mandate and mission statement of protecting the natural resources of the communities it serves. Development within biodiversity areas is carefully reviewed to minimize unnecessary disruption.

The following criteria for determining biodiversity areas were adapted from a matrix that the Natural Resources Department uses to determine work priorities throughout the park system. The following page shows a map of proposed biodiversity areas in Huron Meadows.

Metric	What	Why	Metric	What	Why
Elemental Occurrence	the presence of a species under legal protection, or of a complete system recognized as in condition similar to pre-settlement	statutory, occurrences protected by law from intentional take	Percent Invasive Species Cover	percentage of total acreage with invasive plant coverage	areas with few invasive species require less work, have greater return on investment
FQA (Floristic Quality Assessment)	presence of plant species likely to occur in conditions similar to pre-settlement	determines the ecological value of a system based on its floral assemblage	Community Ranking	rank assigned by the state due to natural community rarity or rate of decline	assesses the vulnerability of each natural community within the state
FQI (Floristic Quality Index) Connectivity	the presence of a quality habitat (greater than 35 FQI) within 100 feet of another	connected habitats provide diverse resources and facilitate migration, increase species fitness	Wetlands	the presence of wetlands	wetlands tend to have greatest diversity and are also critical to promote healthy water resources
Size	acreage of the habitat in question	large habitats provide more diverse resources and facilitate migration, increase species fitness, resilience	Habitat Connectivity	the presence of a complementary habitat within 100 feet of another	connected wetlands promote genetic diversity conservation and water quality



Huron Meadows Today

NEEDS

Better educate the importance of preserving important cultural features

Draw new visitors with programming/education based on history of park

OPPORTUNITIES

Early Settlers

The area enclosed by Huron Meadows Metropark was the first land to be tilled by settlers in Livingston County. Stephen Lee and Almon Maltby were recent arrivals from New York when they arrived in Michigan to take advantage of the fertile soils. Lee built a saw mill on Ore Creek north of the park in what is now Downtown Brighton. Their children, Hannibal Lee and Henry Maltby, purchased more land in the area for agriculture and grazing. Other land holders purchased land south of where Hammel road is now, but the Blackhawk War in Illinois and Wisconsin raised the fear of attack. The war never came this far east, but the land changed hands several times.

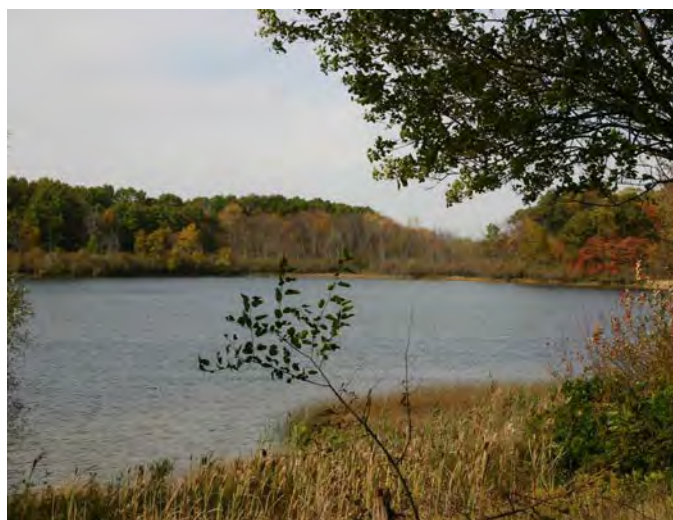
The land that is now the golf course and that surrounds Maltby Lake was acquired in 1977, completing Huron Meadows Metropark. The herd of cattle and bison that

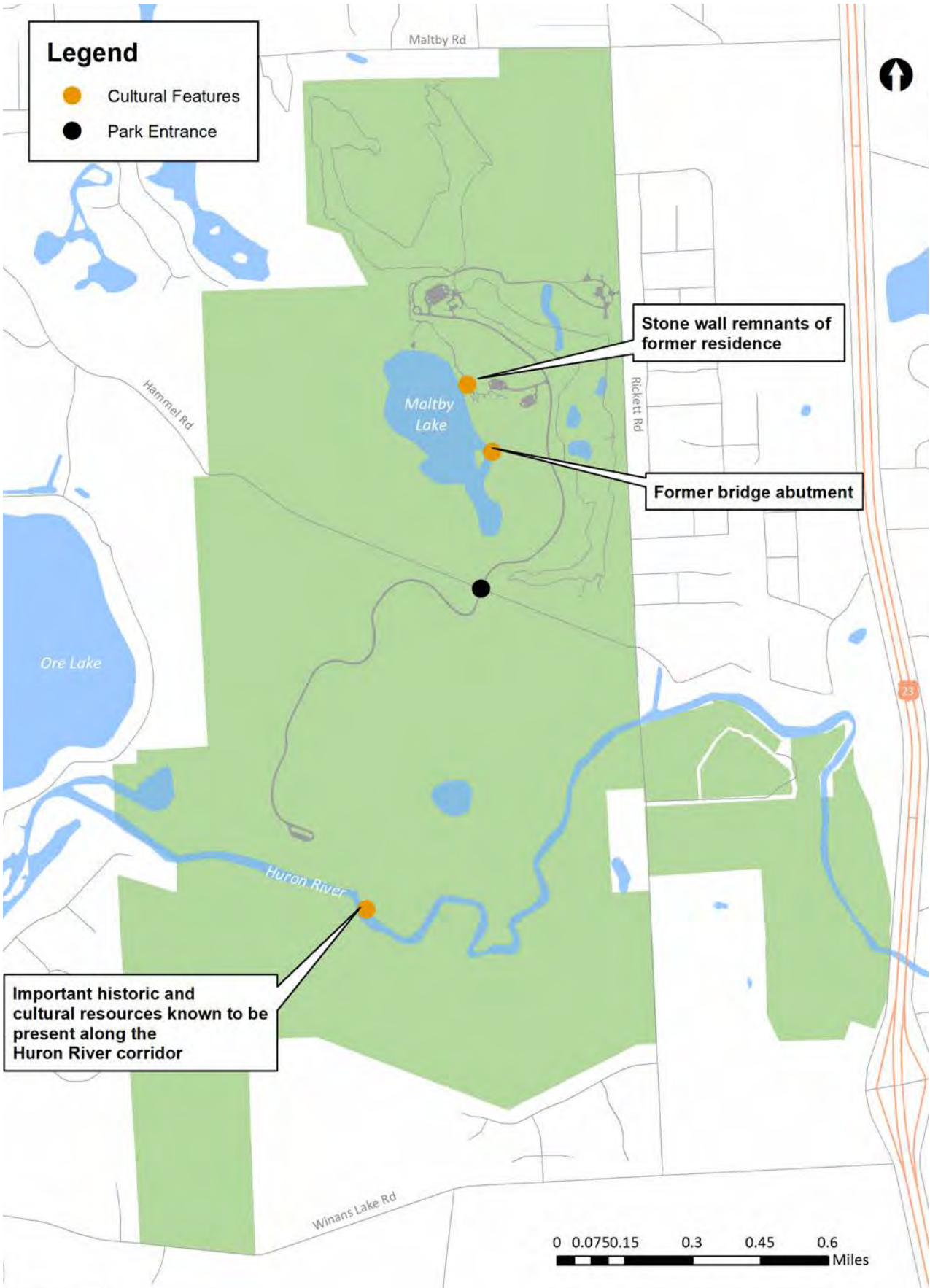
Cultural History

grazed here are gone, replaced by white-tailed deer and Canada geese. Because the land was never heavily developed, many portions of the park are rich in biodiversity. The names Lee and Maltby live on as the names of local roads and Maltby Lake in Huron Meadows Metropark.

Huron River

The natural features of Greek Oak Charter Township have historically played a major role in influencing growth and development. The Huron River that flows through the park is one of the key natural features which was designated a “Country Scenic Natural River” in 1979. This protective designation has contributed to the “up north” feel of the Huron River and provides unique access to the wild beauty of Southeastern Michigan for anglers and paddlers alike. The fascinating heritage of the Huron River for both Native and European settlers is also significant to the natural and cultural history of the entire park and has influenced how and where development has occurred over the years.





Huron Meadows Today

Infrastructure

In order to serve the varied needs of park visitors, Huron Meadows contains a number of buildings, surfaces, facilities and activity areas. Many of these were constructed years ago or decades ago and may require replacement in the near future.

The infrastructure necessary to maintain the activities available in Huron Meadows includes roads, parking lots, boardwalks, trails, utilities and much more. Since maintaining infrastructure is costly, it is important going forward to avoid overbuilding and collocate facilities to minimize paving and to reduce maintenance. Several recreation areas managed by both public and private entities are close to Huron Meadows, a goal in the planning process is to ensure that the facilities in the park complement others nearby, rather than to create duplication.



NEEDS

Address aging and overbuilt infrastructure

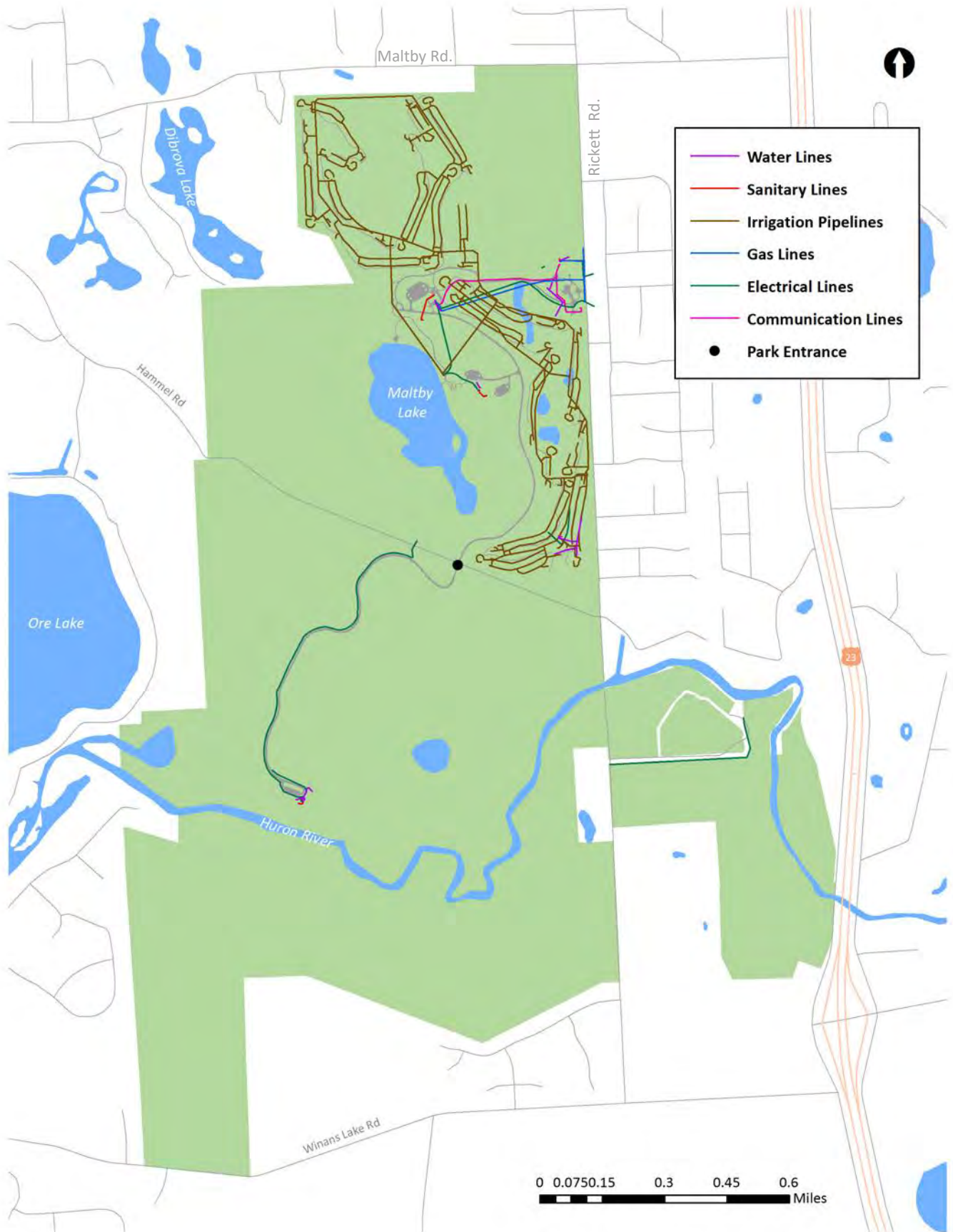
Redevelop park areas to better serve visitors and the environment

OPPORTUNITIES

Huron Meadows Infrastructure	
Public bldgs / avg age	1 / 15
Service bldgs / avg age	6 / 50
Comfort stations / avg age	2 / 13
Road miles	2.12
Parking lot acreage	2.36
Playgrounds	2
Percent of park mowed	2.8
Picnic shelters	3
Sand volleyball courts	2
Baseball fields	1
Fishing platforms	2
Tennis courts	0
Ice skating rinks	0
Basketball courts	0
Public canoe/kayak launches	1







Huron Meadows Today



Picnic Areas

Three picnic areas are located within the park. Sunset Ridge Picnic Area has a picnic shelter, children's play area, softball field, restrooms and accessible fishing pier. Acorn Ridge Picnic Area has a picnic shelter, sand volleyball court, horseshoe pits, children's play area and restrooms. Both of these picnic areas are located north of Hammel Road and are adjacent to Maltby Lake. Cedar Ridge located south of Hammel Road is located near the Huron River. It has a picnic shelter, sand volleyball court, swings, slide, large open sports field area and access to several hiking trails. It also has a canoe or kayak launch to access the Huron River.

Fishing Pier

A large barrier-free fishing pier, accessible by ramp or steps, is located at the Sunset Ridge Picnic Area. Ice fishing is allowed when weather conditions permit.

Ski Center (Golf Starter Building)

Huron Meadows Metropark is one of just a few parks in southeast Michigan that offers skate-style and classically



Facilities & Centers

Huron Meadows features a number of facilities that define its character and enhance the recreational experience of visitors. Some of these either require an admission fee, are available for rentals, or sell concessions, supplementing park revenue. As with all park infrastructure, it is a priority to keep the facilities well-maintained and replace them when no longer functional.

groomed cross-country ski trails. The Ski Center (Golf Starter Building) features classic-style and skate-style ski rentals and a heated lounge, restrooms and snacks. Groups of 10 or more can make arrangements to rent skis during the week.

Buck's Run

The Ski Center also provides access with additional fees to Buck's Run, a 1.5-mile loop made from snow shot from snow guns. The trail is lighted at night and includes a fire pit.

Golf Course

The 6,663 yard, par 72 golf course with rolling fairways is scenic and challenging. It includes a starter building, driving range, practice green and cart paths.



Huron Meadows Today

The Metroparks are moving towards a more data-driven approach to developing facilities. In order to best serve the residents of southeast Michigan and use resources wisely, the Planning Department has identified the location of similar facilities and programs. The goal for future development is to avoid duplication and instead offer unique facilities that fill recreation voids in the geographic area where the park is located.

The map below shows the location of aquatic facilities, golf courses, boat launches, neighborhood sports facilities and interpretive programs that compete with those offered at Huron Meadows. There are relatively few facilities and programs available in the five-mile radius that compete with the park's unique and significant features. This may present opportunities for Huron Meadows to meet the recreational needs of the area in new ways distinct from other recreational opportunities moving forward.

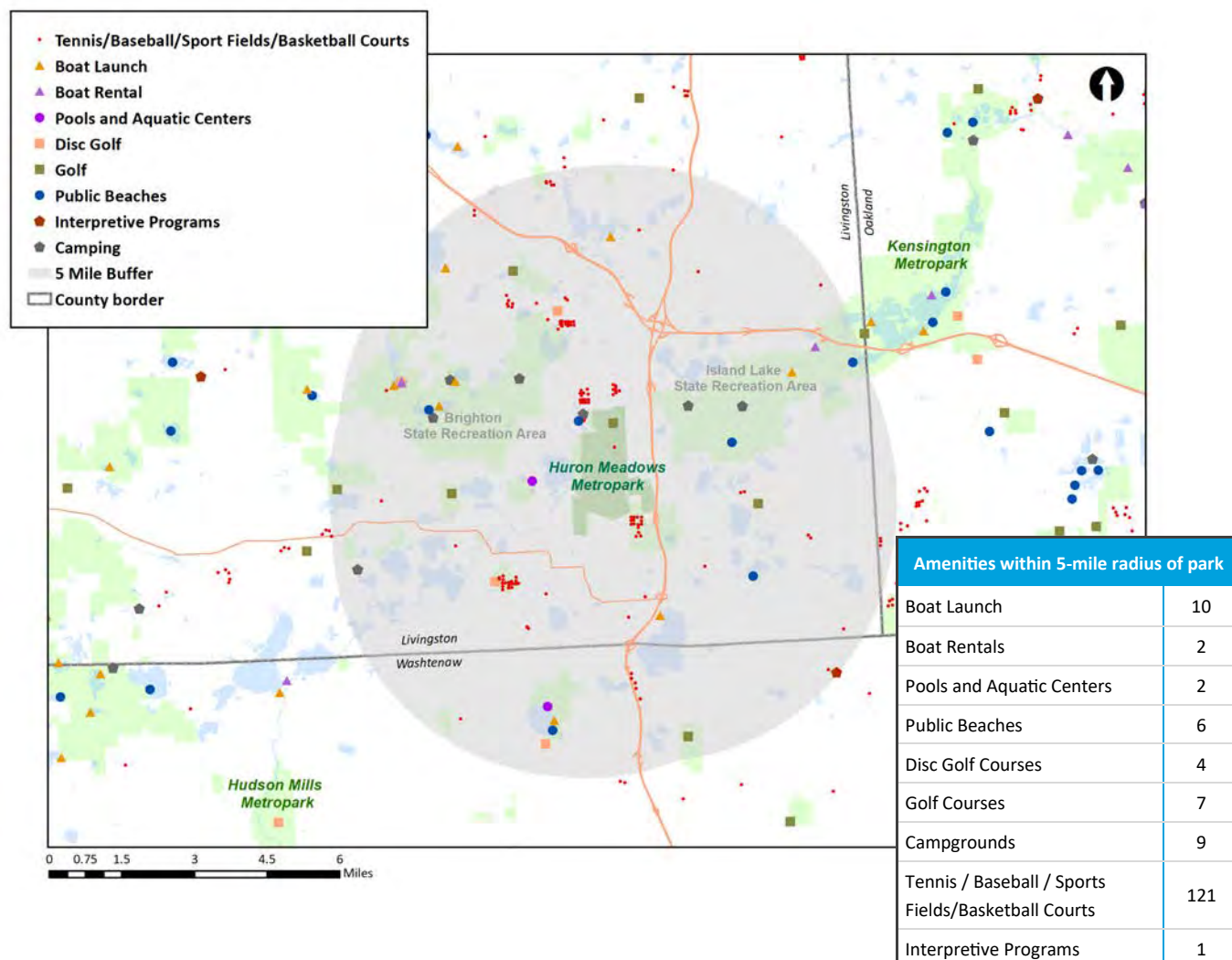
NEEDS

Identify areas of facility duplication for repurposing and consolidation

Provide unique recreational facilities to draw visitors from across the region

OPPORTUNITIES

NEARBY FACILITIES



NEEDS

Work with county and local communities to address any park boundary issues

Create good working relationships with neighbors and partner organizations

OPPORTUNITIES

Grants

Over its history, Huron Meadows has received two grants from the DNR (Department of Natural Resources). One pertaining to the purchase of a property and the other for recreational access and a play area at Maltby Lake. The land specified as the project area of those grants was encumbered in perpetuity—meaning it may never be converted into a private or non-recreational use. Approximately 0.4% of Huron Meadows is encumbered, as shown on the following page.

The generous grants from the DNR and other sources have contributed to Huron Meadows Metropark developing the high-quality recreation it offers to the public today.



Encroachments

The Planning Department has worked with Huron Meadows park staff to identify external encroachments on park boundaries. These include private development on park property, dumping waste and breaking through fence lines. Together with a new combined map of county parcels in relation to historic Metroparks-created parcels, this will help staff resolve existing property issues.

Since Huron Meadows abuts several residential areas, it is important to work with neighbors to discourage illegal paths into the park and identify areas where a formal pedestrian entry point may be necessary to serve a neighborhood.

Informal Access Points

Certain spots on the park border are open to pedestrian access but not formally designated as an entrance. These must be monitored and considered in the planning process. Individuals may park on adjacent streets and enter the park on foot, affecting the tolling revenue of the park and potentially causing negative traffic impacts on the surrounding neighborhood.

Easements

Huron Meadows contains various utility easements, meaning that utility providers are allowed to use certain sections of land to run power lines or other equipment, in order to provide service to the surrounding area. In the future, the Metroparks will collaborate with surrounding municipalities and agencies to link into existing utilities rather than building park-specific utilities. This will help create the vision of a clean, efficient park system.

Adjacent Property Uses

Surrounding the park is predominantly single family residential. The Legacy Center Sports Complex, a large planned unit development, abuts the southeast property boundary.



Vehicular Wayfinding

Standardization

Recently Metroparks updated signage installed at various times with new standards and designs.

Simplicity

In many parks, including Huron Meadows, an abundance of signage was not necessarily useful for directing visitors. Efforts were made to minimize the duplication of signs to express sign information simply in order to make navigation easier for users of the park.

Symbols

Symbols are useful for expressing information in a small amount of space and also make park facilities more accessible for visitors who have trouble reading or speaking English. A standard set of symbols has been developed to be used in wayfinding signage.

Trail Wayfinding

Standardization

Trail types present in the Metroparks include shared use, mountain bike, ski, nature and rustic and equestrian. Despite their different functions, these trails together create a complete recreation system, so signage will be based on a uniform template.

Flexibility

In order to serve the differing needs of users on these various trail types, the signage template will allow for removable panels and be customized to fit the needs of that user group.

Legibility

For many people, the easiest way to orient oneself in a new environment is through use of a map. For greater ease of use, all new trail wayfinding signs will include a map marked with a “you are here” symbols and the location of important park features and amenities.

Wayfinding

NEEDS

Replace outdated, confusing, inconsistent signs

Create consistent, convenient wayfinding system to give visitors confidence

OPPORTUNITIES



Examples above of trail wayfinding signage at other Metroparks

Huron Meadows Today

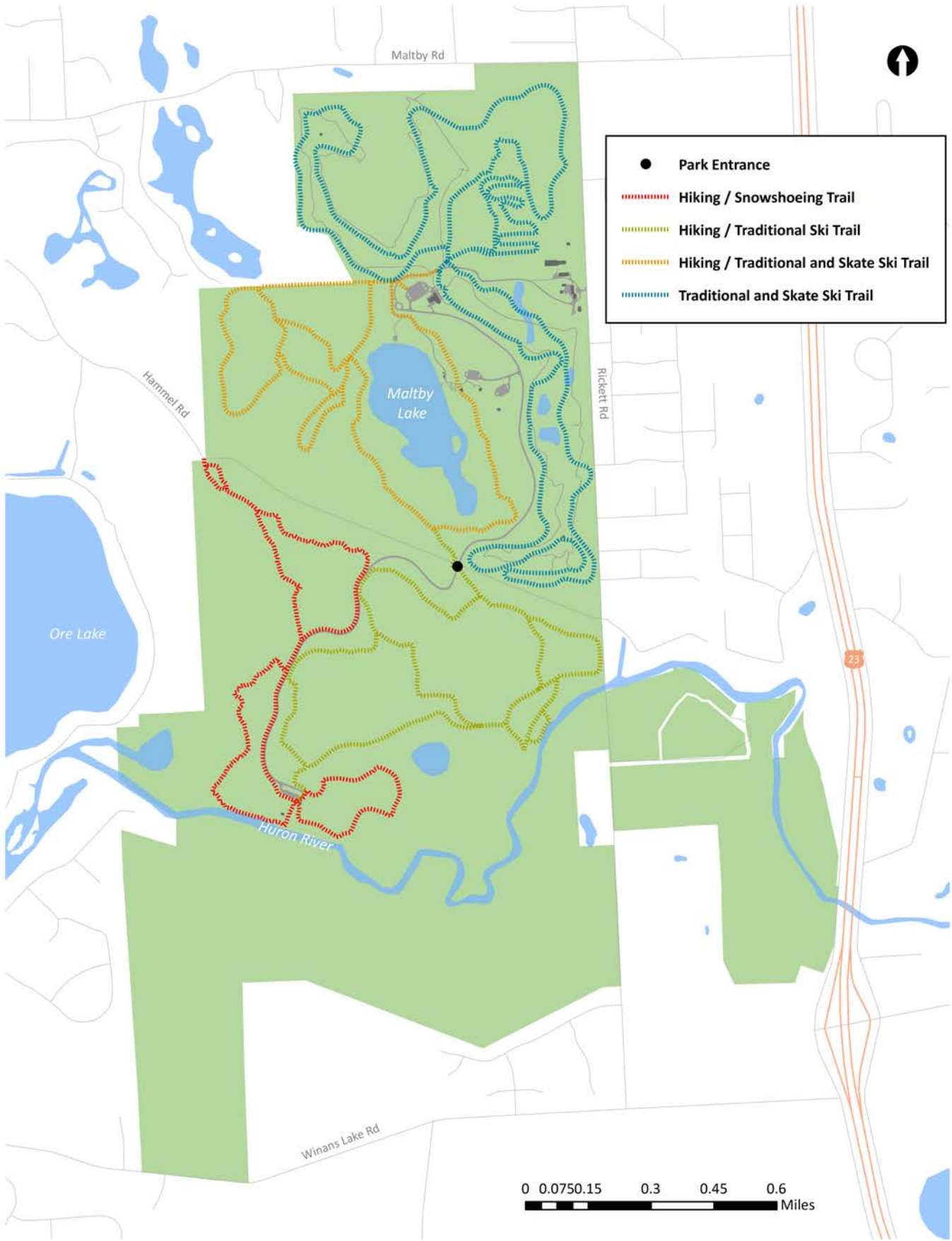
Trails

As part of the master planning process, staff have categorized and defined the various types of trails in the park, inventoried the miles and specified the uses and design of each. This formal listing allows for assessment of availability of trails for various users in comparison to user group demand. It will also lead to more standardized maintenance and rule enforcement processes.



Trail Type	Miles in park	Allowed Uses	Prohibited Uses	Surface
Rustic Hiking Trail	9.45	Pedestrian use only; running, jogging and pets. Snowshoes and cross-country skiing are permitted on designated trails only.	Motorized vehicles, bikes and horses.	Width and material vary, often dirt trails.
Cross-Country Ski Trail	12.67	Cross-country skiing only. Many are used for other activities during the summer.	Motorized vehicles, snowshoes, hiking, bikes, horses and pets.	Snow covered.
Huron River Trail	2.8	Canoeing and kayaking	Other uses are present in river but are not considered part of water trail.	Water

Huron Meadows includes over 24 miles of trails. Cross-country skiing has become an extremely popular activity at this park due to the extensive, well-maintained trails. This requires trail maintenance and grooming, as well as snow-making in dry periods. The park also includes a 2.8 mile segment of the Huron River Water Trail which is recognized as a National Water Trail. Other paths totaling over 5 miles located south of the Huron River are planned to be evaluated for future trail use.



Huron Meadows Today

Accessibility

To remain compliant with the Americans with Disabilities Act, the Metroparks are responsible for ensuring that park space is accessible to all members of the public. In the development of this master plan, planning staff has taken an active role in locating the less accessible park amenities, so that all guest can enjoy the park. A survey of several areas has resulted in a list of accessibility issues present at Huron Meadows Metropark. These areas are highlighted below and shown on the map on the following page.

NEEDS

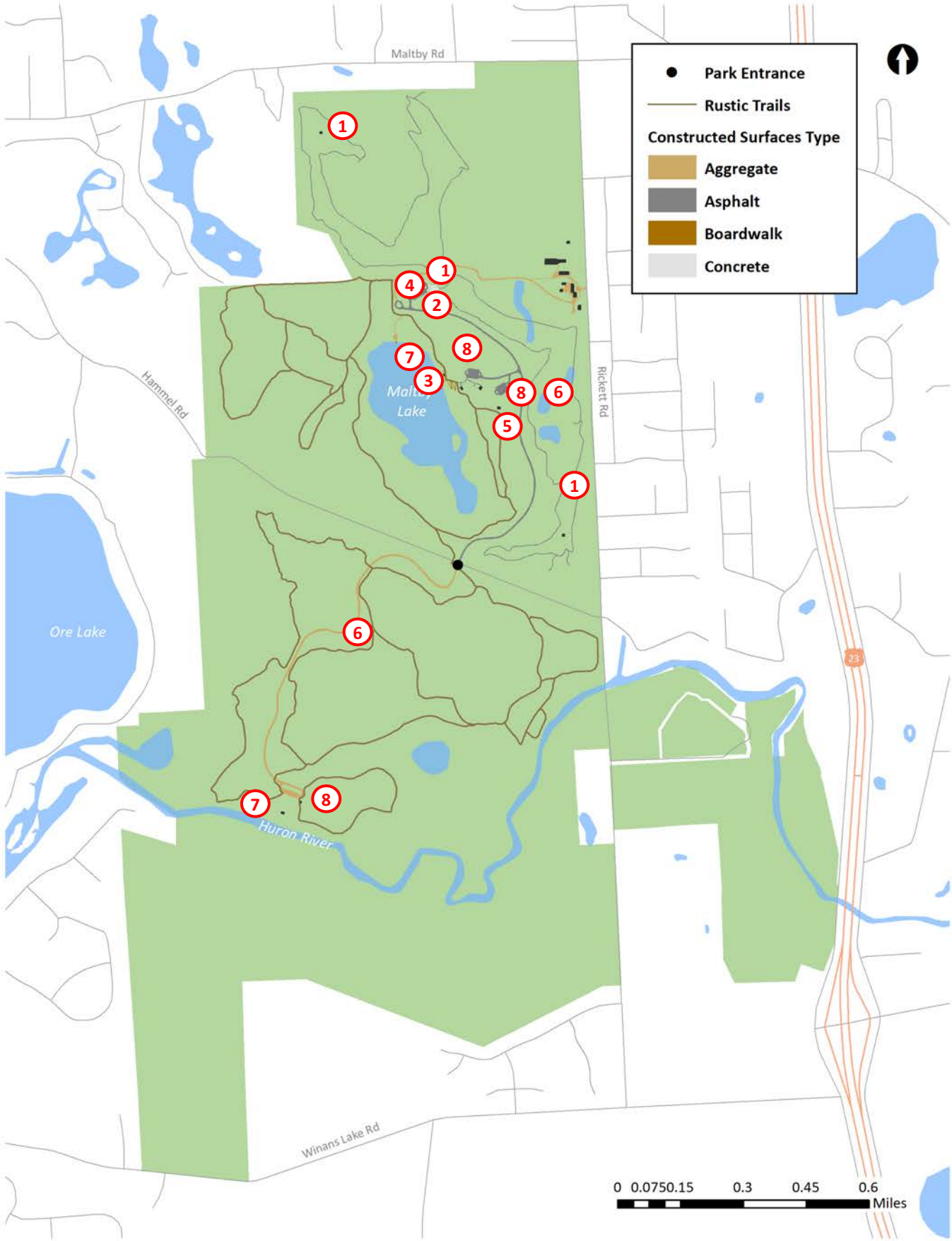
Pursue improvements to park accessibility

Ensure that users of all abilities feel empowered to take full advantage of the park

OPPORTUNITIES

Area	ID #	Description
Golf course	1	Not designed to meet ADA, restrooms are not ADA compliant
Golf course starter building	2	Inaccessible front door and baggage drop area
Fishing pier	3	Repair uneven walkway and add curbs for barrier
Parking lot	4	Parking lot striping, signage and improved ramp access
Acorn Ridge	5	Inaccessible picnic shelter and restrooms
Rustic trails	6	Inaccessible surface, exceeds maximum slopes
Kayak/boat launch	7	Inaccessible surface, exceeds maximum slopes
Cedar Ridge	8	Inaccessible sport fields

By working with the ADA Checklist provided by the ADA National Network and the Institute for Human Centered Design, the Metroparks are able to prioritize accessibility improvements of park entrances, services, public restrooms and other park amenities. The areas mentioned, in addition to others, were identified using the recommended methods for all HCMA parks.



REVENUE

Revenue Sources

NEEDS

Diversify sources of revenue

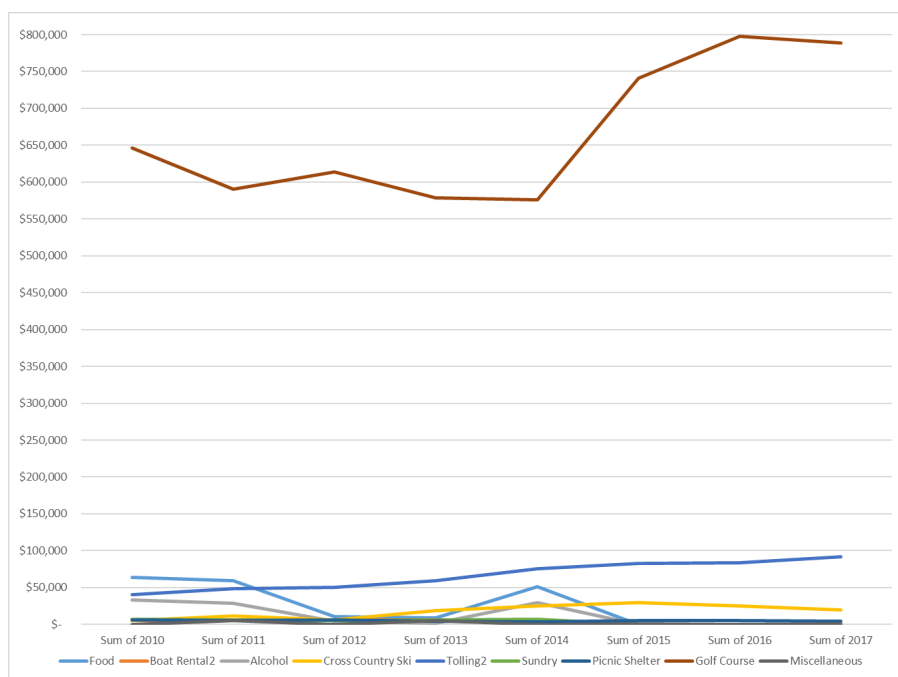
Offer new and exciting activities/
programs to visitors to both boost
tolling and gather user fees

OPPORTUNITIES

The Metroparks 2017 General Fund revenue equaled \$51,974,301. Huron Meadows 2017 operations revenue was approximately \$905,593 comprising 1.7% of all Metroparks revenue.

Huron Meadows budgeted 2018 operations revenues are \$904,684, while estimated 2018 operations expenses are \$1,093,055. Property tax and other revenue is estimated to subsidize 17% (\$188,371) of the Huron Meadows operating budget.

As the chart illustrates, the majority of revenue (approximately 87%) comes from the golf course.



2017 Operations Revenue

Revenue Source	2016 Total	% of Revenue
Golf Course	789,121	87
Tolling	91,388	10
Cross Country Ski	19,867	2
Picnic Shelter	4,200	0.5
Miscellaneous	1,017	0.1

TOTAL: 905,593

Revenue

Visitors

Huron Meadows Metropark is a regional park and can draw from the approximately 2,500,000 Michigan residents that live within a 30 mile radius (approximately a 45-minute drive) of the park. Certain events and activities may draw visitors from greater distances.

Vehicle entries to Huron Meadows Metropark have hovered between 85,867 and 100,356 since 2010, fluctuating through the years but experiencing a slight rise overall. Weather often plays a role in attendance to the park; activity areas greatly affected by weather are the trails and golf course. This may explain the dip in attendance visible in 2011.

Consolidation of statistical information is needed to better assess vehicle entries, park users, event attendance, event participants and activity participation within the park. This information will help with marketing of events, activities and future analysis of the park.

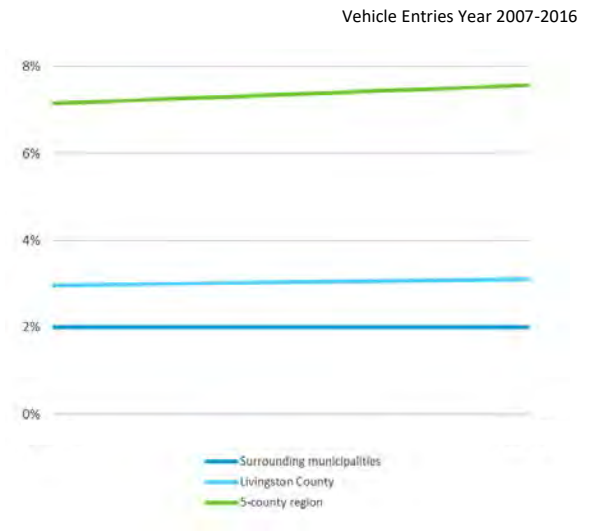


NEEDS

Target market strategy

Take advantage of proximity to urban population to grow revenue and system awareness

OPPORTUNITIES



Revenue

Programs & Events



Cross-Country Ski Events



Golf Course



Day camps

NEEDS

Increase revenue and visitation

Build on enthusiasm of Huron Meadows visitors with exciting, engaging programs and events

OPPORTUNITIES

Huron Meadows hosts dozens of events each year, organized either by park staff or outside groups. Many of these are interpretive programs for both children and adults to explore the natural and cultural assets of the park. Some promote artistic enrichment and others encourage physical activity or advocate for a cause. Experience nature's finest at the picturesque Huron Meadows.

Recent events include:

- Junior Golf League
- Junior Championship
- Orienteering 101
- Huron Meadows Moraine and Fen Discovery
- Cross-country Runs
- Ladies Golf Championship
- Men's Golf Championship
- Senior Men's Golf Championship
- Day Camps
- Frosty Freestyle Cross-Country Skiing
- Krazy Klassic Cross-Country Skiing
- Ice Fishing for Beginners
- Paddle Camp

COMMUNITY INFLUENCES

Population

The population of the communities surrounding Huron Meadows is aging rapidly and changing in mobility. The percentage of households without access to an automobile is gradually rising in the region, Livingston County and at a modest trend downward for the municipalities directly surrounding Huron Meadows. The Metroparks were created at the time of the auto boom, when it was assumed that every family would have a car to take out to the countryside on the weekends. Since habits and lifestyles are changing, the Metroparks must look into innovative ways to provide access to the

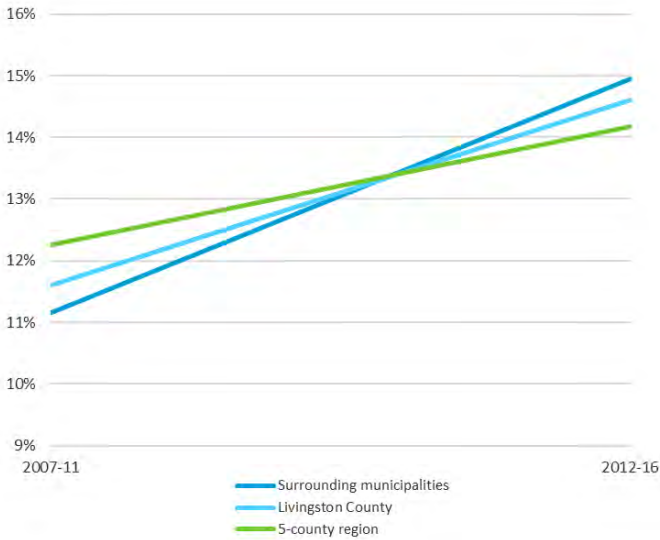
The percentage of individuals over 65 years of age is rising quickly in the region, in Livingston County and most dramatically in communities surrounding the park. Older adults have distinct needs, often requiring accommodations for mobility and accessibility of park features such as trails and buildings. This is important to keep in mind when planning the future of a park serving an older population.

NEEDS

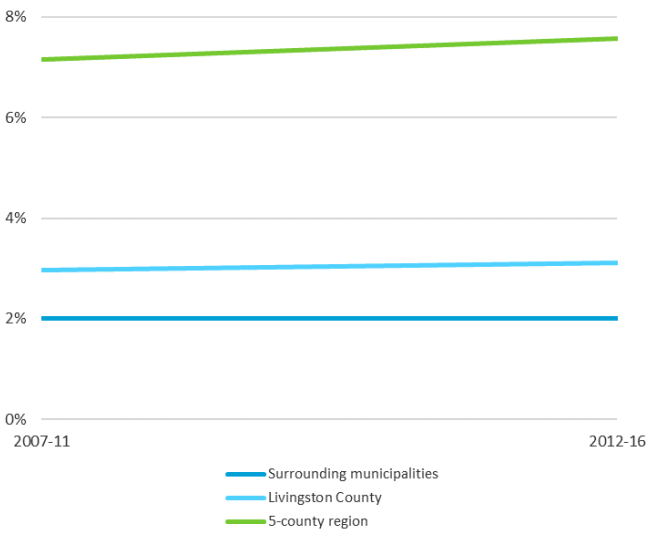
Address changing needs of new population demographics

Draw new users with a connected, accessible, welcoming and safe park environment

OPPORTUNITIES



CHANGE IN PERCENT OF POPULATION OVER 65 YEARS, FROM 2007-11 through 2012-16 (Source: US Census American Community Survey)



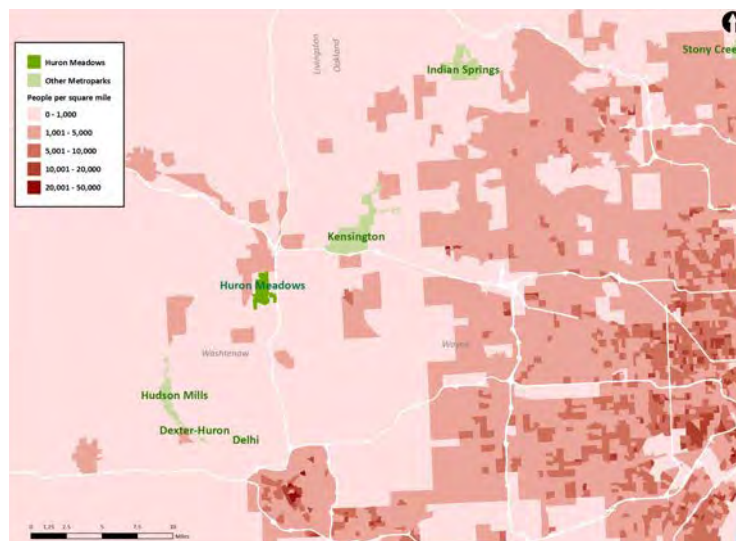
CHANGE IN PERCENT OF HOUSEHOLDS WITH NO CARS AVAILABLE, 2007-11 through 2012-16 (Source: US Census American Community Survey)

Community Influences

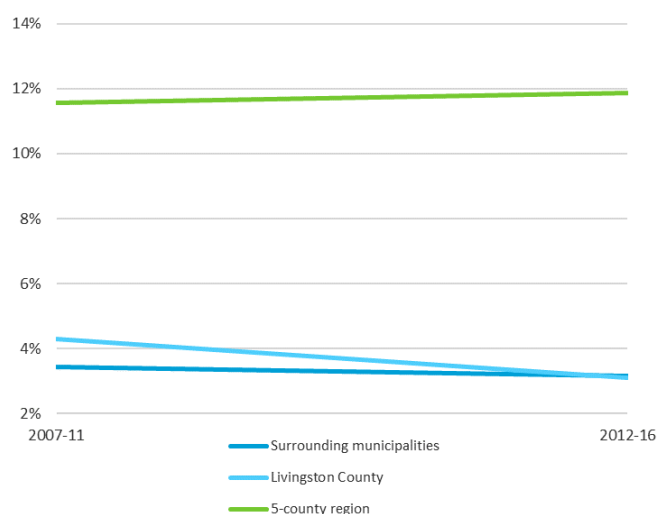
As shown below, Huron Meadows is located in a lower residential density area than many other Metroparks, with the majority of land use characterized as single family residential. The areas directly bordering the park have an average population between 0 and 5,000 people per square mile. Associated with the noted demographic change will be the impact on housing trends. The aging baby boomers will seek different housing options than past generations of seniors. The desire will be for mixed use walkable environments with more compact smaller housing units, along with more time for passive recreational opportunities that will continue to increase in the surrounding communities.

While on average the 5-county region is slightly falling in population density, the average population density for Livingston County and the surrounding municipalities has risen slightly, creating increased demand for recreation in the area. The estimated population from 2007-2011 to 2012-2016 slightly increased an average of 1.8% for the surrounding communities of Hamburg Township and Green Oak Township.

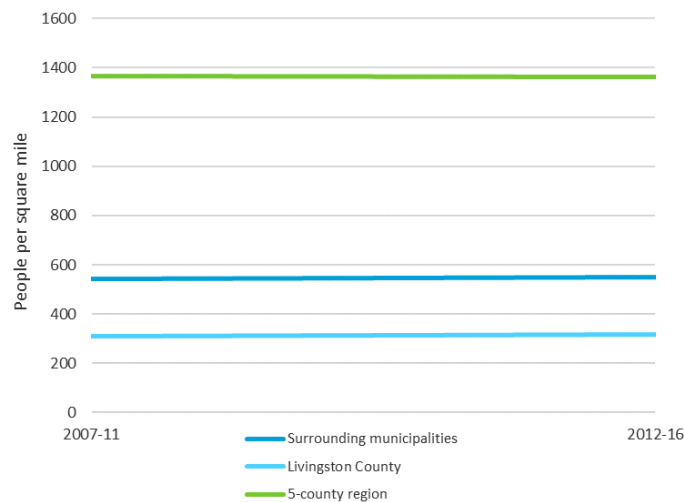
Although most households in the area still speak English as their first language, the region at large are seeing a slight increase in households speaking languages other than English at home. Because of this growing linguistic diversity the Metroparks are working towards more universal signage design, with a focus on easily understandable symbols. Both Livingston County and the surrounding municipalities do not follow this trend, having decreased numbers of speakers of other languages.



POPULATION DENSITY BY BLOCK GROUP, 2012-16



CHANGE IN PERCENT OF HOUSEHOLDS SPEAKING LANGUAGE BESIDES ENGLISH AT HOME, 2007-11 through 2012-16 (Source: US Census American Community Survey)



CHANGE IN AVERAGE POPULATION DENSITY, 2007-11 through 2012-16 (Source: US Census American Community Survey)

Community Influences

NEEDS

Improve connectivity within the park and with the community

Create good working relationship with surrounding municipalities

OPPORTUNITIES

Understanding the goals and plans of municipalities bordering and/or containing Huron Meadows is essential for a collaborative, comprehensive planning process. Planning staff researched the published master plans and recreation plans of surrounding municipalities, counties and other agencies. These provided a basic idea of the direction planned for each, especially regarding land use, development and recreation and current projects.

Green Oak Township

- Construction design and easement acquisition underway from existing path on Fieldcrest from Silver Lake Road to M-36 interchange
- Construction design and easement acquisition underway at M-36 crossing to connect to Lakelands Trail
- Maltby Corridor identified as good connection for Island Lake, Huron Meadows and Brighton State Recreation Area with US-23 Corridor and to Lake to Lake Trail

Hamburg Township

- Hamburg Township is updating its Master Plan 20/20. The current Master Plan was completed in 2011. The planning process has begun with public outreach events this summer for public involvement in helping shape the future of Hamburg Township.

City of Brighton Comprehensive Plan 2017-2037 DRAFT

- Encourage recreation-focused businesses to locate and expand in the city, which is in close proximity to a wide variety of parks and recreation facilities



Projects/Initiatives

Huron River Watershed Council

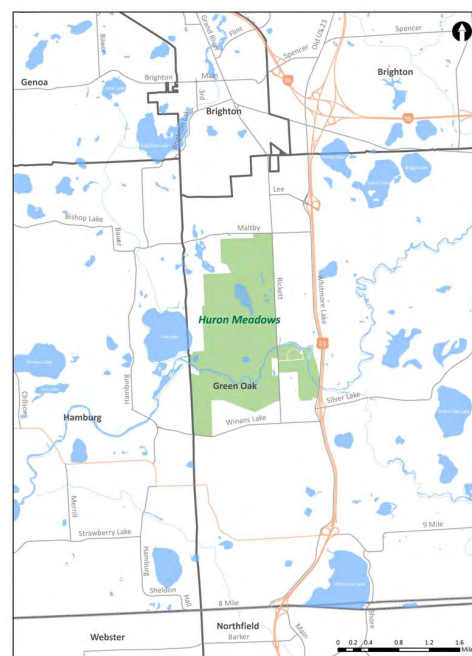
- Improve climate resiliency of communities on the watershed
- Green infrastructure for local governments program
- Collaboration in stormwater management efforts
- RiverUp! program supporting placemaking in river towns
- Huron River Water Trail partner facilitation

Livingston County Comprehensive Plan 2002

- Development of land bequeathed to county as parks that complement existing recreation
- Provide space for active and passive recreation and maintain the rural atmosphere that so many county residents hold dear
- There is great demand in parts of the County for additional sports fields to support youth and adult soccer, football and other sports teams. Many private and non-profit recreation providers have expressed frustration at the limited number of facilities.

Southeastern Livingston County Recreation Authority

- Work with regional recreation providers to expand opportunities and improve connectivity.



MUNICIPALITY MAP

Community Influences

Relevant Planning Documents

MDOT University
Region
Nonmotorized
Plan, 2015

Parks and Recreation
Master Plan 2016
Green Oak Charter
Township, Michigan

City of Brighton
Comprehensive
Plan, 2017-2037
DRAFT

Hamburg Township
Parks and
Recreation Master
Plan 2018-2022

SEMCOG Green
Infrastructure
Vision, 2014

"A new canoe/kayak launch and livery on the Huron River was the highest voted specific element at the community input meeting. Participants were clearly intrigued by the concept of a water trail from Green Oak to Milford through the Metroparks and State Recreation Areas." pg. 45

"A need for a community center with classroom and meeting space, gymnasiums, teen center and additional facilities for residents of all ages has been identified by a number of residents." pg. 66

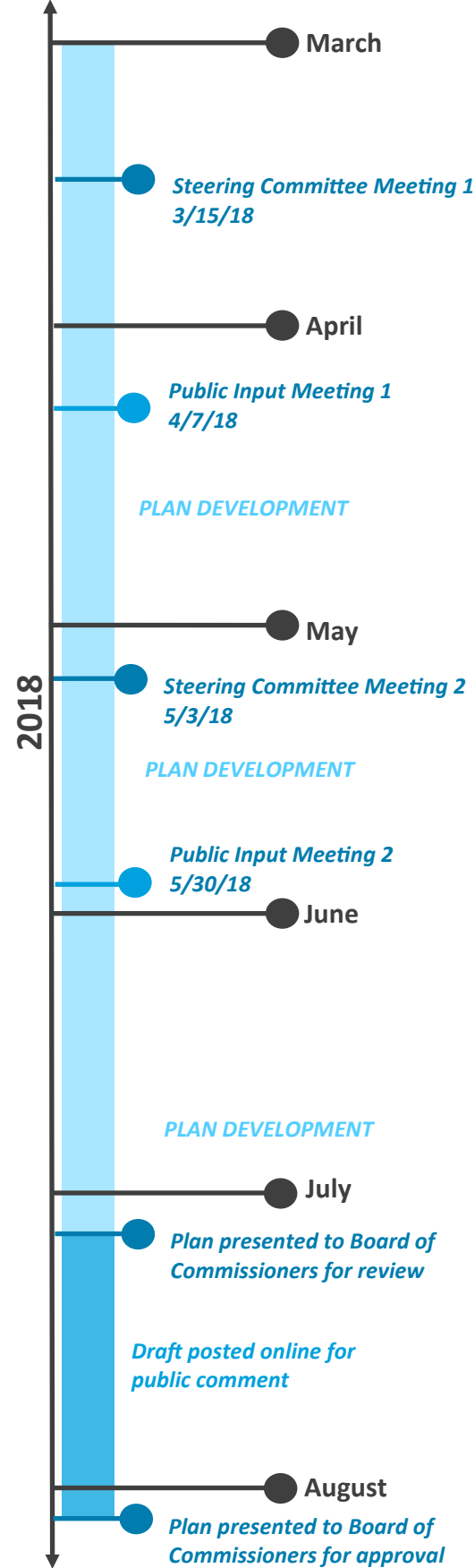
"Public accessibility to the green infrastructure network is paramount, including access to parks, trails, water and ensuring public spaces are designed for all residents." pg. 1

Since the development and land use decisions of bordering communities and other governmental agencies directly impact the park, these neighbor master plans were reviewed and taken into account when creating this document. The opinions and ideas expressed by residents and leaders in these municipalities give Huron Meadows a wider context and in many cases underscore the importance of the park's resources to citizens.

Huron Meadows Metropark is part of a broader system of recreation and green space that includes other Metroparks as well as local, county and state parks and greenways. Due to this, recreation and green infrastructure plans were also considered in creating the Huron Meadows Master Plan. Many communities are currently advancing their non-motorized networks, seeking grant funding to create greenways and paths and cooperating to provide linked green and recreation spaces to their constituents.



← Outreach Process



Since this park belongs to the people of southeast Michigan, the Planning Department aimed to include the public in multiple stages of the planning process.

The planning process began with a meeting of the steering committee, which identified organizations and individuals with significant investment in the park for targeted invitations to the public meeting. A strategy for soliciting general participation in the public meeting was also discussed.

The next step was a public meeting with community members to gather initial ideas about the direction of the park. A general park feedback survey was posted online and advertised by Metroparks social media.

These ideas were taken into account, along with staff feedback and other data, in developing initial recommendations. These were then presented to the public at a second meeting and feedback was collected, analyzed and incorporated into a draft Master Plan document.

This document was posted online in July 2018 for final public comment, which influenced the final Master Plan sent to the Board of Commissioners for approval in August 2018.

Public Meeting 1 - 4/7/18

- Explanation of and timeline for the planning process
- General park information and map
- Regional map on which participants placed stars to indicate their place of residence in relation to the park
- Exercise in which participants placed pom-poms representing resources in jars representing activities, expressing their opinion on where investments should be made
- Opportunity to fill out survey in person

Public Meeting 2 - 5/30/18

- Short presentation on survey results, community influences and intended projects
- Opportunity for participants to write down feedback on intended projects

Public Input

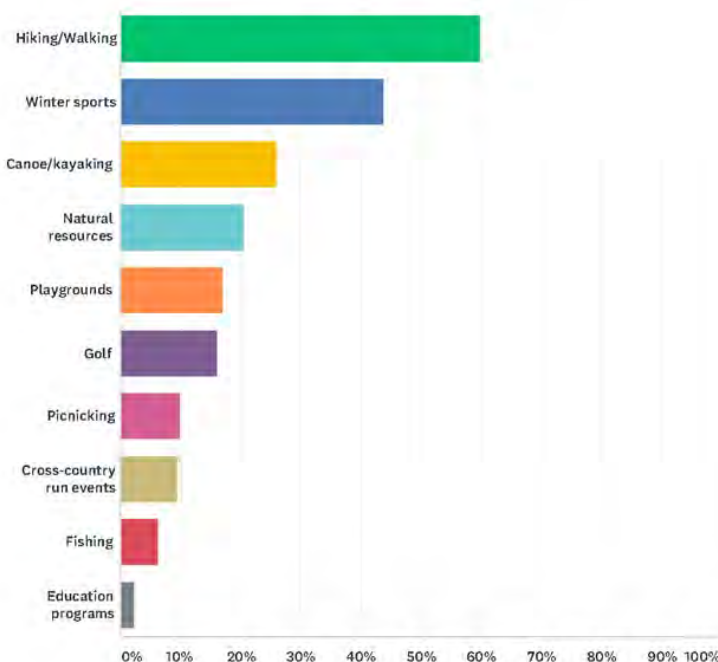
Results

Huron Meadows is primarily used for hiking, fishing, paddling, skiing, picnic outings and golf. Cross-country skiing has become an extremely popular activity at this park due to the extensive, well-maintained trails. This requires trail maintenance and grooming, as well as snow-making in dry periods. In the pom-pom investment activity at the first public meeting, hiking and walking trails were the favorite part of the park based on input received followed by winter sports.

At the second public meeting, planning staff presented the action plan items for participant input. Suggestions by the public for a comprehensive trails system to be accessible both north and south of the Huron River were taken into consideration by the steering committee. In addition, natural resource advocates were active throughout the public input process commenting on the need for continued invasive species management and protection of biodiversity areas identified in the park with a focus on the undeveloped portions of the park south of the Huron River.



Q6: What is your favorite part of the park or activity within Huron Meadows Metropark? (Choose up to 3.)



Public Input

An online questionnaire developed to gather general information about park visitors and their use of the park as well as recommendations for improving features and amenities offered at the park. The survey was made available for the duration of the planning process online as well as hard copies available at the golf starter building for distribution.

The Planning Department also provided hard copy versions of the questionnaire at the Green Oak Township office, City of Brighton office, Hamburg Township Parks and Recreation office, an Hamburg Township library. In total there were 332 people who participated in the survey. The great majority of the responses favored mountain bike trails or multi-use trails that allow bicycles. Generally, respondents offered suggestions for amenities along the trails used by bikers and hikers, connectivity within the park and overall preservation of the natural systems.

Questionnaire Response Topics

Access

- Later winter hours
- Bridge over river(6)
- Accessible canoe/kayak(4)
- Regional connectivity(4)
- Road surfacing
- Trails south side of river(4)
- Accessible trails(2)
- Fishing platforms

Environment

- Invasive species removal(3)
- South of river naturalized(3)

Maintenance

- Less mowing(6)
- Clean water(2)
- Dog/geese waste clean up(2)
- More grooming ski trails(3)
- More snow making
- Maintain maps

Facilities

- Nature center
- Splash pad(3)
- More family friendly areas
- Older children playground(2)
- Toddler play area(2)
- Disc golf
- Sand volleyball
- Mini golf
- Sports fields(4)

Programming

- Add childrens programs
- More programmed walks(2)
- Family camping program
- Historical interpretive program
- Kids mountain biking try outs

Safety/Signage

- Dog enforcement
- Better signage/wayfinding(3)
- More policing
- Better marked hiking trails(2)

Trails

- Leash free trails/areas for dogs(2)
- Mountain bike trail(86)
- Fat tire biking(2)
- More ski trails(3)
- Hike-bike(6)
- Multi-use trails(3)

Amenities

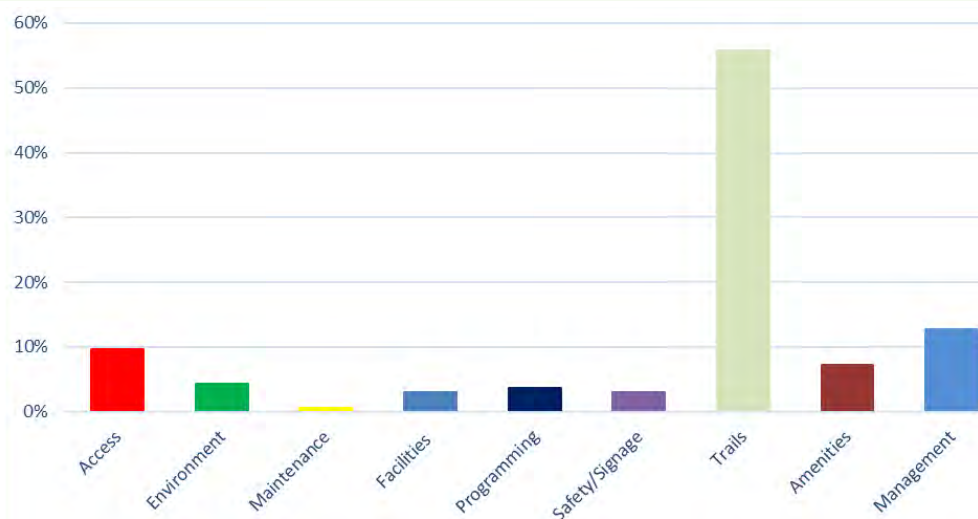
- Bathrooms(3)
- Water refill stations(2)
- Vending options outside(2)
- Bike rental
- Kayaks and sailing opportunities(2)
- Changing rooms(2)
- Golf improvements

Other

- Parking for sled hill
- Free days(2)
- Road bike lanes
- Waive golf entrance if booked online

This chart shows the distribution of questionnaire response topics, as categorized by planning staff. Some responses fell into more than one category, so they add up to more than 100%.

*Uncategorized responses lacked specific suggestions or consisted of only positive remarks.



Public Input

Participation



NEEDS

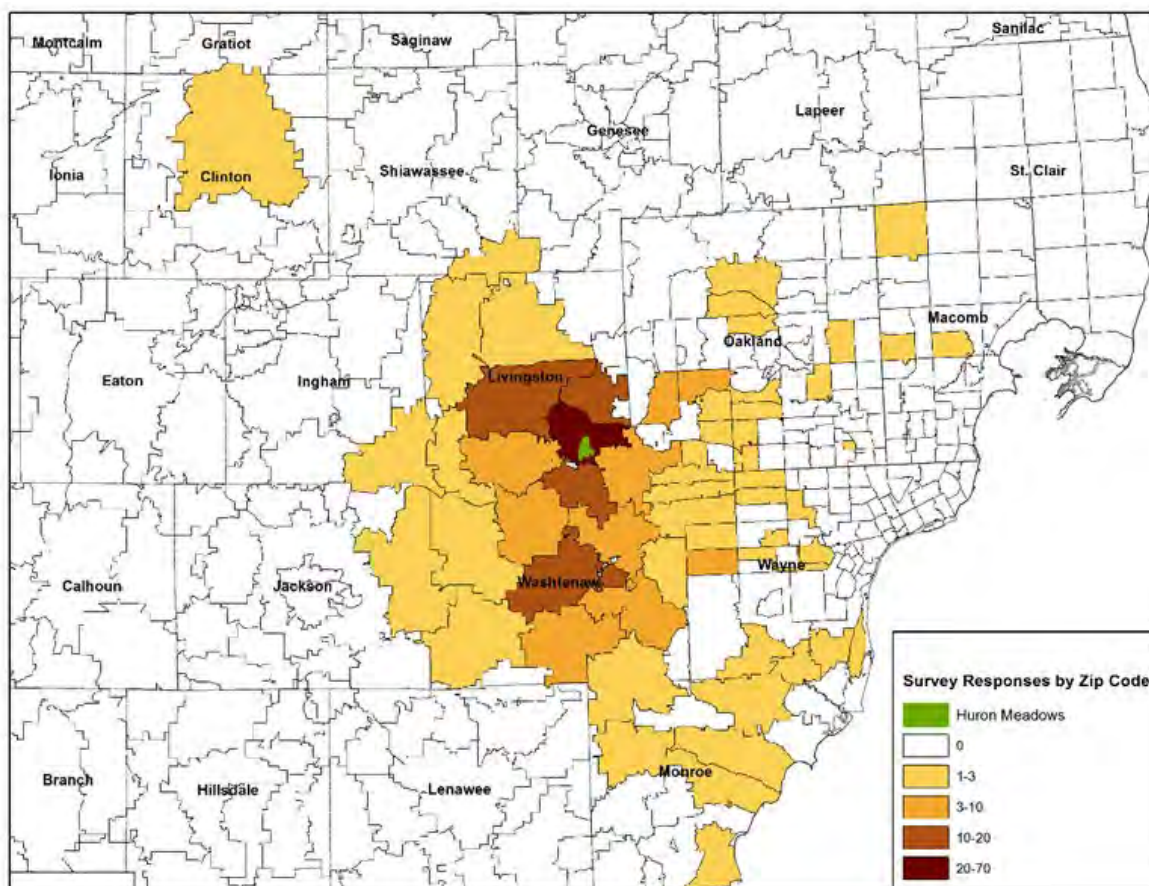
Incorporate a variety of opinions and user groups into the master plan

Create a vibrant park through robust, transparent public outreach

OPPORTUNITIES

The Huron Meadows Master Plan had a total of 39 individuals attend the two public meetings. Many of the respondents to the questionnaire indicated they were frequent visitors to Huron Meadows. As shown below, the questionnaire drew responses from the entire southeastern metropolitan Detroit region and beyond, but were mostly concentrated around the park itself.

Survey Response Zip Code Map



Action Plan

Needs & Opportunities

Based on the assessment of park conditions, demographic research and spatial analysis, public input and staff input, the needs and opportunities listed throughout this document were developed.

Needs

- Continue to draw diverse range of visitors to the park
- Define and protect areas with important biodiversity features
- Better educate the importance of preserving important cultural features
- Address aging and overbuilt infrastructure
- Identify areas of facility duplication for repurposing and consolidation
- Work with county and local communities to address any park boundary issues
- Replace outdated, confusing, inconsistent signs
- Pursue improvements to park accessibility
- Diversify sources of revenue
- Target market strategies
- Increase revenue and visitation
- Address changing needs of new population demographics
- Improve connectivity within the park and with the community
- Incorporate variety of opinions and user groups into master plan



Opportunities

- Build on park character to attract new visitors
- Create a resilient network of biodiverse areas in the park
- Draw new visitors with programming/education based on history of park
- Redevelop park areas to better serve visitors and environment
- Provide unique recreational facilities to draw visitors from across the region
- Create good working relationship with neighbors and partner organizations
- Create consistent, convenient wayfinding system to give visitors confidence
- Ensure that users of all abilities feel empowered to take full advantage of the park
- Offer new and exciting activities/programs to visitors of the park to both boost tolling and gather user fees
- Take advantage of proximity to urban population to grow revenue and system awareness
- Build on enthusiasm of Huron Meadows visitors with exciting, engaging programs and events
- Draw new users with a connected, accessible, welcoming and safe park environment
- Create good working relationship with surrounding municipalities
- Create vibrant park through robust, transparent public outreach



With these in mind, the following list of projects, plans and studies was developed. Major and minor projects have been identified as priorities and assigned a timeline and the accompanying studies have been listed. These pages should serve as a blueprint for the future of the park over the next ten years.

Action Plan

Large Facilities

Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Implement Huron River south connectivity plan	Engineering	Planning, Operation, Maintenance	Foundation, Contractors, Consultants	TBD		x	x
Implement Engineering fieldhouse plan	Engineering	Planning, Operations, Maintenance	Contractors	TBD		x	x
Implement Whitmore Lake-Rickett Road conceptual site plan	Planning, Engineering	Operations, Maintenance	Contractors	TBD	x	x	x
Implement canoe/kayak access improvements strategy	Planning, Engineering	Operations, Maintenance	Contractors	TBD		x	x
Implement Maltby & Rickett Road conceptual site plan for future use	Planning, Engineering, NR	Operations, Planning	Foundation, Contractors	TBD		x	x



Infrastructure / Small Facilities

Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Accessibility improvements, including interiors and walkways - parkwide	Engineering	Planning, Operations	Contractors	TBD	x	x	x
Pursue Whitmore Lake Road easement with Green Oak Township per property sale commitment	Engineering	Planning, Operations, Maintenance	Contractors	TBD	x		
Replace Cedar Ridge playground	Planning	Engineering, Operations, Maintenance	Contractors	\$100,000		x	
Install tollbooth + associated staff support space on park entrance road north of Hammel Road	Engineering	Operations, Planning, Maintenance	Contractors	\$120,000	x		
Implement Maltby Lake trail improvement plan	Engineering	Planning, Operations, Maintenance, NR	Contractors	TBD		x	
Implement parking overflow conceptual plan (resulting from parking study)	Engineering	Operations, Maintenance	Contractors	TBD	x		
Rustic trail connectivity improvements: Sunset Ridge trailhead, golf course trailhead, Cedar Ridge pedestrian crossing	Engineering	Planning, Operations, Maintenance	Contractors	TBD		x	x

Action Plan

Natural Resources

Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Vegetation management (annual)	NR	Planning, Operations	Contractors	\$30,000.00	x	x	x
Hazardous waste removal (annual)	NR			\$2,000.00	x	x	x
Early detection rapid response. Invasive species surveys and control in high quality natural areas (annual)	NR	Interpretive	MDNR	\$12,000.00	x	x	x
Wildlife management (annual)	NR	Operations, Maintenance, Police		staff time	x	x	x
Conduct prescribed fire in fire adapted communities	NR		Contractors	\$4,000.00	x	x	x
Oak wilt control and prevention	NR	Operations, Interpretive	MDNR	\$4,500.00	x	x	x
Grasslands restoration	NR		Contractors	\$40,000.00		x	x
Maltby Lake Fen/Swamp Restoration	NR			\$10,000	x	x	x
Oak Barren restoration south of Hammel Road and elsewhere	NR		Contractors	\$30,000	x	x	x
Wetland complex restoration along the Huron River	NR		MDNR, NGOs	\$40,000.00	x	x	x



Signage

Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Install park entrance sign on Whitmore Lake upon access road development (Green Oak easement)	Maintenance	Planning		\$2,000.00	x		
Develop and install interpretive signage	Interpretive	Operations, Planning, Marketing		\$5,000.00	x		



Action Plan

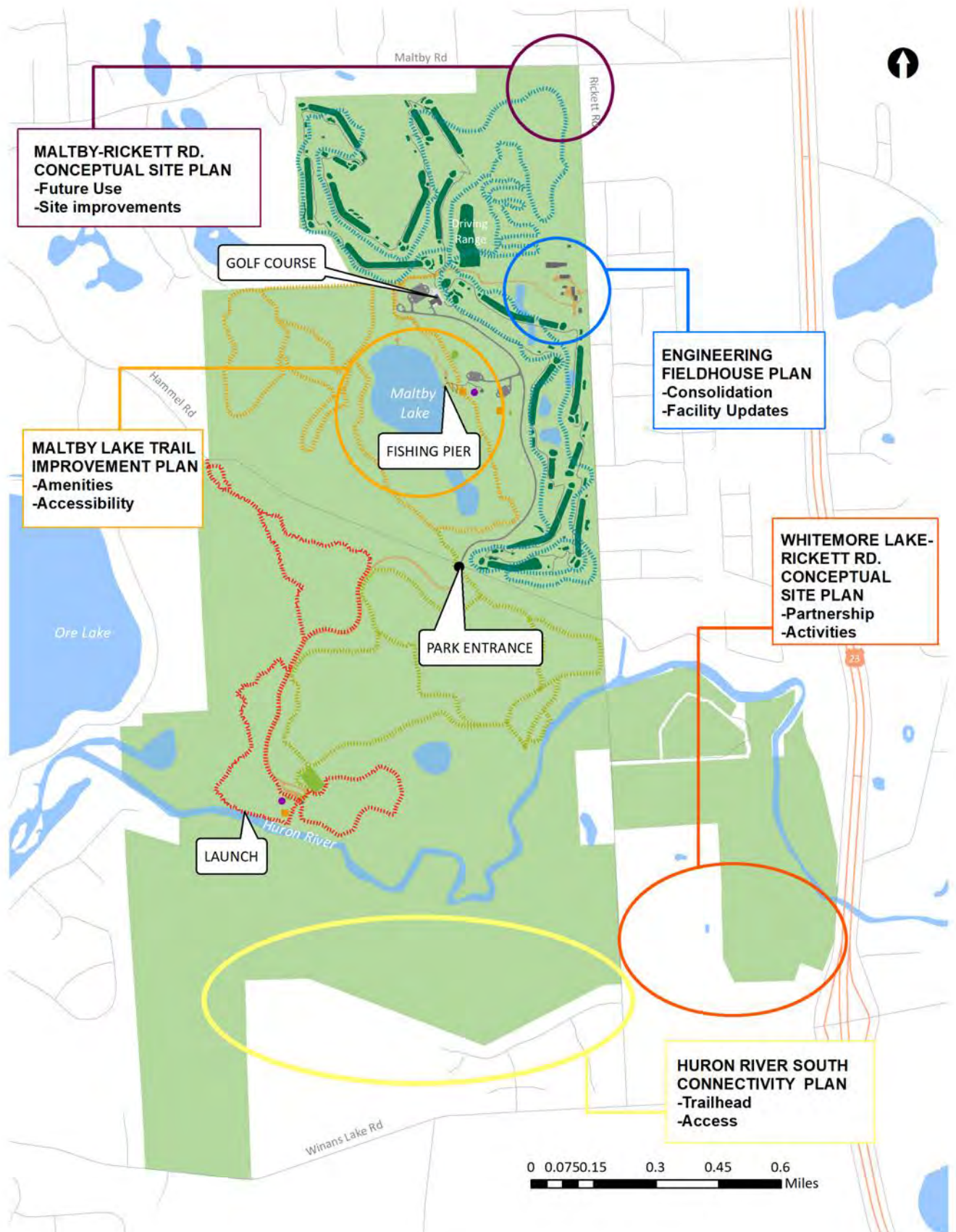
Area Plans/Studies/Initiatives

After identifying the need for changes or improvements based on user feedback and staff research, in-depth evaluation and planning must be carried out to gain a detailed understanding of problems and opportunities and determine the best strategies based on existing conditions and resources. Sometimes a process to formally monitor facility usage and gauge popularity is necessary. These studies often result in a scope of work, a work plan and in some cases a site plan that give staff a roadmap for planned changes. Recommended studies are listed below:

Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Develop plan for Engineering fieldhouse: strategy for HCMA file digitization/climate-controlled long-term storage; identify permanent location for field engineers; determine timeline for demo	Planning, Engineering	Administrative		staff time	x		
Maltby Lake trail improvement plan: determine potential short-term and long-term impacts to an improved trail surface around Maltby Lake; explore opportunities for ADA accessibility	Planning	Engineering, NR, Operations, Maintenance		staff time	x		
Connectivity plan for south of the Huron River: develop strategy for providing access to this property from the rest of the park	Planning	Engineering, Operations, Maintenance, NR		staff time	x		
Whitmore Lake-Rickett Road conceptual site plan: work with adjacent property owners to develop a site plan for activating and connecting these parcels to the rest of the park	Planning	Engineering, Operations, Maintenance	Legacy Center, LLC, Green Oak Township, Livingston County Road Commission	staff time	x		
Maltby & Rickett Road conceptual site plan: determine desired future use of area	Planning	Engineering, Operations, Maintenance, NR		staff time		x	

Area Plans/Studies/Initiatives (cont'd)

Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Parking study: consider access to sledding hill, trails south of Hammel Road, overflow parking for large events	Planning	Engineering, Operations, Maintenance, NR		staff time	x		
Winter activities study: evaluate options for enhancing existing winter recreation amenities and incorporating new activities	NR	Maintenance, Engineering, Planning	Contractors	staff time	x	x	x
Sustainability initiatives	NR	Operations, Planning, Engineering		TBD	x	x	x
Establish invasive species control tracking website	NR	Web, IT	MNFI, MISIN	staff time	x		
Stormwater monitoring	NR			\$5,000	x	x	x
Herpetological surveys	NR		NGOs	\$15,000	x	x	x
European Frog Bit control research	NR		Local universities	\$20,000	x		
Canoe/kayak access study throughout park	Planning	Engineering, NR, Operations, Interpretive	HRWC	TBD		x	



Key Projects

Maltby-Rickett Road Conceptual Site Plan

2023-2027

The Maltby & Rickett Road conceptual site plan will be developed with public input and staff to determine desired future use of area.

Needs:

- Access
- Enhance user experience
- Sense of place

Solutions:

- Development Node
- Placemaking
- Activate this area of the park



Maltby Lake Trail Improvement Plan

2018-2022

The Maltby Lake trail improvement plan will determine potential short-term and long-term impacts to an improved trail surface and alignment around Maltby Lake. The plan will explore opportunities for ADA accessibility along the trail and Maltby Lake. The goal will be to provide trail access to the scenic viewsheds of Maltby Lake and a loop system for a more enjoyable, comprehensive user experience of the park.

Needs:

- Improve connectivity in park
- Park user demographics

Solutions:

- Develop for access around lake
- Create loop system



Action Plan

Engineering Fieldhouse Plan

2023-+ 10 Years

The engineering fieldhouse will need a plan to study the building alterations and site improvements along with consideration for ADA compliance.

Needs:

- Underutilized
- Modernization
- Maintenance

Solutions:

- Building and site improvements
- Electronic storage of files
- Additional landscaping/maintenance plan



Whitmore Lake & Rickett Rd Concept Plan

2018-2022

A conceptual site plan will be developed for Whitmore Lake-Rickett Road. Potential partnership in working with adjacent property owners will be a factor in developing a site plan that activates and connects these parcels to the rest of the park.

Needs:

- Enhance user experience
- Trail connectivity
- River access

Solutions:

- Partnership with Legacy Center
- Potential kayak access
- Connection across Rickett Rd.



Action Plan

Canoe/Kayak Improvements Strategy

2023-10+ years

Improvements at Cedar Ridge promoting river access with additional amenities and consideration for ADA compliance.

Needs:

- Parking access
- River access
- Water trail amenities

Solutions:

- Add paths to river
- Accessible canoe launch



Huron River South Connectivity Plan

2018-2022

Connectivity plan for south of the Huron River: develop strategy for providing access to this property from the rest of the park

Needs:

- Improve connectivity in park
- Enhance user experience

Solutions:

- Vegetation management of invasive species
- Trailhead at Rickett Rd.
- Alternative analysis for preferred route



Action Plan

Other Projects

- Install tollbooth north of Hammel Road
- Pursue Whitmore Lake Road easement per Green Oak Township property sale
- Wetland complex restoration along the Huron River
- Replace Sunset Ridge playground
- Rustic trail connectivity improvements: Cedar Ridge pedestrian crossings





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**HURON-CLINTON METROPOLITAN AUTHORITY**

To: Board of Commissioners
From: Nina Kelly, Chief of Planning and Development
Subject: Report – 2018 Count Day Initiative
Date: July 5, 2018

Action Requested: Motion to Receive and File

That the Board of Commissioners' receive and file this report as presented by Chief of Planning and Development Nina Kelly and staff.

Background: Significant data to make informed decisions about recreational infrastructure, programming and educational offerings can be gleaned from learning where park visitors live. This location data can be overlaid with information gathered by the U.S. Census and American Community Survey utilizing a Geographic Information System (GIS) database to determine neighborhood factors such as age, housing tenure, median household income, percentage of families living under the poverty line, racial and ethnic identity, disability status and educational attainment.

This summer, the Planning department will be facilitating a Count Day Initiative in coordination with operations staff at each Metropark. Each visitor entering a Metropark by motor vehicle on these "count days" while the tolling area is staffed, will be asked to provide their ZIP code. Staff will also be instructed to record the observed number of persons per vehicle (PPV) and whether the car has an annual pass or if a daily pass was sold. On the approach to the tolling area, temporary signage will be placed to notify visitors about the initiative in English, Spanish and Arabic. Park visitors will also be invited to participate in a more detailed supplemental survey online.

There are 18 tolling areas and 29 toll lanes throughout the Metroparks system. Eight key areas without year-round tollbooths will be included in the initiative, for a total of 26 locations and a maximum of 37 staff gathering data at any given time throughout the collection period. Planning staff consulted the schedule for the month of July to avoid conflict with any major park events, and following discussion at a recent operations meeting, one weekday (Monday, July 16) and one weekend day (Sunday, July 22) were selected as the count days.

The goal of this initiative is to better understand weekday and weekend use of the Metroparks during the busiest time of year. It will create a baseline for comparison in the future, when the proposed integration of tools such as a customer relationship management (CRM) system will make collecting and tracking such data easier and less labor-intensive. It will also provide guidance to the Metroparks on an appropriate multiplier with which to calculate the average PPV and therefore more accurately estimate total monthly and annual visitation. By gathering geographic information via ZIP codes and tying it to demographic data, staff will be able to identify gaps in our visitor base and examine the potential economic impact of the Metroparks.

Results of the Count Day Initiative will be presented to the Board following a thorough analysis by Planning staff.

**HURON-CLINTON METROPOLITAN AUTHORITY**

To: Board of Commissioners
From: Jennifer Jaworski, Chief of Interpretive Services
Subject: Report – Interpretive Services
Date: July 5, 2018

Action Requested: Motion to Receive and File

That the Board of Commissioners' receive and file the Interpretive Services report as recommended by Chief of Interpretive Services Jennifer Jaworski and staff.

Background: In 2017, nearly 1.5 million students, scouts, families, seniors and individuals engaged with interpretive services through Metroparks facilities or outreach programming. Through programming, interpreters educate citizens of all ages who will make an impact on society.

One of the greatest impacts we can have are with students. Staff serves pre-K through college students with school programs that provide environmental, cultural and natural science literacy. All programs support the Michigan Science Standards curriculum in content, methodology and technology use. A wide variety of programs offered support the Common Core curriculum, STEM and Michigan Science Standards. Each of these programs are taught by a professional Interpreter who is knowledgeable in the content and school requirements.

During the 2017-2018 school year, the Interpretive department served 80,090 students and conducted 2,280 programs at facilities and through outreach. To move towards education equity and expand opportunities for greater inclusion several initiatives were instituted during this time including: Get Out and Play grants, Get Out and Learn scholarships, PNC grant, 3M TENS and 3M Ecosystem Explorations through the Southern District Mobile vehicle.



HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners
 From: Ryan J. Colliton, Chief of Natural Resources and Regulatory Compliance
 Subject: Report – Black Creek Marsh Restoration Project Final Project Update
 Date: July 5, 2018

Action Requested: Motion to Receive and File

That the Board of Commissioners' receive and file the final report on the Black Creek Marsh Restoration Project as recommended by Chief of Natural Resources and Regulatory Compliance Ryan Colliton and staff.

Fiscal Impact: The Black Creek Marsh Restoration Project was budgeted for in Capital Projects, Land for 2018. Of the funds available for the project, \$848,000 was provided through the Great Lakes Restoration Initiative (GLRI) grant fund and the remaining \$416,000 was paid for by the Metroparks.

Background: In September 2014, The Metroparks was awarded \$648,000 with the original intent of reconnecting the Clinton River with the Black Creek Marsh. However, the Metroparks were unable to purchase the property, at a fair price, between the Clinton River and the Black Creek Marsh.

As a result, the Metroparks worked with the original granting agency, The National Oceanic and Atmospheric Administration (NOAA) to develop an alternative plan to enhance the conservation value of the Black Creek Marsh. The alternative agreed upon was the restoration of fish spawning habitat specifically for Northern Pike and Yellow Perch, through the creation of several small pools and shallow channels to allow fish access to shallow water spawning habitat and water based recreation trails.

This new design went out to bid and the White Lake Dock and Dredge of Muskegon was awarded the project for \$949,000. This created a deficit in funding for the dredge portion of the project. To address this deficit, the Natural Resources department worked with NOAA and the Great Lakes Commission (GLC) to provide full funding for the alternative design.

At its Aug. 10, 2017 meeting, the board approved the partnership with GLC for additional grant funding totaling \$200,000 as well as the \$386,000 transfer from Capital and Major Maintenance projects from the Natural Resource Departments annual budget for Major Maintenance and Capital Projects. This provided a new project budget total of \$1,264,000 to complete the project.

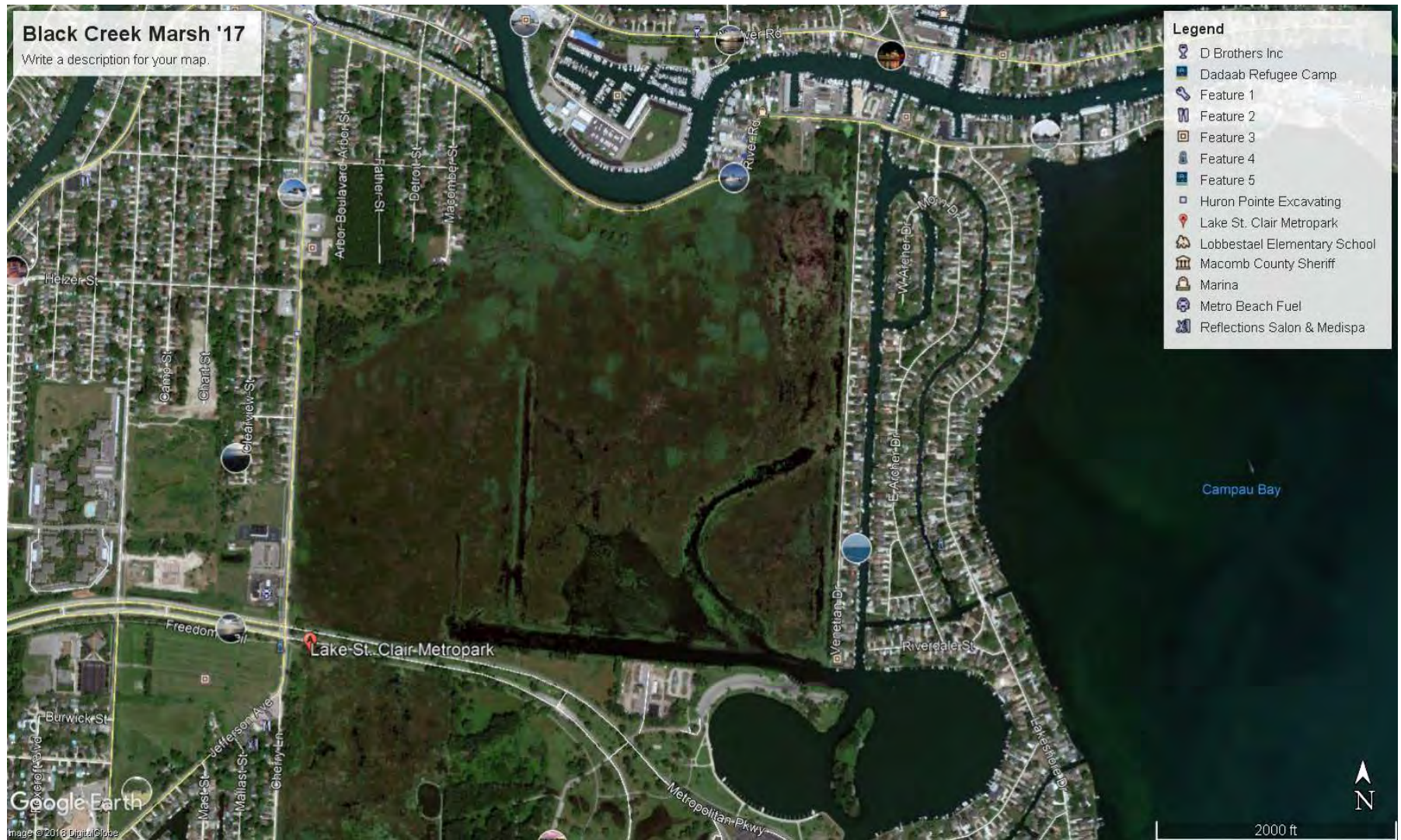
The project was to begin after Labor Day in 2017. However, due to Lake St. Clair water levels in the channels only at 8-feet to was determined that the inadequate water level would not keep the barge afloat. Therefore, after discussions with White Lake Dock and Dredge that channel design would be doubled in width to 16-feet with an associated decrease in linear feet of channels while all pools would be created as originally designed. This allowed staff to meet all of the restoration goals and stay within budget for disposal of dredge material.

In the early spring 2018, White Lake Dock and Dredge completed all construction activities and has submitted invoices for final payment. All work was done to specifications and is satisfactory based on the goals and objectives of the grant.

Attachment: Black Creek Marsh Historic Photos

Black Creek Marsh – 2017

8-D-1-a



Black Creek Marsh – 1999

8-D-1-a





HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners
 From: Mike Henkel, Chief of Engineering Services
 Project No: RFP 900-18-1119-100P
 Project Title: Approval – Professional Services Agreement, Storm Water Management Plan
 Location: Systemwide
 Date: July 5, 2018

Action Requested: Motion to Approve

That the Board of Commissioners' (1) approve the proposal from OHM Advisors in the amount of \$456,000; and (2) approve the transfer of \$456,000 from the Lake St. Clair Unallocated account to the Engineering Professional Services account as recommended by Chief of Engineering Services Mike Henkel and staff.

Fiscal Impact: As part of the SAW grant award, \$989,515 was allotted for the development of a storm water asset management plan. In the 2018 HCMA budget, \$480,000 was placed in the Lake St. Clair unallocated account for Storm Water Improvements. The SAW grant has a 10 percent match up to the first \$1 million and the grant has a total project local match of \$417,568 with 10 percent of plan development cost at \$45,600. This will be applied to the total grant match for all SAW grant projects. The remaining \$410,400 cost of the plan development will be reimbursed by the SAW grant.

Background: The SAW (Storm water, Asset management, Wastewater) grant covers the development of a storm water asset management plan. The goal of the plan is to improve water quality. The storm water conveyance system is an asset class within the park system that requires maintenance and long-term planning moving forward.

The plan will identify and quantify any necessary deficiencies. A major component of the planning process is to assess existing storm water conveyance systems and map the entire network throughout all the parks. Planning process elements include meetings with park staff, public involvement, public education, field inspection, condition assessments, mapping, analysis and recommendations and a storm water management report.

Mapping and condition assessments will be conducted for shorelines, river banks, culverts, ditches, and watershed areas. All the information will be incorporated into the Metroparks Geographical Information System (GIS) and will be referenced for future projects.

After a thorough review of the proposals and a comparison of cost, OHM Advisors provided the most comprehensive understanding of the project and the requirements to fulfill the intent of the grant as well as the long-term goal of the plan. OHM also supplied relevant personnel experience with their project team. Metroparks staff worked with OHM on the SAW grant application and submitting it to the state.

Once complete, the storm water management report will be reviewed by the state as a requirement of the SAW Grant. The consultant will work with multiple park staff to develop a comprehensive inventory and plan for the park system as a whole. The plan will complement the efforts already underway in relation to the Metroparks storm water regulatory requirements and public educational elements.

<u>Consultant</u>	<u>City</u>	<u>Amount</u>
AEW (Anderson, Eckstein, and Westrick, Inc.)	Sterling Heights	\$ 72,424.00
OHM (Orchard, Hiltz, & McCliment, Inc.)	Livonia	\$456,000.00
Johnson and Anderson	Waterford	\$478,958.50
Giffels Webster Engineers, Inc.	Birmingham	\$553,920.00
Lockwood, Andrews, B Newman	Shelby Township	\$572,600.00
HRC (Hubbell, Roth, & Clark, Inc.)	Bloomfield Hills	\$619,950.00
2016 Budgeted Amount for Design, Contract Services and Administration		\$480,000.00
Proposed Design Work Order Amount		
Design Services- OHM Advisors		\$456,000.00
Contract Administration		<u>\$ 10,000.00</u>
Total Proposed Design Work Order Amount		\$466,000.00

Attachment: OHM Proposal



REQUEST FOR PROPOSAL **STORMWATER MANAGEMENT PLAN**

Huron-Clinton Metropolitan Authority

Engineering Department
13000 High Ridge Drive
Brighton, Michigan 48114

Wednesday, May 23, 2018

May 23, 2018

Karin Ely
Huron-Clinton Metropolitan Authority
Engineering Department
13000 High Ridge Drive
Brighton, Michigan 48114



Re: Request for Proposals for Stormwater Management Plan

Dear Ms. Ely,

It is with much anticipation that I submit our proposal for the Huron-Clinton Metropolitan Authority Stormwater Management Plan. This moment has been five years in the making. I've had the pleasure of working with HCMA since 2013 when we first envisioned how the SAW grant could benefit the Authority's 13 parks. More than a million visitors come to the Metroparks to enjoy the beauty of nature each year. It is HCMA's goal to use the SAW grant monies to ensure a healthy environment that is maintained properly and where visitors can be educated on proper stormwater management practices.

In order to continue serving as stewards of the natural resources of Southeast Michigan and provide excellent recreation and educational opportunities, it is incumbent upon HCMA to utilize the available SAW grant funds to maximum effectiveness. Water quality in the Metroparks system is greatly impacted by stormwater runoff, which in turn affects ecology, habitat, recreation, and educational aspects and limits the ability to avail citizens to natural environments and enhance our society's health. If left unchecked, stormwater runoff could greatly reduce the abundance and quality of our natural resources and outdoor experiences.

OHM Advisors is uniquely qualified to perform this project. As a former MDEQ SAW grant stormwater committee member, I helped develop the guidelines and requirements of the SAW stormwater management plan grant and can assure that all work will be in conformance with the grant requirements. In addition, we have assembled a team of the best experts to provide HCMA with excellence. Drummond Carpenter is known for water resource engineering, green infrastructure and public involvement and education. Natural Community Services are experts in ecological field assessments and OHM

Advisors has broad expertise in GIS, stormwater management, hydrologic and hydraulic modeling, asset management planning, cost estimating, overall planning as well as report writing and project management. Our team is quite literally custom-crafted to deliver the expertise that a project of this magnitude requires, especially in the timeframe allowed under the SAW grant stipulations.

There is hardly a single standard element to this proposed project, as the setting and scenario are unique to the Huron-Clinton Metroparks. Our team stands ready to discover and address hydrologic deficiency and associated impacts throughout the combined project area, and deliver a comprehensive series of stormwater management plans that outline priority maintenance and improvement projects. An Authority-wide plan encompassing all 13 Metroparks will detail a comprehensive review and analysis of the existing stormwater system and provide recommendations for capital improvements while serving as a road map into the future for improving the water quality of our lakes and streams.

As always, I am glad to facilitate the vision of HCMA in whatever way I can. Our team members live, work, play and raise our families in the Huron and Clinton watersheds. We enjoy family reunions, weddings, picnics, and all manner of outdoor activities across the Metroparks. We are enthusiastic about the opportunity to finish what was started years ago and provide this service for the communities of Southeast Michigan. Enclosed you will find a description of methodology, timeline, and budget associated with the completion of the goals of this project.

Please feel free to contact me at 734-466-4479 should you have any questions or concerns.

Sincerely,

A handwritten signature in dark ink, appearing to read "Vicki Putala", written over a horizontal line.

Vicki Putala, PE
Principal, OHM Advisors

Infused into everything we do is the belief that putting people first creates a lasting impact on a community and its residents.

Contents

PART I

A General Information and Project Team

- Company Profile
- Subconsultant Profile

B Project Understanding, Management Summary, Work Plan, Schedule, and Budget Review

C Personnel

- Communication
- Resumes

D References

PART II

A Cost Proposal

B Compensation Information



PART I

A. GENERAL INFORMATION AND PROJECT TEAM

COMPANY PROFILE

Who We Are

As a community advancement firm designing award-winning work across the **architecture, engineering and planning spheres**, we believe that something incredible grows out of a team of experts with individual specialties

— ideas with bigger impact.

Firm Growth

Orchard, Hiltz & McCliment, Inc. (OHM Advisors) was established in 1962 and has been growing steadily ever since. As a growing multidisciplinary organization, we provide a variety of services to our clients with a passion to be Advancing Communities for many years to come.

Firm Organization & Ownership

OHM Advisors is a privately held corporation, licensed to perform business in the State of Michigan. Our firm is governed by a seven member Board of Directors and has thirty-six employee shareholders.

Federal ID Number: 800134608

In House Capacity

- 23 Architectural Staff Members
- 25 CADD Technicians
- 94 Civil Engineers
- 75 Construction Inspectors/Managers
- 12 Mechanical / Electrical Engineers
- 4 GIS Specialist
- 24 Surveyors
- 19 Landscape Architects
- 11 Planners
- 17 Technicians/Analysts
- 45 Transportation Engineers
- 6 Structural Engineers
- 30 Water Resources Engineers/Sanitary Engineers

14 LOCATIONS THROUGHOUT MICHIGAN, OHIO, & TENNESSEE

Office Address

OHM Advisors
34000 Plymouth Road
Livonia, MI 48150
T 734.522.6711
F 734.522.6427



A. General Information and Project Team



About Drummond Carpenter

Drummond Carpenter, PLLC specializes in environmental and water resources technical services and applied research. Drummond Carpenter is headquartered in Orlando, Florida with offices in Florida and Michigan. Drummond Carpenter is a certified Service-Disabled Veteran-Owned Small Business (SDVOSB) by the Small Business Administration and the State of Florida.

Corporate principals are licensed professional engineers in Florida and Michigan and have completed projects across the country.

President Chad Drummond PE, D.WRE, BCEE served in the United States Navy from 1989 to 1993 including a tour in the Gulf War aboard the USS Vreeland. He also served on the USS Elmer Montgomery working in shipboard engineering. Mr. Drummond's consulting career started in 1995, and from 2008 to 2016 Mr. Drummond worked for a leading, mid-sized AE consulting firm where he served in corporate-level leadership roles in water resources and contaminant assessment and remediation.

Donald D. Carpenter, PhD, PE, LEED AP serves as Vice President of Water Resources. Dr. Carpenter has been a professor of civil engineering at Lawrence Technological University in Southfield, Michigan since 2001 and currently directs the Great Lakes Stormwater Management Institute. From 2004 to 2016 he served as a senior technical consultant for an environmental and water resources firm and also was sole proprietor of a firm that focused on engineering research and technology application.

Drummond Carpenter staff have decades of experience in dealing with multidisciplinary water resources issues. Our clients have included various governmental organizations, educational institutions, attorneys, private industry, and non-profit organizations. Projects have included environmental resource value protection, sediment transport and analysis, watershed planning and management, springs protection, water quality improvements, and water supply protection.



About Natural Community Services (NCS)

Natural Community Services' environmental scientists and ecologists use best management practices of site assessment, sustainable design/planning, and ecological restoration to enhance and restore wetlands, woodlands, prairies and other environmental, social, and agricultural resources in natural areas and in urban settings. We design solutions for soil-water quality, biodiversity, green infrastructure, public program management and nature interpretation. We plan/design and or restore conservation buffers, native landscaping and other LID features naturalized detention basins, streambank stabilizations/natural shorelines, natural areas/natural features setbacks, phytoremediation, and create wetlands.

Promoting the functions and values of native plants, Natural Community Services works with clients to foster sustainable landscapes and functional stormwater BMPs ranging from forest preserves to ditch bioswales to private/NGO land and water management. Natural Community Services participates in collaborative professional teams to work on environmental projects for the preservation and restoration of natural resources, urban ecological restoration, water quality controls, and environmental remediation.

Paramount is the belief that restoration and remediation must benefit the larger environment in which we live, enriching the natural heritage of people, plants, and animals and improving ecology and native habitats throughout Michigan. Since 2008, Natural Community Services has had continued success planning natural resource programs, restoring and maintaining native ecosystems, enhancing local forests and agriculture, and protecting and maintaining environmental health throughout Michigan.

Our mission is to restore and maintain the health, integrity, beauty, recreation and resource value of clients' land and water.

Scope of Services Overview

- Ecological Assessments /Monitoring, Environmental Science
- Soil Erosion and Sediment Control Projects
- Green Infrastructure (GI)
- Naturalized Detention Basins
- Natural Areas Stewardship and Maintenance
- Environmental Planning:
- Forestry and permaculture consulting services include:
- Water Resources



PART I

B. PROJECT UNDERSTANDING, MANAGEMENT SUMMARY, WORK PLAN, SCHEDULE, AND BUDGET REVIEW

B. Understanding, Management Summary, Work Plan, Schedule, & Budget Review

Understanding

The Huron-Clinton Metropolitan Authority has been awarded a MDEQ SAW Grant for the development of a Stormwater Management Plan. The SWMP will provide a comprehensive review and analysis of the existing stormwater conveyance system, and provide a plan for improvement and maintenance projects that prioritizes reduction of impacts on water quality.

The successful implementation of this plan will require obtaining input from the public, field inspection and condition assessment of hydrologic and hydraulic components, and in-depth analysis and cost effective recommendations- encapsulated in a clear, concise, and easily digestible series of maps, individual park system SWMPs, and a final comprehensive Authority-wide plan.

The OHM project team is well prepared to provide HCMA with the expertise needed to complete this plan. OHM Advisors has completed more than 50 SAW grant funded projects, which provides us with a wealth of experience in successfully executing this type of plan, many of which share similar water quality goals. During the development of the Orion Township SWMP, the OHM team worked to evaluate culverts, ditches, streambank, and lakeshore, and in turn were able to use this data to effectively recommend capital improvement projects such as culvert rehabilitation, streambank stabilization, and green infrastructure practice areas in order to improve water quality in Orion's streams.

In order to fully understand the existing stormwater conditions Authority-wide, it is necessary to not only have a well-rounded knowledge of stormwater infrastructure, but also the nature of the environment into which it drains. The OHM project team brings decades of environmental science fieldwork to the fore; whether it be BMP evaluation for Auburn Hills stormwater SAW Grant or streambank assessment in the City of Rochester Hills and Orion Township SAW-funded SWMPs, or the invasive species identification and mapping and hydrologic impact studies performed by NCS during the Belle Isle Flatwoods Restoration and Design, we bring the breadth and depth of experience necessary.

The HCMA SWMP will require accurate analysis and recommendations for stormwater management- a set of tasks that our project team is well experienced in. In the course of developing the City of Battle Creek's stormwater asset management plan, OHM worked to effectively develop a deterioration forecasting model, used risk/consequence factors to establish priority rankings, and provide recommendations for on-going inspections and capital improvements. Drummond Carpenter has provided analysis and recommendations for stormwater management for a variety of clients including project management and lead design for the Clinton River Watershed Council's Watertowns initiative, and for the USEPA Shoreline Cities Green Infrastructure Program in Detroit, Michigan.

To Accomplish the Authority's goals we will complete the following work tasks:

- Meet with HCMA Staff
- Public Involvement
- Public Education Plan
- Field Inspections, Condition Assessment, and Mapping
- Analysis and Recommendations
- Stormwater Management Plan Report

A detailed description of each task is included in the management summary starting on the next page.

Methodology

Our work plan for the overall effort is as follows:

TASK A: MEET WITH HCMA STAFF

Understanding: At the project onset, HCMA wishes to first fully communicate with the OHM project team to develop an understanding of the existing stormwater system and identify known water quality problems within each park. This information will provide the basis for investigation, inspection, and assessment of problem areas and lead to determination of feasible system improvements.

Approach: HCMA and OHM Advisors will work together closely to begin the SWMP process by meeting to recognize and evaluate areas already known to be priority areas of concern within each park. These priority areas will be further documented and investigated for recommended system improvements during the subsequent field efforts. Focus will be on project needs associated with water quality concerns. A technical memorandum will be developed conveying conclusions of the interview process.

OHM Advisors will meet with engineering staff at HCMA offices to make introductions, as well as build relationships and expand project understanding between key staff from each organization.

OHM will design agendas, compile pre-meeting research, and ask HCMA to provide necessary background materials in order to streamline meeting efforts, thoroughly establish an overall approach, and refine specific agendas and meeting goals. OHM Advisors goal is full understanding of the background, work-to-date, and top goals prior to the launch of the SWMP development including public involvement and public education.

Anticipated topics for these meetings will include:

- Project Team: What does day to day collaboration between HCMA and OHM Advisors look like?
- Park Profiles/Demographics/Issues/Goals – “What we know”
- Known Hydraulic Problem and Sensitive Area Identification
- Public Involvement

- Public Education
- Overall Project Goals
- Project Schedule and Current Status
- Significant Findings to Date
- Interim Project Deliverables

TASK B: PUBLIC INVOLVEMENT

Understanding: Based on the discussions and outcomes of Task A, the next step will be the involvement of interested stakeholders and staff in surrounding communities, including regulatory agencies. Task B will provide the opportunity for input on existing conditions, stormwater related water quality and quantity problems, and level of service expectations by public stakeholders.

Approach: Identify methodologies for gathering and ascertaining public knowledge via public involvement. This is important in order to determine the perspective of the input i.e. what they know v. what they think they know. It will provide collaborative buy-in and improved understanding. Understanding gaps in knowledge will be valuable as the SWMP is developed and HCMA moves forward with implementation.

- Who should be included? Why were they selected? Identified leaders? Size of groups?
- Will smart technology be utilized and if so, what will this look like?
- Format of meeting exercises, challenges, and activities designed to engage attendees, initiate meaningful discourse and guide planning.
- Final review of agendas, arrangements, field inspections, meeting prep and products (maps, inventory, etc.)

OHM Advisors and Drummond Carpenter will lead an onsite facilitation in each of the identified parks. These consultations will be engaging and interactive, incorporating the pre-meeting research. The professional staff associated with each park will be lead through productive exercises designed to guide the individual parks to a course of planning actions and implementation and remediation strategies.

B. Understanding, Management Summary, Work Plan, Schedule, & Budget Review

Based on this work with the interested and relevant stakeholders, OHM Advisors and Drummond Carpenter will create and submit a public involvement plan to HCMA for approval. With the approval of HCMA, the public involvement plan will move forward to implementation.

The combined input of all public involvement will be documented and summarized for inclusion in the SWMP and will be considered a deliverable under this proposal.

TASK C: PUBLIC EDUCATION PLAN

Understanding: HCMA wishes include a section in the Stormwater Management Plan that addresses the need for public education. This section will detail how a public education program should engage and educate the public about how actions affect water quality, what can be done to mitigate effects, and how stormwater infrastructure should be maintained.

Approach: OHM Advisors will outline a plan of action for the creation of a Public Education Program addressing stormwater quality and how the public can work to improve water quality. Strategies that interpretive staff can employ to further educate and effectively engage the public will also be included in the Stormwater Management Plan.

TASK D: FIELD INSPECTIONS, CONDITION ASSESSMENT, AND MAPPING

Understanding: Through the implementation of this project, HCMA wishes to develop a detailed summary of the stormwater system components. Through a review of current inventory, inspections and field assessments, and rating of conditions utilizing a method approved by engineering staff, corrective actions can be effectively recommended.

Approach: The OHM project team will employ the tasks listed below in order to locate features, assess conditions and determine ratings. All data collected will be stored in a digital format easily reviewable in real time by HCMA and team members, and delivered in a format easily integrated into the HCMA spatial database.

1. Assessment of Storm Outfalls, Oil/Grit Separators – A total of 218 outfall structures will be inspected throughout the Metroparks. Missing geo-locations of stormwater structures, stormwater outfalls, and oil/grit separators will be located with GPS and their physical condition assessed as well as photo documentation taken.

2. Field Evaluation of Culverts – A total of 4,831 linear feet remain for inspection throughout the Metroparks. Visual inspection and photo documentation will be used to assess each culvert using criteria developed by the Michigan Department of Transportation and the Federal Highway Administration, and modified for the specific needs of this project. Size, location, material, and collected in a format that can be easily added to the HCMA spatial database. Field findings will provide basis for recommended actions provided. GPS data will be collected in a manner consistent with current HCMA standards.

3. Streambank Assessment – There is 202.5 miles of streambank within the thirteen Metroparks. Streambanks for this task are considered lineal waterways that are traversable down the centerline taking data on both sides simultaneously. Visual inspection of streambank based on Rosgen river stability methodology will be performed at all traversable stream reaches. GPS locations and field evaluations of streambank condition and woody debris causing obstruction will be recorded and photo documentation will be provided.

4. Shoreline Assessment along Lakes and Rivers – There is approximately 167.9 miles of lake and river shoreline throughout the thirteen Metroparks in need of evaluation. Shoreline is considered any waterbody that is not lineal in nature and would require an inspection of one edge at a time along the perimeter. Problem areas will be documented and field located utilizing GPS where feasible, and evaluated for field condition such as erosion and invasive species occurrence and density.

5. Ditch Assessment – Approximately 9.7 miles of ditch are noted as in need of inspection throughout the thirteen Metroparks. GPS locating in a manner consistent with current HCMA standards and field inspection for erosion, vegetative cover, and obstructions will be completed for aforementioned ditch segments.

6. Field Evaluation of Stormwater BMPs and Neighboring Properties – Eleven constructed wetlands and six known stormwater BMPs within the park boundaries as well as adjacent neighboring properties will undergo field inspections for bank and bottom condition, sediment deposition, obstructions of inflow and outlet, erosion, vegetative density, and invasive species density, and overall functionality. GPS location of associated structures and photo documentation of each practice area will be taken.

B. Understanding, Management Summary, Work Plan, Schedule, & Budget Review

7. Creation of Comprehensive Stormwater Conveyance

Map by Park – A GIS stormwater conveyance map will be created for each park. Each map will show the major stormwater conveyance and treatment components. All other GIS data gathered during field assessment will be provided to HCMA. Individual conveyance maps for Lake St. Clair, Wolcott Mill, Stoney Creek, Indian Springs, Kensington, Huron Meadows and Lake Erie will be produced, as well as combined stormwater conveyance maps for Hudson-Mills, Dexter-Huron, and Delhi Metroparks as well as Lower Huron, Willow and Oakwoods.

TASK E: ANALYSIS AND RECOMMENDATIONS

Understanding: In order to fully understand the results of field investigations and condition assessments, HCMA requests review and analysis of data and the creation of a list of capital improvement and maintenance projects for each park, as well as an authority-wide list. This phase of the project will consider rate of deterioration and criticality of infrastructure, along with estimated operation, maintenance, and capital costs.

Approach: The OHM project team will use the following protocol in order to complete a full and concise analysis of the existing inventory and field assessment results. Recommendations for improvement projects and maintenance operations will be based on this analysis.

- 1. Water Quality & Water Quality Issues** – Water quality issues will be identified in a meeting with HCMA staff. In addition, data collected from field work will be analyzed to determine the extent and impact of problem areas. Evaluation, analyses, and recommendations will be completed accordingly.
- 2. Collective Prioritization** – This task involves determining business risk exposure for infrastructure and subsequent ranking of these infrastructure improvements in order to identify a prioritized list of improvement needs. Business risk is proposed to be determined by a combination of a condition and consequence evaluation. System condition evaluation will utilize condition assessment data from field work and system consequence evaluation will be determined through a collective exploration with the HCMA on the potential environmental, economic, and social consequences of an infrastructure failing.
- 3. Deterioration Forecasting** – This task intends to

evaluate the rate of deterioration of select, critical infrastructure based on a variety of factors, including historic maintenance information, condition data system age (if applicable), and preliminarily a linear deterioration forecasting methodology.

- 4. Cost Considerations** – Capitol Cost: A cost opinion is established for recommended capital improvements. These improvements must have a water quality benefit and can also have water quantity benefit. O&M Costs: A cost estimate is established for operations and maintenance of the above recommended improvements. Additionally, existing operation and maintenance costs are evaluated. Cash Flow Analysis: The cash flow analysis compares the projected revenue HCMA generates through their millage against the anticipated operation and maintenance cost plus the cost of the recommended capital improvements.
- 5. Maintenance Plan** – A maintenance plan will be created that addresses infrastructure such as pipes, manholes, culverts, ditches, BMPs as well as streams, lakes, and constructed wetlands. Inspections, cleanouts, sealing and repairs, as well as removal of large woody debris would be examples of typical actions incorporated into a maintenance plan.

TASK F: STORMWATER MANAGEMENT PLAN REPORT

Understanding: CMA desires a plan that both fulfills all required elements of the SAW grant program and the statement of work provided for this project.

Approach: The OHM project team will work to produce individual and combined Stormwater Management Plans for properties across the project area, as well as an authority-wide plan. A plan that is clear and concise, easy to refer to in future instances, and all-encompassing in regards to Stormwater Management in HCMA parks, is the goal of this task. Information collected through inventory review, interviews with staff and the public, field investigations, and analysis and recommendations will all be included in the final comprehensive Stormwater Management Plan.

- 1. Individual SWMP Document** – In order to fully capture and convey the results of interviews and public involvement, field investigations, and analysis and recommendations, our project team will compile several individual park and/or park complex specific stormwater management plans. These individual plans

B. Understanding, Management Summary, Work Plan, Schedule, & Budget Review

will also include background information and relevant mapping, and specific recommendations for capital improvement and maintenance projects that will improve the quality of stormwater reaching surrounding waterbodies. Individual Stormwater Management Plans for Lake St. Clair, Wolcott Mill, Stoney Creek, Indian Springs, Kensington, Huron Meadows and Lake Erie Metroparks, and combined Stormwater Management Plans for Hudson-Mills, Dexter-Huron, and Delhi Metroparks as well as Lower Huron, Willow and Oakwoods, respectively, will be produced.

2. A final comprehensive plan will be produced that addresses stormwater management authority-wide. The report will incorporate and summarize field data collected as well as all analysis completed throughout the overall project area. Background information and a summary of overall stormwater system components will be provided for each park. In addition, all thirteen parks will have an individual summary of each field component (manholes, culverts, shoreline, streambank etc.). A final component of the SWMP Report will be identification and analysis of assets by risk and consequence of failure, and an overall 20-year Capital Improvement Plan including recommended timeline. This final report will fully comply with the strictures of the MDEQ approved SAW grant agreement.

Below is a proposed outline of the authority-wide Stormwater Management Plan.

Sample Table of Contents- Authority-wide Stormwater Management Plan

Executive Summary	
Background	
Public Involvement.....	
Field Findings.....	
Hydrology	
Hydraulics	
Culverts and Grit Separators.....	
Streambank.....	
Wetlands.....	
Ditches and BMPs.....	
Lakes and Rivers.....	
Recommendations	
Capital Improvement Projects.....	
Operations and Maintenance	
Public Education.....	
Appendix A – Images and Photographs.....	
Appendix B – Authority-Wide Conveyance Map.....	
Appendix C – Public Input.....	
Appendix D – Figures of Problem Areas and Recommendations	
Appendix E – Cost Opinions	

*Individual and combined park plans will be similarly organized.

DELIVERABLES

1. Ten meetings with HCMA engineering staff
2. Public Involvement Plan
3. Memo containing conclusions of staff interviews pertaining to water quality concerns
4. Geodatabase containing ditches, shoreline, and streambank to 0.5 meter accuracy
5. Updated dataset containing missing stormwater system components locations to 0.5 meter accuracy
6. GPS dataset and photo documentation for areas of concerns along streambank and shorelines to 0.5 meter accuracy
7. Stormwater conveyance map for each park
8. Detailed summary of stormwater system component condition and O&M recommendations
9. Capital improvement plans to address water quality issues at each park
10. Individual Stormwater Management Plans for Lake St. Clair, Wolcott Mill, Stoney Creek, Indian Springs, Kensington, Huron Meadows and Lake Erie. Combined Stormwater Management Plans for Hudson-Mills, Dexter-Huron, and Delhi Metroparks as well as Lower Huron, Willow and Oakwoods.
11. Authority wide Stormwater Management Plan

Budget Review

It is the opinion of the OHM project team that the available budget is adequate and appropriate for the proposed scope of services. Should a greater level of service or additional or extraneous tasks be determined to be necessary, our project team stands ready to complete at rates compliant with prices listed on the Standard Cost Form included in the RFP.

B. Understanding, Management Summary, Work Plan, Schedule, & Budget Review

ADDITIONAL RECOMMENDED SERVICES

The development of a robust Public Education Program is reimbursable through the SAW Grant program.

A program to increase public understanding of the importance of stormwater management and how public involvement can affect the success of an SWMP, and should be highly considered for development during the SWMP process.

Approach: OHM Advisors suggests utilizing existing stormwater public outreach and education campaigns in order to leverage HCMA resources. There are several Michigan watershed/stormwater campaigns that can be easily adapted for use by HCMA. Using existing marketing tools will accomplish three things: 1) immediate availability, saving several months of development 2) reduction of costs, and 3) build on the work of neighboring watersheds creating synergies and common messaging. Using such resources will quickly and economically extend the capabilities of the interpretive staff as they work to message the importance of

stormwater infrastructure. Minor adjustments can be made to localize the messaging while still capitalizing on the savings of time and resources.

Building on the selected public education plan, OHM Advisors and Drummond Carpenter will combine their expertise and experience to support and expand the existing HCMA programming increasing public understanding of how actions affect water quality, what can be done to improve water quality and how stormwater infrastructure should be cared for and maintained.

The ultimate goal is to educate the public about stormwater management and the benefits of having a SWMP. Careful consideration will be given to target audiences, methodology, messages, and delivery.

In order to monitor the effectiveness of this program, pre and post evaluations will be included to show the metrics of gained understanding and assure messages are resonating with the public.

Schedule

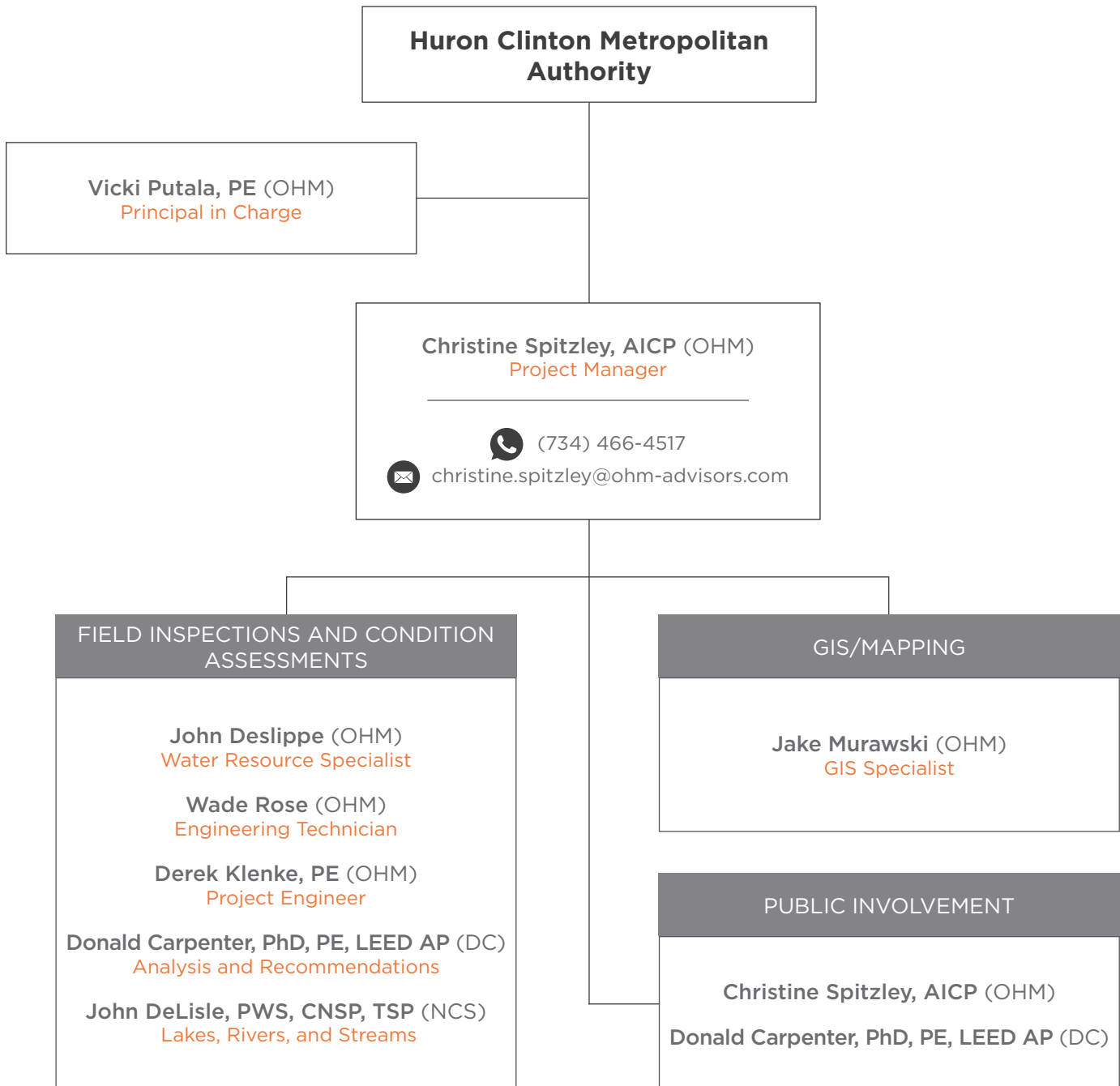
HCMA Stormwater Mangement Plan	2018								2019							
	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept
Task A: Meet with HCMA Staff																
Task B: Public Involvement																
Task C: Public Education Plan																
Task D: Field Inspections, Condition Assesement, and Mapping																
1. Assessment of Outfalls, Oil/Grit Seperators																
2. GPS of Culverts and Field Evaluation																
3. Field Evaluation of Streambanks and Potential Blockages																
4. Shoreline Assessment along Lakes and Rivers																
5. Ditch Assessment																
6. Evaluation of Stormwater BMPs and Neighboring Properties																
7. Comprehensive Stormwater Conveyance Maps																
Task E: Analysis and Recommendations																
1. Water Quality and Quantity Issues																
2. Collective Prioritization																
3. Deterioration Forecasting																
4. Cost Considerations																
5. Maintenance Plan																
Task F: Stormwater Management Plan																
Task 1. Draft for 50% Completion Submittal for Comments																
Task 2. Draft for 90% Completion Submittal for Comments																
Task 3. 100% Completion Submittal																
Task 4. MDEQ Submittal Assistance																



PART I

C. PERSONNEL

Organizational Structure



C. Personnel Resumes

Vicki Putala, PE | Principal in Charge



Education

Bachelor of Science in
Environmental Engineering,
Michigan Technological
University, 1988

Experience

With OHM since 1993
5 years prior experience

Professional Registration(s)

Professional Engineer, MI,
1994, #40097

Professional Affiliation(s)

- American Water Works Association, member
- Michigan Water Environment Association, member

Professional Affiliation(s)

- PSMJ – Get Work Now, 2014
- Michigan Green Infrastructure Conference, 2014
- Principal's Boot Camp, 2008
- Project Manager's Boot Camp, 2005
- ACEC Environmental Quality, 2003
- LeaderEase Management Training Program, 2002
- Source Water Protection Seminar, 2002
- Funding for Watershed and Stormwater Projects, 2001
- Developing a Watershed Management Plan for Water Quality, 2000

Background

Vicki Putala is the Director of OHM Advisors' Environmental and Water Resources Group (EWRG). As the Director she oversees a team of more than 30 professionals and is responsible for overall client satisfaction for the projects performed by the group. She also acts as a Senior Project Manager on water resources related projects and is the Principal for several OHM Advisors' clients.

Vicki's water resources experience includes master planning and studies for water, wastewater and stormwater. Many of the projects have received federal and state funding including S2, State Revolving Fund, Green Project Reserve Principal Forgiveness, Drinking Water Revolving Fund, Rural Development, Competitive Grant Assistance Program, Great Lakes Restoration Initiative, EPA Section 319, Clean Michigan Initiative, Rouge Program Office, and the Stormwater, Asset Management and Wastewater program. She is an expert in understanding client and public needs, and communicating engineering information clearly in public forums.

Select Relevant Experience

Alliance of Downriver Watersheds Facilitation Services, ADW

Main Facilitator for the ADW to assist all 23 members with their individual MS4 permit. Responsibilities include facilitation at various meetings, grant applications, website updates and preparation of biannual report. Helped assist the ADW with creation of collaborative pieces including public education plan, public participation plan, IDEP elimination program and TMDL implementation plan.

Stormwater Management Plan, Alliance of Downriver Watersheds (ADW)

Technical Advisor for a SAW funded Stormwater Management Plan for the ADW. The project includes creation of a robust GIS system that includes storm sewers and outfall from all 23 communities as well as streams and major drainage corridors. Extensive field work is included to identify gaps in the GIS, provide recommendations for green infrastructure and identification and recommendations for streambank stabilization. This project also includes updating the Wayne County stormwater standards, providing a framework for establishment of a stormwater utility fee, approval of the collaborative pieces of the MS4 permit and preparation of an overall report documenting the findings of the Stormwater Management Plan.

Stormwater Management Plan, Orion Township, MI

Project Manager responsible for creation of a stormwater management plan for the community. The stormwater management plan incorporated a public involvement component, field investigation of problem areas, modeling, recommendations, cost opinions and collaboration with the Clinton River Watershed. The plan focused on both water quantity and water quality needs. The final deliverable was a report meeting all the requirements of the Michigan SAW program.

Vicki Putala, PE | Principal in Charge**Select Relevant Experience, Continued****Wastewater Asset Management Plan, Ypsilanti Community Utilities Authority, MI**

Project Manager responsible for creation of an asset management plan for the Authority. The asset management plan includes inventory and condition assessment of 600 manholes, gravity sanitary sewers, forcemain and 31 pumping stations. The existing GIS was updated and Lucity was selected as the new work order management software. Condition assessment was coded using NASCO's MACP and PACP ratings. Consequence of failure coupled with condition assessment was used to create a capital improvement program. The resulting capital improvement program coupled with needed operation and maintenance was evaluated as part of the rate setting process. This project was funded by the Michigan SAW program.

Wastewater Asset Management Plan, Brighton Township, MI

Project Manager responsible for creation of an asset management plan for the Township. This asset management plan focuses on the wastewater treatment plant, 10 lift stations and nearly 1,000 grinder pumps. The asset management plan will incorporate condition assessment and consequence of failure in development of the capital improvement plan.

Whispering Willows Golf Course, City of Livonia, MI

Project Manager for stream restoration and off-line regional wetland detention creation in an existing City owned golf course. Project includes HEC-RAS backwater analysis, sediment characterization, scour analysis and evaluation of shear stresses to identify most susceptible areas and to design the proper stabilization methods along with identifying the best areas for floodplain storage and detention opportunities. NRCS natural stream design techniques are being utilized. Project funded by 50% RPO grant.

Rennolds Ravine Stream Restoration, City of Livonia, MI

Project Manager for restoration of 1000 feet of stream which has failing banks and jeopardizing residential properties in the area. Stream restoration includes HEC-RAS backwater analysis, sediment characterization, scour analysis and evaluation of shear stresses to identify most susceptible areas and to design the proper stabilization methods. NRCS natural stream design techniques are being utilized. Project funded by 50% RPO grant.

Pioneer High School Stormwater Improvements and SRF Support, Washtenaw County Water Resources Commissioner

Project Manager responsible for the design of a 2 million gallon underground stormwater detention system with infiltration, grit chambers and site restoration. Project was funded through a SRF low interest loan and has qualified for 40% principal forgiveness through the ARRA funding. Savings are 1.76 million dollars.

Galloway Drain Study, City of Auburn Hills, MI

Project Manager / Project Engineer responsible for option evaluation to relieve flooding at the Fieldstone Golf Course property in the City of Auburn Hills, preparation of a SRF Project Plan for project funding and development of bidding documents.

City Retrofit Stormwater Project, City of Auburn Hills, MI

Project Manager responsible for the design of rain gardens, level spreaders and cisterns for stormwater improvements among several City properties including two parks, the City campus and a fire station. Project is being funded through a SRF low interest loan and has qualified for 40% principal forgiveness through the ARRA funding. Savings are \$120,000.

C. Personnel Resumes

Christine Spitzley, AICP | Project Manager



Education

Bachelor of Science in Urban and Regional Planning,
Michigan State University,
1990

Experience

With OHM since 2017
27 years prior experience

Professional Certification(s)

- AICP, member
- National Charrette Institute
- National Grant Writers Association;
- Senior Grants Specialist, Certified Grants Specialist, Certified Grants Reviewer, Certified Grants Consultant

Professional Affiliation(s)

- American Planning Association, member
- American Water Works Association, Consumer Confidence Report Workgroup member
- AWWA, Michigan Section;
- Chair 2017-18
- Trustee 2002-05
- Chair to Audit, Youth Education, and Management/Administrative Practices Committees
- Committee member to Planning & Strategy, Community Awareness, Safe Water in Ecuador, Education, and Source Water Protection

Background

Christine Spitzley is a Senior Planner at OHM Advisors' serving in unique dual role within the Environmental and Water Resources Group (EWRG) and Planning Department. In this role she connects approximately 50 professionals, from both teams, and is responsible for identifying synergies and plans for the projects performed by these teams. She also serves as a Project Manager on water resources and planning related projects.

Ms. Spitzley is a leader in the water resource profession. She is currently Chair of the Michigan Section American Water Works Association's (MIAWWA) Board, which is a community of water professionals dedicated to treating, delivering, and protecting clean, safe water for Michigan communities. As a board member, Ms. Spitzley serves as the MIAWWA liaison to the Michigan Township Association and the Michigan of Agriculture and Natural Resources Department (MDARD) Western Lake Erie Basin Stakeholder Group.

In addition to being a statewide leader in the field of water resources, Ms. Spitzley has nearly 30 years of experience leading planning projects and teams. Prior to joining OHM, Ms. Spitzley worked with Tri-County Regional Planning Commission (TCRPC) as Chief Planner and managed projects in water, land use, transportation, air quality, economic development and fair housing. Ms. Spitzley helped local governments engage in collaborative regional planning efforts developing and facilitating multijurisdictional projects that created long term solutions and plans to shared regional issues. She is an expert in leading community consensus and communication.

Ms. Spitzley also has experience leading projects in healthcare information systems with the Michigan Health Information Network Shared Services (MIHIN). As a project manager, Ms. Spitzley managed projects ensuring timelines, budgets, and deliverables were met in addition to authoring key use case documents. She facilitated project schedules, meetings and communications between vendors, contractors and the State of Michigan.

Christine's professional passion is to create and implement regional strategies for communities that are sustainable and economical. She believes success comes from building long term relationships and viewing projects through the lens of the long term impact.

Select Relevant Experience

Alliance of Downriver Watersheds (ADW) Facilitation Services

Project management and facilitation for the ADW supporting a 23 community watershed alliance. Responsibilities include meeting coordination and leadership, budgets, grant reporting and providing community training and networking. Creation and support of ADW marketing and public relations.

Christine Spitzley, AICP | Project Manager**Select Relevant Experience, Continued****Greater Lansing Area Wellhead Protection Programs**

Designed, wrote and implemented Wellhead Protection Programs for the Greater Lansing Area representing 360,000 residents. Results included Wellhead Protection Plans for thirteen local communities and Michigan State University, revised zoning ordinances, building codes, site plan reviews, delineations for 225 public wells and multimedia public education program that included: movie ads, website, public speaking engagements, a DVD, brochures, and business training seminars. Christine guided each plan to initial adoption and regular 3 year updates by the individual municipalities.

Lead Service Line (LSL) MDEQ Pilot Projects

Christine is coordinating the efforts of three client communities who have selected OHM Advisors to guide them through their MDEQ LSL Pilot Projects. The goal of these projects is to begin to understand what the “real” costs will be for activities such as LSL identification and replacement. Christine is working with each project team to identify challenges and share successful strategies including: bid processes, contract language, identification, inventory, mapping and community messaging.

Iron Removal Public Outreach Education -Oakland Charter Township

In response to citizen concerns over the impacts of iron in their water, Oakland Charter Township engaged OHM Advisors to educate residents about why the iron is present and the choices available to the residents to manage the iron. Christine has coordinated a plan for a robust public outreach effort and putting into place a set of resources for future residents to become educated on the topic.

Lead and Copper Rule Facilitation-- Oakland County Water Resource Commissioners Office

Christine convened and facilitated a group of SE Michigan Stakeholders to review and address the proposed changes to the Lead and Copper Rule (LCR) by the Michigan Department of Environmental Quality (MDEQ). She guided discussions and strategy sessions as the stakeholders worked to create coordinated written responses to the proposed LCR changes.

Water Storage Tank Site Selection – Oakland Charter Township

Project Manager for the site selection of two ground storage tanks in Oakland Township. Her team lead the Township and County as they worked together to establish a transparent methodology for initial site selection and a criteria for screening over two dozen potential sites. Careful consideration was given to the results of a public survey. Christine continues to lead the process as final selections, site visits, and construction schedules are confirmed.

Michigan ByProduct Synergy Program –State of Michigan

Managed the creation of the statewide Michigan ByProduct Synergy Program matching undervalued waste or by-product streams from one facility with the potential users of those by-products at another facility. The recycling or use of by-products creates new revenues or savings with efficiency breakthroughs by bringing together companies and organizations of all sectors and sizes to develop multi-stakeholder solutions. Christine developed a marketing plan, populated and vetted a database of potential synergies, and managed the creation of a two-part survey methodology to identify by-products on site.

C. Personnel Resumes

John Deslippe | Water Resource Specialist



Education

Bachelor of Science in
Environmental Studies
and Geospatial Analytics,
University of Michigan, 2014

Experience

With OHM since 2015
10 years prior experience

Professional Development

OSHA Confined Spaces Entry
Training

Technical Skills

- Certified Arborist
- ArcGIS 10
- Wetland Delineation
- Engineered Bioretention
- Environmental Planning
- Environmental Regulatory Compliance
- Invasive Species Management
- Remediation Fieldwork
- Urban Forestry
- Heavy Equipment Operation
- Industrial and Construction Stormwater Compliance

Background

As a Water Resource Specialist for OHM Advisors' Environmental and Water Resource Group (EWRG), John Deslippe is active in many project aspects related to environmental science. Investigative fieldwork, wetland delineation, floral and faunal survey and monitoring, riparian habitat assessment, watershed advisory group technical support, and Geographic Information Systems projects are among the activities John is regularly engaged in with OHM Advisors.

His breadth of experience includes an extensive background in landscape construction, as well as horticultural production and the application of native plants in urban and suburban settings. John is International Society of Arborists certified and State of Michigan certified construction stormwater operator as well as a master raingardener. Professional level trainings completed by John included hydric soil analysis, wetland delineation, engineered bioretention design and maintenance, and stream habitat assessment methodology.

Select Relevant Experience

Stormwater Management Plan, Orion Township, MI

Performed many duties in multiple phases of this project including: streambank assessment, lakeshore evaluation, invasive species investigations, detention pond and culvert inventory and inspection. Conducted computer hydrologic modeling and analysis of stream flow, created technical memorandums, maps, and final report, as well as interfaced with the Township of Orion during project progress meetings.

Stormwater SAW Grant Activities, Rochester Hills, MI

Performed field investigation of Sargents Creek in the Chichester West subdivision for hydrologic functionality as well as streambank erosion and obstruction, including inline storage and associated structures. Produced report of findings and presented to City of Rochester Hills engineering department representatives. Assessed dozens of stormwater detention structures, devised weighted rating system, and produced report of results.

Milford Wastewater Treatment Plant Improvement Wetland Monitoring, Milford, MI

Performed ecological consultation for the City of Milford concerning sensitive protected wetland habitats in proximity to construction activities. Performed wetland mapping activities, oversaw installation of monitoring wells and data collection, interfaced with MDEQ and project partners to assure project goals were met while protecting fragile ecosystems.

Battle Creek Unlimited Wetland Delineations and Assessments, Battle Creek, MI

Performed delineation of over 60 acres of wetland on five undeveloped parcels, field wetland assessments of various wooded sites, and desktop review of several other wetland areas across Battle Creek. Prepared legal documentation for permit application submittal requirements, reported on findings, and GIS mapped wetland site investigations.

John Deslippe | Water Resource Specialist**Select Relevant Experience, Continued****Endangered Seabird Recovery Project, Island of Lanai, HA***

Performed endangered species tracking, monitoring, and conservation activities under federal endangered species permit in sensitive rainforest habitat. Employed state of the art biological remote sensing technology to produce biological community baselines and develop invasive predator management plan. Provided GIS mapping data and analysis for Department of Natural Resources.

GLRI Invasive Species Grant Project Coordination Committee, Alliance of Downriver Watersheds, MI

Continue to work with on multiple grantee project including planning and implementation phases. Performed field surveys of terrestrial invasive plant species at sites across the watershed as well as provided mapping, prioritization, and technical support for collaborative Great Lakes Restoration Initiative grant for Alliance of Downriver Watersheds.

Canton Water Storage Tank Construction Tree Survey, Canton, MI

Conducted field survey of several hundred mature trees and in accordance with the City of Canton historic tree ordinance. Produced report for water tower site plan purposes.

Galloway Wetland Restoration, Auburn Hills, MI

Provided environmental technical support for The City of Auburn Hills during the design and funding phase of this restoration project.

Wetland Delineation, Baldwin Road Improvement, Orion Township, MI

Conducted wetland delineation and produced report for Baldwin Road Improvement Project Township of Orion.

SAW Grant Activities, Auburn Hills, MI

Produced report on detention pond inspections, conducted MACP inspections in the City of Auburn Hills.

Wellhead Protection Plan, Dexter, MI

Compiled data and produced maps for comprehensive MDEQ required plan for municipal wellhead protection for the City of Dexter.

Sanitary Sewer and Water System GIS Project, Owosso, MI

Created GIS system for sanitary and clean water systems for the City of Owosso.

Vacant Land Green Infrastructure Implementation Plan, Detroit, MI*

Lead landscape construction and green stormwater infrastructure implementation of vacant land on City of Detroit-owned parcels.

Dendroremediation Implementation Project, Detroit, MI*

Lead implementation efforts of contaminated soils remediation using hybrid poplar and willow species at brownfields across the City of Detroit.

**Indicates work completed prior to joining OHM Advisors.*

C. Personnel Resumes

Wade Rose | Engineering Technician



Education

Bachelor of Science in
Environmental Studies
University of Michigan, 2014

Experience

With OHM since 2016
20 years prior experience

Professional Certification(s)

- OSHA, 30-Hour Construction Safety, expires 02/06/21
- OSHA, Confined Spaces Training, expires 01/19/2019
- PACP, LACP, MACP certifications, NASSCO, expire 01/13/2020
- Interpretive Nature Guide, National Association of Interpretation, expires 2018
- MIOSHA 10 Hour Construction, received 2015
- Commercial Pesticide Applicator License, Category 6, expires 2020

Technical Skills

- GIS software
- Wetland Delineation
- Invasive Species Management
- Urban Forestry
- Ecosystem Services
- Remediation Field Work
- Data Analysis
- Landscape Design
- Commercial Pesticide Applicator
- Heavy Equipment Operation

Background

Working in the field services department for OHM Advisors' Environmental and Water Resource Group (EWRG) Wade Rose has worked on a variety of environmentally based projects. Stormwater runoff mitigation, wetland delineation, sanitary and storm sewer assessment, floral and faunal survey, and watershed advisory group technical support encompass the activities Wade routinely participates in with OHM Advisors.

Wade brings over 20 years of experience in forestry and landscape construction, having worked in both the private and public sectors. Most recently Wade worked with The Greening of Detroit as a project manager where he specialized in ecosystem services, installing native plant landscapes, and performing community education and outreach on a variety of projects.

Select Relevant Experience

City of Detroit Stormwater Drainage Program, Detroit MI - Conduct property owner interviews to assist in collecting consistent information on sites regarding stormwater infrastructure, green infrastructure practices and future site operations. Perform engineering analysis, and provide preliminary recommendations for site modification to mitigate stormwater runoff.

DEQ SAW Grant Program, MI - Assisting with flow metering, smoke testing, field investigation of sanitary sewer flow anomalies, manhole inspections of sanitary and storm sewer structures for multiple municipalities throughout the state.

Battle Creek Unlimited Wetland Delineations and Assessments, Battle Creek, MI - Performed delineation of over 60 acres of wetland on five undeveloped parcels, field wetland assessments of various wooded sites, and desktop review of several other wetland areas across Battle Creek. Prepared report on field investigation findings.

GLRI LEAP Vacant Land Revitalization, Detroit, MI* - Implemented green infrastructure landscapes on 32 vacant parcels in the city of Detroit to mitigate storm water runoff. Worked on multiple project phases including permitting, site control, landscape design, community outreach and engagement, site evaluations, installation management, data collection protocols and analysis.

Dendroremediation Research Project, Detroit, MI* - Identified brownfield properties throughout Detroit contaminated with heavy metal and poly-cyclic aromatic hydrocarbons. Conducted extensive soil research, data collection, site monitoring and installation of hybrid tree species to mitigate soil contaminants on 13 acres of city of Detroit owned property.

Stein Park Bioswale, Detroit, MI* - Performed site investigation, preliminary design, stormwater runoff calculations and construction management of The Stein Park Bioswale to reduce flooding occurrences in the Cody Rouge neighborhood.

**Indicates work completed prior to joining OHM Advisors.*

Derek Klenke, PE | Project Engineer**Background**

Derek Klenke is a member of OHM Advisors' Environmental and Water Resources Group. His responsibilities have included assisting in their current SSES projects by performing utility testing, metering and inspections and meter data processing. He has also provided assistance to our team's Construction and Municipal Groups by negotiating with property owners in the placement of public utilities and the acquisition of easements, plan and specification preparation, road and underground utility design, and direction of manhole rehabilitation. Derek is one of our key staff in efficiently setting up and analyzing meter data and understanding when data collection issues arise so they can be quickly fixed.

Education

Bachelor of Science in Civil Engineering, Lawrence Technological University, 2004

Experience

With OHM since 2002
4 years prior experience

Professional Registration(s)

Professional Engineer:
MI, #63622, 2017

Professional Certification(s)

- OSHA, Construction Safety 30-Hour
- Pipeline Assessment Certification Program (PACP), National Association of Sewer Service Companies, Inc. (NASSCO)
- Lateral Assessment Certification Program (LACP), NASSCO, Inc.
- Manhole Assessment Certification Program (MACP), NASSCO, Inc.
- Certified Administrator of Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act (1994 PA 451, as amended), 2009
- Storm Water Management Operator, MDEQ #C14779, expires 7/1/2014
- Confined Space Entry Training per 29CFR 1910.146, 2011

Derek has worked on a wide range of projects from emergency repairs to municipal sewers, footing drain disconnections, SSES programs for municipalities and topographic surveys. Additionally, he leads the EWRG flow metering data collection efforts by installing and maintaining the metering equipment. Collecting quality data is critical in these projects and Derek works to ensure that this happens. He has been involved in creating contract documents for several projects and understands the importance of meeting the data collection needs of the contract.

Select Relevant Experience**Willow Lift Station Study, Delta Township, MI**

Field Engineer on evaluation of the existing sewer system to determine, the most cost effective and sustainable solution, and develop a plan that successfully completes the upgrades. The plan consisted of understanding the hydraulic capacity and performance of the lift station and its impacts on the upstream system performance. A limited flow-metering program with only two (2) temporary flow meters was performed, along with analysis on antecedent moisture effects on wet weather flows to develop design peak flow rates. Hydraulic modeling focused on the interceptors and trunk sewers in the area, without simulating every pipe in the service areas. Utilizing an asset management approach to evaluating the force mains, and developing recommendations for physical conditions assessment on those segments that were the most critical was also performed.

Sanitary Sewer Improvements Preliminary Engineering, City of Ann Arbor, MI

Field Engineer responsible for performing flow metering, smoke testing, basement floor elevation surveys, MACP manhole inspections, and field connectivity investigations for 5 separate project areas within the City of Ann Arbor. Data gathered in the field is being used to analyze the sewer system and make preliminary recommendations for improvements to the sanitary sewer system for the City.

C. Personnel Resumes

Derek Klenke, PE | Project Engineer

Select Relevant Experience, Continued

SAW Grant/ Asset Management Projects, Various Clients
Field Services Manager for crews performing MACP manhole inspections. MACP and PACP data brought back into the office is QA/QC'd, processed, and analyzed. Rehabilitation methods are prescribed for deficient manholes and pipes. Sanitary and storm flow metering is also being performed for many of these projects.

- | | |
|-----------------------|-------------------------|
| City of Livonia | City of Owosso |
| City of Westland | City of Rochester Hills |
| City of Traverse City | City of Battle Creek |
| YCUA | City of Hancock |
| Superior Township | City of Ontonagon |
| City of Auburn Hills | City of Alma |
| City of Novi | City of Milan |

District 40/41 Flooding Assistance, City of Westland, MI
Field Engineer responsible for smoke testing 420 sanitary manholes and approximately 89,000 feet of sewer. A survey was also performed to determine the basement floor elevations and their vertical proximity to the adjacent sanitary sewer.

The City of Westland had experienced numerous basement backups in the neighborhoods northwest of the Van Born / Middlebelt intersection (Sewer Districts 40 and 41). The City desired to evaluate the sanitary and stormwater collection systems in this area to determine probable causes of basement flooding and to receive recommended system improvements to prevent future basement flooding.

Combined and Sanitary Sewer Study, City of Royal Oak, MI
Field engineer for this project which consisted of flow metering and modeling to evaluate the effectiveness of the ordinance and other improvements, and determine the risks of basement backups in the City. The study found that the ordinance and subsequent improvements have had a tremendous impact on peak flows, reducing them by about half. Recommendations included continuing to require detention through the ordinance, coordination with the County to understand impacts of the regional system and regional stormwater controls planned, and several minor system improvements

Sanitary Sewer/Manhole Inspections, Village of Milford, MI
Field Engineer responsible for performing MACP/PACP analysis on sanitary sewer and manholes. cursory manhole inspections were performed in suspected problem areas within the Village and several manholes were identified as having severe structural deficiencies. Level 2 MACP inspections were then performed on the identified manholes. PACP inspections of 14,000 feet of sanitary sewer were analyzed for structural deficiencies and rehabilitation and cost estimates were prepared for inclusion in an SRF report to be submitted in 2013.

Sanitary Sewer Evaluation Survey, City of Livonia, MI
Field Engineer responsible for leading the smoke testing of 6 square miles of the City over several weeks. Upon completion of the field effort, the data was brought into the office and analyzed along with over 1000 manhole inspections and nearly 15,000 feet of structurally deficient pipe. I/I based cost-effective analysis was performed on the remaining 200,000 feet of pipe and all the manholes to determine which assets had defects justifying the cost of needed repair.

Donald Carpenter, Ph.D., P.E., LEED AP | Analysis, Recommendations, and Public Involvement**Education**

- Ph.D., Environmental and Water Resources Engineering, University of Michigan (2001);
- M.S. Civil Engineering, Oregon State University (1996);
- B.S. Civil Engineering, Purdue University (1993)

Licensure and Certifications

- Registered Professional Engineer (Michigan PE #6201056764; Florida PE# 77517)
- Leadership in Energy and Environmental Design Accredited Professional (LEED AP)
- NCI Charrette Facilitation Certified, National Charrette Institute, Portland OR

Professional Affiliation(s)

- American Society of Civil Engineers
- American Society of Engineering Education
- U.S. Green Building Council
- Chi Epsilon, Civil Engineering Honor Society
- Society of American Military Engineers

Background

Donald D. Carpenter is an accredited green design professional and professional engineer whose expertise includes green infrastructure, stormwater best management practices (BMPs), hydrologic modeling and design, and field data collection. Dr. Carpenter's has 20 years' experience working with diverse clients across the United States as a researcher and practicing professional. As a NCI Certified Charrette Facilitator, he has extensive experience in community engagement and planning. His efforts have facilitated community implementation of green infrastructure and the development of community socio-economic sustainability plans. Dr. Carpenter routinely provides professional lectures and short courses on stormwater BMP design and green infrastructure implementation. Professionally, Dr. Carpenter is an active committee leader for the ASCE Environmental and Water Resources Institute and several regional green infrastructure committees dedicated to improving stormwater management.

Dr. Carpenter joined the Department of Civil Engineering at Lawrence Technological University in 2000. He currently serves as Director of the Great Lakes Stormwater Management Institute and a Professor of Practice. In this capacity, he conducts research on stormwater BMP effectiveness and advises communities on how to implement green infrastructure to manage stormwater. His University appointments included serving as University Director of Assessment (2009 to 2012) and founding Director of the Center for Teaching and Learning (2006 to 2009). Innovation, problem solving, communication, and assessing efficacy are hallmarks of his academic career that he leverages as a water resources professional.

Fields of Specialization

- **Green Infrastructure and Low Impact Development (LID)**
- **Stormwater Best Management Practices (BMPs)**
- **Hydrologic and Watershed Modeling**
- **Stormwater and Environmental Flow Monitoring and Assessment**
- **River Restoration and Sediment Transport**
- **Leadership in Energy and Environmental Design (LEED)**
- **Community Planning, Placemaking, Outreach and Education**
- **Design Manual Guidance**

Select Relevant Experience

Water Quality Improvement Projects in the Alliance of Downriver Watersheds, Wayne County Department of Environment, Wayne MI - Provided monitoring services and project evaluation for a vegetated roof on the grounds of Brownstown Middle School as part of a project funded by the Michigan Department of Environmental Quality (MDEQ) 319 Program. Monitoring goals included determining the overall volume of precipitation retained and detained (water quantity), determining the water quality variable attenuation capabilities, including total solids, pH and temperature (water quality), and determining the reduction in ambient temperature (air quality). Was also responsible for developing the Quality Assurance Proposal Plan (QAPP) approved by the MDEQ.

D. Personnel Resumes

Donald Carpenter, Ph.D., P.E., LEED AP | Analysis, Recommendations, and Public Involvement

Select Relevant Experience, Continued

Green Infrastructure Support Services for WaterTowns, Clinton River Watershed Council, Rochester Hills, MI

The Clinton River Watershed Council is a non-profit organization whose mission is to protect, enhance, and celebrate the Clinton River watershed (MI). Project Manager and Lead Designer for this five year project (2014 – 2019) to provide conceptual green infrastructure plans for downtown and municipal areas of three community partners per year in close proximity to the Clinton River in support of their community WaterTowns program. The conceptual plans included specific green infrastructure improvements (such as rain gardens, porous pavement, bioswales etc.) along with community place making suggestions (such as gathering spaces, trails, etc.). The artistic renderings of the site plans were critical in communicating the vision to the partners and securing community acceptance. Finally, estimated volumes of water retained on site and a general cost estimate for construction and maintenance were provided.

Village of Northport Stormwater Reduction Project, The Watershed Center Grand Traverse Bay, Traverse City MI

Project Manager and lead professional engineer on a project implementing green infrastructure in a downtown streetscape to reduce stormwater runoff and pollutant loading into Grand Traverse Bay. Green infrastructure techniques employed including tree box filters, street trees, and infiltration basins. The project included significant community engagement activities to meet placemaking, aesthetic and maintenance goals in addition to stormwater reduction goals.

USEPA Shoreline Cities Green Infrastructure Program Monitoring and Modeling for Detroit Eastside,

Detroit Economic Growth Corporation, Detroit, MI

Principal Investigator on a project to determine effect of green infrastructure on reducing stormwater runoff in a combined sewer overflow (CSO) area on the east side of Detroit MI. Tasks include completing QAPP for USEPA, monitoring performance using flow meters at common collection points both pre- and post- green infrastructure implementation, determining the volumetric performance for individual green infrastructure BMP installed and the cumulative effect of green infrastructure, modeling each green infrastructure BMP under consideration and calibrating with

measured data, using the calibrated model to extrapolate volumetric performance results over the entire area of GI implementation, documenting the results in the final report and recommending a specific hydrologic modeling tool for future quantification of green infrastructure implementation.

Engineering and Design Services for Storm Water Management Practices, Detroit Water and Sewerage Department, Detroit MI - Drummond Carpenter, PLLC is on a team providing Engineering and Design Services for Storm Water Management Practices for Detroit Water and Sewerage Department under Contract No. CS-1830. The overall goal is to provide the best return on investment for a property owner based on their site utilization, projected drainage charges, and cost to implement the recommended stormwater management technique. As part of the contract, I assisted in developing site analysis protocols, reporting requirements, and computational spreadsheets for stormwater managed, implementation cost, and return on investment. Also conducted site visits, developed conceptual site plans, met with stakeholders and property owners, and performed QA/QC on engineering reports.

Erb Family Foundation Green Infrastructure Specialist,

Detroit, MI - The Erb Family Foundation mission is “to nurture environmentally healthy and culturally vibrant communities in metro Detroit, consistent with sustainable business models, and support initiative to restore the Great Lakes Ecosystem.” Serve as the resident green infrastructure expert for the Erb Family Foundation and provides a range of services to their staff and grant recipients. Advise the Erb Family Foundation on all grant applications that include green infrastructure plans and approves water quantity performance goals of grant recipients and provide technical advice and early stage design review to current or potential grant recipients. Projects include the development of green infrastructure pocket parks, public rain gardens and community gardens in Detroit, water harvesting systems for urban farms, and conceptual green infrastructure design of cultural institutions and faith based organizations.

John DeLisle, PWS, CNSP, TSP | Lakes, Rivers, and Streams**Education**

- M.S.; University of Michigan; Environmental Science; 2008
- B.S.; Michigan State University, Natural Resources; 1999

Experience

17 years of experience

Professional Registration(s)

- Natural Shoreline Professional
- DNR USDA NRCS TSP
- CERP & PWS

Relevant Highlights

- Habitat Restoration Design
- Wetlands assessment, design
- Biological surveys
- Shoreline assessment and bioengineering design

Background

Mr. DeLisle is a wetland scientist and terrestrial ecologist with over 15 years of experience in assessment, habitat restoration design, bioretention, invasive species management, SESC and permitting projects for residential, commercial, agricultural, and government clients. John is dedicated to restoring the diversity, vitality, integrity, and beauty of our clients' land and water resources. John manages a staff educated and experienced in planning, installing and maintaining native ecosystems, and well-versed in the range of native plants suitable to these natural habitats. John facilitates ecological survey, design and site management methods proven to ameliorate disturbed soils, hydrology, wildlife, and vegetation, while establishing locally indigenous plants adapted to restoring pre-settlement conditions.

Select Relevant Experience**Belle Isle Flatwoods Habitat Restoration Design, Detroit MI**

Project Manager; As part of the Belle Isle/Detroit River NFWF AOC grant, NCS led biological and ecosystem planning, assessment, data collection & analysis, GIS, basis of design reporting, drawing composition of rare wet-mesic flatwoods habitat. NCS evaluated trees & other vegetation, invasive species, herpetofauna, wetlands, habitat structures, birds, mammals, insects/aquatic macroinvertebrates, and more for population dynamics, health, and potential impact by hydrologic redesign of the flatwoods. In the process, we designed ecological restoration procedures to benefit the amphibians, reptiles, birds and other animals that frequent the flatwoods as well as improve recreational opportunities. John led the biological assessment and bioengineering design for this project.

GLRI River Raisin Ecological Restoration, Monroe MI

Principal Ecologist; At Sterling State Park, Michigan DNR is restoring 1100 acres of Great Lakes marsh and acres of lakeplain prairie. In this project component, NCS worked on 350 acres of invasive species mapping, control, collection of native seed, and project data analysis. NCS controlled Purple loosestrife and phragmites (*Phragmites australis*) in north River Raisin delta wetlands (Figure 2), on public and private lands for 3 years. Phragmites improves the quality of wetlands for fish and wildlife. The phragmites control component includes monitoring of the phragmites population for the duration of the project to determine the success of this component.

The Nature Conservancy-Oak Openings Invasive Species Survey & Control, MI/OH

Principal Ecologist; As part of a GLRI-funded ecological restoration project, NCS identified, mapped and located the target invasive species-patches, thickets, and seedling carpets of Glossy Buckthorn, Common Buckthorn, Autumn Olive, Multiflora Rose, Privet species, Red Maple, Black Cherry, and Sassafras, using systematic-walk of 25' spaced parallel transects, found outliers by scanning vegetation for form, and surveyed tall vegetation from higher viewpoints (CWD, slopes etc).

C. Personnel Resumes

Jake Murawski | GIS/Mapping



Background

Jake Murawski serves as a GIS Specialist at OHM Advisors, based out of our Livonia office. Performing as a technical GIS professional, Jake has a strong work ethic coupled with the ability to address complex problems and design technical solutions. Jake specializes in the areas of GIS, asset management, environmental planning and assessment, spatial analysis, database management, Global Positioning Systems (GPS), and data development and collection. With his experiences in GIS and environmental planning, his development concentrations range from data model design to asset management and coupling GIS with water modeling software to locate problems in infrastructure.

Education

- Master of Science in Geographic Information Systems, Central Michigan University, 2012-Present
- Bachelor of Science in Geographic Information Systems, Central Michigan University, 2012

Experience

With OHM since 2015
3 years prior experience

Professional Affiliation(s)

- Michigan Communities Association of Mapping Professionals
- (MiCAMP), member 2015-Present
- Ohio-Michigan GIS User Group (OH-MI), member
- Michigan GIS User Group, member
- Southeast Michigan Council of Governments (SEMCOG), member
- Geographic Information Systems Certification Institute

Professional Development

- Michigan Communities Association of Mapping Professionals
- (MiCAMP) Annual Conference, 2015, 2016, 2017

Jake is responsible for providing and executing all GIS tasks within each discipline. This includes the deployment and integration of ArcGIS Online's suite of applications and mapping products, data collection, and database QA/QC. He is also responsible for mentoring and training GIS staff members in each of our regional offices. He is experienced in using a variety of software and related tools, including ESRI ArcGIS, 3D Analyst Extension, Spatial Analyst Extension, ArcGIS Online, Statistical Analyst Extension, ArcPad, Trimble TerraFlex, Trimble Catalyst and other GPS data collectors and Microsoft Office.

Select Relevant Experience

GIS Consultant Detroit Water and Sewerage (DWSD), Detroit, MI

Jake is available to do GIS analysis on an as-needed basis. These projects include the creation and configuration of any online maps and/or applications for DWSD, database creation, data manipulations, spatial analysis, data development, and data QA/QC.

Stormwater and Wastewater Asset Management Plans (SAW Grant), Charter Township of Orion, MI – 2015-2018

GIS Specialist / Field Technician for the townships SAW Grant to develop Asset Management Plans for its stormwater and wastewater infrastructure. Project includes field data collection, stream bank survey and analysis, city-wide creation of its GIS databases, record drawing research, system survey, detention pond and open channel assessments, sewer televising, manhole inspections, modeling, and the development of rate studies for both utilities. The stormwater rate study will include coordination with key local stakeholders to explore the feasibility of community-wide revenue sources for the stormwater system.

Stormwater and Wastewater Asset Management Plans (SAW Grant), City of Hancock, MI – 2015-Ongoing

GIS Specialist for the city's three-year \$2M SAW Grant to develop Asset Management Plans for its stormwater and wastewater infrastructure. Project includes city-wide creation of its GIS databases, record drawing research, system survey, detention pond and open channel assessments, sewer televising, manhole inspections, modeling, and the development of rate studies for both utilities. The stormwater rate study will include coordination with key local stakeholders to explore the feasibility of community-wide revenue sources for the stormwater system.

Jake Murawski | GIS/Mapping**Select Relevant Experience, Continued****Asset Management Programs, Various Communities – 2015-Ongoing**

Asset management programs (AMP) vary depending on the community's needs and budgets. As a GIS Specialist, Jake works with the community to create or update their GIS for each desired utility system. The GIS team updates the GIS both via spatial location and attribution to create a complete system. Systems analyzed have included some of the largest utility systems in the State of Michigan, including:

- City of Auburn Hills
- Brighton Township
- Charter Township of Orion
- City of Hancock
- City of Livonia
- City of Marquette
- City of Milan
- City of Owosso
- City of Rochester Hills
- City of Westland
- Superior Township
- Traverse City
- Village of Baraga
- Village of Ontonagon
- Ypsilanti Communities Utilities Authority (YCUA)

As Needed GIS Support, Data Management, Updates, and Modeling – 2015-Ongoing

- Detroit Water and Sewerage Department (DWSD)
- Charter Township of Orion
- City of Auburn Hills
- City of Westland
- Green Oak Charter Township
- Livingston Community Water Authority (LCWA)
- Village of Baraga
- Village of Dexter
- Superior Township
- Scio Township
- Ypsilanti Township

Isabella County Drain Commission, Mount Pleasant, MI, March 2012 – January 2015*

Reporting directly to Drain Commissioner Working alongside County Engineer and Consultants, worked on a variety of storm water management projects, including underground storm sewer, surface channel reconstruction, watershed analysis, and assessment of drainage districts. Assist Professional Engineer and Project Manager in preparation of material estimates and legal documentation.

Develop and manage construction plans, including plan and profile drawings, shop drawings, and details, from design concept through final design. Perform data collection and management, land surveying, GIS, AutoCAD Drafting.

**Indicates work completed prior to joining OHM Advisors.*



PART I

D. REFERENCES



We encourage you to contact the references listed below who can speak to the quality of our work and the effectiveness of our collaborative approach.

Chris Barnett

Supervisor
Orion Township
2525 Joslyn Road
Lake Orion, MI 48360
248.391.0304

Ron Melchert

Director of Public Works
City of Auburn Hills
15000 Brown Road
Auburn Hills, MI 48326
248.364.6902

Allan Schneck

Public Service Director
City of Rochester Hills
1000 Rochester Hills Drive
Rochester Hills, MI 48309
248.841.2497

Jim Gorris

Mayor
City of Gibraltar
ADW Chair
29450 Munro Avenue
Gibraltar, MI 48173
734.676.7287

D. References

Orion Township – Stormwater Management Plan

Orion Township, Michigan



The Township has approximately 67 miles of open channels, of which about 46 miles (two-thirds of the total) are directly adjacent to or near existing land development. These channels were experiencing damage due to the impacts of urbanization, including increased flow rates, streambank erosion, channel downcutting, and stormwater quality degradation. OHM Advisors completed a Stormwater Management Plan (SMP) to address these critical needs.

OHM Advisors created a detailed understanding of stormwater conveyance patterns, hydraulic restrictions, and necessary upgrades to protect against flooding. An inventory of critical conveyance facilities, such as rivers, lakes, streams, creeks, county drains, culverts and ditches was created. Hydrologic models were created to decide peak flow data based on known water levels, 2-foot contours, and pond/lake outlet configuration.

This plan was provided to the Township with detailed information on the functionality, hydraulic capacity, surface water quality, and maintenance needs for the open drainage systems, culverts, and bridges throughout the Township.

In addition to describing existing conditions, it was the goal of the SMP to aid the Township in prioritizing future stormwater projects that address current deficiencies. It also allowed the Township to further regulate stormwater quantity and quality for development projects, as needed, to avoid problems with downstream drainage facilities.

This project was funded through the MDEQ SAW Grant Program.



COMPLETION
10.2017

CLIENT INFORMATION
Charter Township of Orion
Chris Barnett,
Supervisor
2525 Joslyn Road
Lake Orion, MI 48360
248.391.0304

COST
SAW Grant Budget
\$400,000

SERVICES PROVIDED
Condition Assessment
Asset Inventory
Hydrologic Modeling
Capital Improvement Plan

City of Auburn Hills – Stormwater AMP/SMP

Auburn Hills, Michigan

The City of Auburn Hills' stormwater collection system consists of over 900,000 lineal feet of storm sewer pipe and approximately 3,200 manholes (although a lack of system mapping makes these figures lower than actual). The system discharges to the Clinton River through a system of tributaries and OCWRC Drains. The system serves a population of 21,600. The City of Auburn Hills expanded rapidly in the 1980s – 1990s, and much of the stormwater collection system has had to adapt to increased peak flows and runoff volumes resulting from rapid land development.

The City of Auburn Hills has not previously cleaned and televised its stormwater collection system, which leaves the structural condition of their key drainage infrastructure largely unknown. Initiating a storm sewer cleaning and televising program yielded useful information on structural defects that helped guide future capital improvement and O&M strategies through an Asset Management Program (AMP).

DETAILED INFORMATION ON THE FUNCTIONALITY, HYDRAULIC CAPACITY, SURFACE WATER QUALITY, AND MAINTENANCE NEEDS

A Stormwater Management Plan (SMP) was needed to address the components of the City's drainage system that are not covered by the Asset Management Plan (AMP). This was necessary to determine the City's potential obligations for future maintenance and repair of County Drains, detention ponds, and other critical elements of the stormwater collection infrastructure that impact (or are impacted by) hydraulic components that may not be under the City's direct jurisdiction. Although the AMP covers the enclosed (i.e. piped) components of the stormwater infrastructure, the SMP covered the remaining components that may impact long-term financial commitments. This SMP provided the City with detailed information on the functionality, hydraulic capacity, surface water quality, and maintenance needs for the open drainage systems, culverts and bridges throughout the City.

This project was funded through the MDEQ SAW Grant Program.



COMPLETION
04.2017

CLIENT INFORMATION
City of Auburn Hills
Ronald Melchert,
Director of Public Works
1500 Brown Road
Auburn Hills, MI 48326
248.364.6902

COST
SAW Grant Budget
\$1,377,778

SERVICES PROVIDED
Inventory
Condition Assessment
AM/GIS Investments
Cleaning and Television
Rate Study
Grant Application
Culvert Condition Assessment
Detention Rating System
Hydraulic Modeling
Capital Improvement Plan

D. References

City of Traverse City – Stormwater AMP/SMP

Traverse City, Michigan



Traverse City embarked on a comprehensive Asset Management Planning program involving its stormwater and wastewater infrastructure. This plan required a significant management effort to control the work product and budget for 22 separate project tasks with an overall budget of \$2.44 million. The City requested the assistance of OHM Advisors to manage and assist with implementing the tasks necessary during the first twelve months in order to start the Asset Management Program on a successful track.

The system is currently comprised of approximately 340,000 lineal feet of storm sewer main, 1,800 storm structures, and an unknown number of culverts maintained by the City.

Based on project needs and a work plan that was detailed in the City’s Saw Grant, OHM Advisors assisted the City with the inspection of catch basins and inlets as part of this effort. This task also included estimating the condition based on the inspections and industry data.

The Plan also included an extensive field inventory where open drains within the City were “walked” in order to assess their condition. Erosion was noted and ranked as severe, moderate or slight and recommendations for stream bank stabilization were made. Outfalls were also noted and any outfalls of suspicious nature were brought to the attention of the City.

A Stormwater Management Plan (SMP) was needed to address the components of the City’s drainage system that are not covered by the Asset Management Plan (AMP). This was necessary to determine the City’s potential obligations for future maintenance and repair of County Drains, detention ponds, and other critical elements of the stormwater collection infrastructure that impact (or are impacted by) hydraulic components that may not be under the City’s direct jurisdiction. Although the AMP covers the enclosed (i.e. piped) components of the stormwater infrastructure, the SMP covered the remaining components that may impact long-term financial commitments. This SMP provided the City with detailed information on the functionality, hydraulic capacity, surface water quality, and maintenance needs for the open drainage systems, culverts and bridges throughout the City.

COMPLETION
06.2015

CLIENT INFORMATION
City of Traverse City
Larry LaCross,
Asset Management/GIS
Analyst
625 Woodmere Avenue
Traverse City, MI 49686
231.941.7716

COST
SAW Grant Budget
\$1,443,500

SERVICES PROVIDED
Asset Inventory
Condition Assessment
Hydraulic Modeling
Metering/Modeling
Level of Service Determination
Capital Improvement Plan
Rate Study

Rochester Hills – Stormwater Asset Management Plan

Rochester Hills, Michigan

OHM Advisors helped to secure \$2M in MDEQ SAW Grant funding for the City of Rochester Hills' stormwater and wastewater infrastructure. This project focused on developing comprehensive Asset Management Plans for the City's stormwater and wastewater collection systems, as well as a Stormwater Management Plan to address runoff quality.

OHM served as the Program Manager for the SAW Grant projects, overseeing other consultants and contractors, and conducting progress meetings, public presentations, and preparing summary reports for the results of the asset management findings.

The purpose of the asset management plans was to evaluate a representative sample of the storm and sanitary sewer systems (through sewer televising and manhole inspections) and merge the data from these evaluations (i.e. structural condition scores) with the City's GIS and asset management software. This information was used to develop the following:

- Business Risk Evaluation (BRE) for every inspected asset
- Capital Improvement Plan, based on asset prioritization from the BRE analysis
- Deterioration forecast modeling: long-term maintenance, rehabilitation, and replacement to maintain a functioning system for future generations
- Targeted business plan for the City's infrastructure, focusing on investments that provide the best value to the City's customers by enhancing level of service while controlling costs

All of the compiled data were used to determine appropriate investment levels for the near term and long term, including an analysis of funding options for the stormwater system. OHM prepared several presentations for the City's Public Safety & Infrastructure Committee and developed a Funding Feasibility Study which reviewed the potential for a dedicated funding source (stormwater utility) for the City's aging drainage infrastructure. This study included an evaluation of potential user fees for typical customers (residents) and key potential ratepayers.



HELPED TO SECURE \$2M IN SAW GRANT FUNDING

COMPLETION
10.2017

CLIENT INFORMATION
City of Rochester Hills
Allan Schneck,
Public Services Director
1000 Rochester Hills Dr
Rochester Hills, MI 48309
248.841.2497

COST
SAW Grant Budget
\$1,320,000

SERVICES PROVIDED
Asset Inventory
Condition Assessment
Metering/Modeling
CCTV Inspection
Level of Service Determination
Rate Study
Grant Application
Hydraulic Modeling
Capital Improvement Plan

D. References

City of Battle Creek – Stormwater AMP

Battle Creek, Michigan



The City of Battle Creek’s stormwater collection system consists of nearly 1 million lineal feet of sanitary sewer pipe and over 11,000 structures (manholes and catch basins). Unlike a wastewater system (which is inspected on a regular basis), the vast majority of the stormwater collection system has not been evaluated. Much of the system is functionally obsolete (unable to convey design storm flows) and other components are in need of rehabilitation or replacement, as many sewers are nearing the end of their anticipated service life.

By developing an Asset Management Plan, the City received an evaluation of the collection system, with recommended O&M and capital strategies to maintain an adequate Level of Service. With this information, revenue needs can be determined, which in turn allows the City to evaluate funding options for its stormwater system. Since the City currently has no dedicated funding source for this critical infrastructure component, the funding component of this project was essential.

The Asset Management Plan (AMP) report includes a holistic evaluation of all stormwater assets evaluated in preceding and subsequent tasks in this scope of services. The AMP included the following:

- Import of CCTV and MH inspection ratings into sanitary sewer GIS database. These ratings were used to establish a Risk of Failure variable to be assigned to each component.
- Worked with City staff to determine appropriate characteristics used to establish a Consequence of Failure variable.

- Using the Risk/Consequence factors, established a priority ranking (“Criticality Index”) to be used to develop a list of repair/replacement/rehab needs.
- Used the roadway (PASER) and sanitary sewer pipe ratings, along with GIS to determine where coincidental high priority areas exist and added these to the list of Early Action Projects to be added to the Capital Improvement Plan.
- Developed a Deterioration Forecasting Model based on current pipe condition, depth, material, and age. This will be used to forecast system repair/rehab/replacement needs.
- Provided recommendations for future (ongoing) system inspection needs, including CCTV and manhole inspections.
- Identify ongoing needs for maintaining other key drainage assets, including concrete-and stone-lined sections of the Battle Creek and North Branch Kalamazoo River in and around downtown Battle Creek.
- Prepared a written report that summarizes the asset evaluation.

COMPLETION

11.2018 (Expected)

CLIENT INFORMATION

City of Battle Creek
Kurt Tribbett,
Engineering Administrator
150 S. Kendall St.
Battle Creek, MI 49037
269.966.3355

COST

SAW Grant Budget
\$1,034,749

SERVICES PROVIDED

Asset Inventory
Condition Assessment
Capital Improvement Plan
Rate Study



PART II

A. COST PROPOSAL



HURON CLINTON METROPOLITAN AUTHORITY REQUEST FOR PROPOSAL STANDARD COST FORM

(TO BE SUBMITTED WITH PROPOSAL PART II)

PROJECT TITLE: Stormwater Management Plan

PARK NAME: Authority Wide

RFP No.: 900-18-1119-100P

DUE DATE: Wednesday, May 23, 2018

PROJECT PHASE	ESTIMATED HOURS	ESTIMATED COST
Meet with HCMA Staff	48	\$6,000.00
Public Involvement	165	\$26,500.00
Public Education Plan	30	\$5,000.00
Field Inspections and Condition Assessments	1,700	\$165,000.00
Mapping	400	\$45,000.00
Analysis and Recommendations	662	\$75,000.00
Reporting	--	--
- 50% Complete	300	\$35,000.00
- 90% Complete	180	\$32,000.00
- 100% Complete	100	\$12,000.00
Miscellaneous	--	--
- Meetings	10 Meetings	\$20,000.00
- Assist Owner with MDEQ Submittal Items	12 Hours	\$1,500.00
- Assist Owner with MDEQ Review Items	12 Hours	\$1,500.00
Additional Phases/Tasks As Proposed	--	--
- Project Management	210	\$31,500.00
-		
-		

Include estimated hours for all work performed
except provided by subconsultant as lump sum. 3,819 hrs

Proposal Cost (Not to Exceed)

\$456,000.00



HURON CLINTON METROPOLITAN AUTHORITY

REQUEST FOR PROPOSAL STANDARD COST FORM (SUBCONSULTANT INFORMATION)

Subconsultant: Drummond Carpenter, PLLC
Discipline: Water Resource Engineering
Contact Information: Donald Carpenter, Ph.D., P.E., LEED AP, <i>President & Vice Principal</i>
4717 Campus Drive Suite 2000
Kalamazoo , MI 49008
(407) 417-1220
Subconsultant: Natural Community Services, LLC
Discipline: Ecological Services
Contact Information: John DeLisle, PWS, CNSP, TSP, <i>Principal Ecologist</i>
6410 Upper Straits Boulevard
West Bloomfield, MI
(248) 672-7611
Subconsultant:
Discipline:
Contact Information:
Subconsultant:
Discipline:
Contact Information:

B. Compensation Information

OHM ADVISORS HOURLY RATES

Professional Engineer IV/Architect IV	\$170.00
Professional Engineer III/Architect III	\$155.00
Professional Engineer II/Architect II	\$140.00
Professional Engineer I/Architect I	\$130.00
Graduate Engineer IV	\$135.00
Graduate Engineer III	\$125.00
Graduate Engineer II	\$120.00
Graduate Engineer I	\$110.00
Graduate Architect III/Landscape Architect III	\$120.00
Graduate Architect II/Landscape Architect II	\$100.00
Graduate Architect I/Landscape Architect I	\$90.00
Technician IV	\$130.00
Technician III	\$110.00
Technician II	\$95.00
Technician I	\$75.00
Engineering/Architectural Aide	\$60.00
Professional Surveyor III	\$155.00
Professional Surveyor II	\$140.00
Professional Surveyor I	\$130.00
Graduate Surveyor	\$110.00
Surveyor III	\$107.00
Surveyor II	\$100.00
Surveyor I	\$80.00
Surveyor Aide	\$60.00
Planner IV	\$155.00
Planner III	\$135.00
Planner II	\$120.00
Planner I	\$80.00
Planner Aide	\$60.00
Graphic Designer	\$105.00
Data Base Developer	\$185.00
Administrative Support	\$65.00
Clerical Aide	\$50.00
Principal	\$195.00
Sr. Associate	\$185.00
Associate	\$175.00

NCS HOURLY RATES

Principals	\$89.00
Ecologist	\$75.00
Biological Technician	\$50.00
Intern	\$39.00

DC HOURLY RATES

Water Resource Engineer	\$160.00
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HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners
 From: Mike Henkel, Chief of Engineering Services and
 Nina Kelly, Chief of Planning and Development
 Subject: Approval – Revised Cell Tower Agreement Terms
 Location: Wolcott Mill and Stony Creek Metroparks
 Date: July 5, 2018

Action Requested: Motion to Approve

That the Board of Commissioners' approve the proposed contract terms and direct staff to work with Legal counsel at Miller, Canfield, Paddock, and Stone, P.L.C., and Kitch Law Firm, P.C. to finalize cell tower lease documents as recommended by Mike Henkel, Nina Kelly and staff.

Background: At its Oct. 12, 2017 meeting, the Board approved Kitch Law Firm, P.C. to work with staff to formulate, implement, and negotiate new lease agreement terms with Crown Castle for the two existing cell tower locations. Since that time, staff has been working with Kitch and Miller Canfield to negotiate the agreement with Crown Castle.

In 2016, HCMA had received contract proposals to extend the cell tower leases at 21385 26 Mile Road (Wolcott Mill) and 1588 E. Snell Road (Stony Creek) to May 31, 2057 and February 20, 2056, respectively. HCMA inherited the lease at 21385 26 Mile Road, originally dated from September 1996, when the property was acquired as part of Wolcott Mill Metropark in October 2005. HCMA entered into the original lease at 1588 E. Snell Road in February 2001. Since the execution of the original leases, Crown Castle has assumed ownership of the lease rights at both locations.

The Board of Commissioners approved the renewal terms from Crown Castle at the June 9, 2016 meeting; however, final agreements were never executed. In July 2017, Crown Castle contacted Metroparks staff to inquire about the status of the contracts. The Engineering Department brought the previously-approved (in June 2016) contract terms, which had been negotiated by the then-Director, back before the Board of Commissioners at the September 14, 2017 meeting for final approval and execution. At that time, the Board requested that staff conduct further research to determine whether HCMA was receiving fair market value for the cell tower leases as proposed by Crown Castle.

In reviewing the contract proposals with additional information gleaned from research into the subject matter, staff recommended the use of specialized legal services to help facilitate negotiations of the contract terms with Crown Castle to help protect and optimize the financial interests of HCMA. Since the approval of this approach by the Board in October 2017, staff has been working diligently with Kitch to communicate with Crown Castle representatives. In mid-June 2018, HCMA's representation at Kitch received the first real improved offer from Crown Castle, presented herein for recommended approval.

Key improvements to the contract terms include the following:

26 Mile Road (Wolcott Mill):

- Add eight, five-year automatic options to extend for a final lease expiration date of May 31, 2057;
- 15 percent base rent increase effective Sept. 1, 2016 to \$1,092.50 per month;
- 15 percent per term escalations effective June 1, 2017;
- Additional base rent increase to \$2,550 per month, effective the first day of the second full month following lease execution;
- Competitor Right of First Refusal; and
- One-time \$50,000 bonus payment.

E. Snell Road (Stony Creek):

- Add six, five-year automatic options to extend for a final lease expiration date of Feb. 20, 2056;
- 15 percent additional base rent increase effective the first day of the second full month following lease execution;
- Competitor Right of First Refusal;
- One-time \$10,000 bonus payment; and
- \$10,000 Expedite Fee if the signed amendment is returned by Aug. 10, 2018.

PARK	MONTHLY VEHICLE ENTRIES				MONTHLY TOLL REVENUE			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Lake St Clair	56,872	56,205	53,870	6%	\$ 261,093	\$ 297,140	\$ 265,664	-2%
Wolcott Mill	4,871	7,776	7,966	-39%	\$ 6,142	\$ 9,380	\$ 3,434	79%
Stony Creek	78,019	85,336	78,781	-1%	\$ 382,768	\$ 470,022	\$ 401,571	-5%
Indian Springs	12,563	13,506	12,768	-2%	\$ 48,982	\$ 45,308	\$ 45,735	7%
Kensington	100,154	99,456	94,545	6%	\$ 390,577	\$ 450,137	\$ 374,573	4%
Huron Meadows	10,989	10,492	10,049	9%	\$ 4,247	\$ 3,080	\$ 3,115	36%
Hudson Mills	23,202	26,601	24,919	-7%	\$ 79,525	\$ 77,034	\$ 69,725	14%
Lower Huron/Willow/Oakwoods	61,087	65,222	60,860	0%	\$ 166,434	\$ 163,438	\$ 151,896	10%
Lake Erie	25,282	25,421	24,978	1%	\$ 85,268	\$ 98,570	\$ 84,884	0%
Monthly TOTALS	373,039	390,015	368,737	1%	\$ 1,425,036	\$ 1,614,109	\$ 1,400,597	2%

PARK	YTD VEHICLE ENTRIES				YTD TOLL REVENUE			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Lake St Clair	184,992	167,695	168,220	10%	\$ 899,194	\$ 789,609	\$ 753,385	19%
Wolcott Mill	26,245	32,729	29,259	-10%	\$ 27,729	\$ 29,223	\$ 11,373	144%
Stony Creek	258,304	248,300	239,905	8%	\$ 1,303,634	\$ 1,405,480	\$ 1,277,601	2%
Indian Springs	37,964	40,039	39,843	-5%	\$ 170,959	\$ 184,259	\$ 173,197	-1%
Kensington	360,763	352,158	353,334	2%	\$ 1,476,787	\$ 1,568,191	\$ 1,365,797	8%
Huron Meadows	40,667	38,799	39,785	2%	\$ 35,143	\$ 24,667	\$ 33,141	6%
Hudson Mills	88,918	94,407	90,835	-2%	\$ 273,869	\$ 311,529	\$ 288,144	-5%
Lower Huron/Willow/Oakwoods	251,873	260,491	245,080	3%	\$ 488,749	\$ 503,507	\$ 468,132	4%
Lake Erie	84,439	86,927	82,569	2%	\$ 344,141	\$ 352,507	\$ 330,735	4%
Monthly TOTALS	1,334,165	1,321,545	1,288,830	4%	\$ 5,020,205	\$ 5,168,972	\$ 4,701,505	7%

PARK	MONTHLY PARK REVENUE				Y-T-D PARK REVENUE			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Lake St Clair	\$ 363,807	\$ 408,687	\$ 366,550	-1%	\$ 1,305,459	\$ 1,171,466	\$ 1,135,520	15%
Wolcott Mill	\$ 17,571	\$ 26,528	\$ 74,295	-76%	\$ 129,985	\$ 139,642	\$ 222,087	-41%
Stony Creek	\$ 673,633	\$ 764,307	\$ 693,474	-3%	\$ 2,057,649	\$ 2,135,576	\$ 2,002,728	3%
Indian Springs	\$ 196,625	\$ 192,006	\$ 190,107	3%	\$ 509,664	\$ 531,754	\$ 516,759	-1%
Kensington	\$ 726,838	\$ 746,668	\$ 685,802	6%	\$ 2,293,276	\$ 2,226,262	\$ 2,107,192	9%
Huron Meadows	\$ 152,909	\$ 146,995	\$ 142,275	7%	\$ 387,510	\$ 352,820	\$ 357,404	8%
Hudson Mills	\$ 179,107	\$ 175,604	\$ 171,514	4%	\$ 522,947	\$ 540,690	\$ 522,716	0%
Lower Huron/Willow/Oakwoods	\$ 521,198	\$ 501,538	\$ 465,933	12%	\$ 1,065,483	\$ 1,023,855	\$ 997,081	7%
Lake Erie	\$ 326,919	\$ 314,650	\$ 300,719	9%	\$ 803,361	\$ 780,099	\$ 768,621	5%
Y-T-D TOTALS	\$ 3,158,607	\$ 3,276,983	\$ 3,090,669	2%	\$ 9,075,333	\$ 8,902,163	\$ 8,630,108	5%

District	YTD Vehicle Entries by Management Unit				YTD Total Revenue by Management Unit			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Eastern	469,541	448,724	437,384	7%	3,493,093	3,446,684	3,360,335	4%
Western	528,312	525,403	523,797	1%	3,713,397	3,651,526	3,504,071	6%
Southern	336,312	347,418	327,649	3%	1,868,844	1,803,954	1,765,702	6%

GOLF THIS MONTH	MONTHLY ROUNDS				MONTHLY REVENUE			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Stony Creek	5,610	5,548	5,562	1%	\$ 182,508	\$ 183,723	\$ 177,407	3%
Indian Springs	4,647	4,274	4,228	10%	\$ 135,336	\$ 125,956	\$ 111,225	22%
Kensington	5,631	5,292	5,196	8%	\$ 171,453	\$ 163,161	\$ 138,616	24%
Huron Meadows	4,744	4,511	4,532	5%	\$ 147,661	\$ 142,714	\$ 132,722	11%
Hudson Mills	3,677	2,918	3,062	20%	\$ 89,110	\$ 72,843	\$ 70,638	26%
Willow	3,941	4,246	3,868	2%	\$ 109,862	\$ 125,335	\$ 108,882	1%
Lake Erie	4,757	4,116	4,459	7%	\$ 138,944	\$ 118,170	\$ 114,072	22%
Total Regulation	33,007	30,905	30,907	7%	\$ 974,874	\$ 931,902	\$ 853,561	14%
LSC Par 3	1,461	1,344	1,417	3%	\$ 8,450	\$ 8,384	\$ 9,135	-8%
LSC Foot Golf	51	201	224	-77%	\$ 304	\$ 1,414	\$ 1,292	-76%
Total Golf	34,519	32,450	33,130	4%	\$ 983,628	\$ 941,700	\$ 867,784	13%

GOLF YTD	GOLF ROUNDS YTD				GOLF REVENUE YTD			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Stony Creek	11,848	11,646	11,974	-1%	\$ 380,985	\$ 376,011	\$ 378,069	1%
Indian Springs	9,668	9,248	9,254	4%	\$ 278,311	\$ 264,341	\$ 237,903	17%
Kensington	12,620	11,894	11,876	6%	\$ 377,468	\$ 353,844	\$ 312,654	21%
Huron Meadows	10,498	10,122	10,099	4%	\$ 322,424	\$ 315,212	\$ 292,323	10%
Hudson Mills	8,099	6,237	6,568	23%	\$ 187,952	\$ 149,642	\$ 145,287	29%
Willow	6,741	7,725	8,494	-21%	\$ 187,898	\$ 229,055	\$ 233,812	-20%
Lake Erie	9,611	9,212	9,794	-2%	\$ 271,581	\$ 258,855	\$ 245,587	11%
Total Regulation	69,085	66,084	68,058	2%	\$ 2,006,618	\$ 1,946,961	\$ 1,845,635	9%
LSC Par 3	2,573	2,443	2,505	3%	\$ 14,892	\$ 15,260	\$ 17,403	-14%
LSC Foot Golf	70	276	329	-79%	\$ 409	\$ 1,932	\$ 2,000	-80%
Total Golf	71,728	68,803	72,173	-1%	\$ 2,021,919	\$ 1,964,153	\$ 1,873,612	8%

AQUATICS THIS MONTH	PATRONS THIS MONTH				MONTHLY REVENUE			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Lake St. Clair	11,345	11,285	10,412	9%	\$ 56,708	\$ 56,421	\$ 49,618	14%
Stony Creek Rip Slide	5,553	6,899	6,506	-15%	\$ 27,974	\$ 31,668	\$ 32,108	-13%
KMP Splash	7,929	8,500	8,835	-10%	\$ 46,032	\$ 51,790	\$ 50,952	-10%
Lower Huron	19,647	16,889	18,387	7%	\$ 197,766	\$ 168,351	\$ 164,788	20%
Willow	4,618	4,228	4,367	6%	\$ 22,553	\$ 21,768	\$ 19,388	16%
Lake Erie	8,034	7,764	7,716	4%	\$ 65,787	\$ 64,011	\$ 58,507	12%
TOTALS	57,126	55,565	56,788	1%	\$ 416,820	\$ 394,009	\$ 379,320	10%

AQUATICS Y-T-D	PATRONS Y-T-D				REVENUE Y-T-D			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Lake St. Clair	16,223	12,555	12,808	27%	\$ 81,074	\$ 62,841	\$ 70,181	16%
Stony Creek Rip Slide	7,615	8,037	7,918	-4%	\$ 36,762	\$ 37,446	\$ 41,685	-12%
KMP Splash	12,274	9,802	10,891	13%	\$ 74,404	\$ 62,124	\$ 72,778	2%
Lower Huron	26,284	18,700	21,598	22%	\$ 265,870	\$ 187,070	\$ 195,698	36%
Willow	6,091	4,663	5,216	17%	\$ 29,998	\$ 24,338	\$ 23,443	28%
Lake Erie	11,812	8,463	9,318	27%	\$ 88,600	\$ 70,110	\$ 70,554	26%
TOTALS	80,299	62,220	68,443	17%	\$ 576,708	\$ 443,929	\$ 479,190	20%

PARK	Seasonal Activities this Month				Monthly Revenue			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Lake St. Clair								
Welsh Center	8	8	7	14%	\$ 5,800	\$ 6,925	\$ 3,708	56%
Shelters	48	49	56	-14%	\$ 11,475	\$ 12,155	\$ 11,923	-4%
Boat Launches	1,432	1,428	1,278	12%	\$ -	\$ -	\$ -	-
Marina	295	371	403	-27%	\$ 2,882	\$ 2,932	\$ 3,600	-20%
Mini-Golf	2,131	2,627	2,483	-14%	\$ 7,673	\$ 9,571	\$ 9,165	-16%
Wolcott								
Activity Center	7	8	12	-42%	\$ 500	\$ 2,000	\$ 2,233	-78%
Stony Creek								
Disc Golf Daily	1,724	2,298	2,737	-37%	\$ 5,816	\$ 8,686	\$ 8,809	-34%
Disc Golf Annual	7	5	5	40%	\$ 385	\$ 275	\$ 250	54%
Total Disc Golf	1,731	2,303	2,742	-37%	\$ 6,201	\$ 8,961	\$ 9,059	-32%
Shelters	68	67	63	7%	\$ 15,300	\$ 15,075	\$ 13,867	10%
Boat Rental	3,210	3,831	4,007	-20%	\$ 33,984	\$ 39,555	\$ 39,578	-14%
Boat Launches	252	231	201	26%	\$ -	\$ -	\$ -	-
Indian Springs								
Shelters	5	3	10	-50%	\$ 900	\$ 600	\$ 1,283	-30%
Event Room	3	7	5	-40%	\$ 4,600	\$ 9,500	\$ 8,641	-47%
Kensington								
Disc Golf Daily	4,189	3,469	3,798	10%	\$ 16,069	\$ 10,407	\$ 11,384	41%
Disc Golf Annual	25	7	11	134%	\$ 1,355	\$ 365	\$ 513	164%
Total Disc Golf	4,214	3,476	3,808	11%	\$ 17,424	\$ 10,772	\$ 11,898	46%
Shelters	74	82	62	19%	\$ 16,650	\$ 18,450	\$ 14,808	12%
Boat Rental	3,277	3,078	3,360	-2%	\$ 40,423	\$ 41,489	\$ 43,950	-8%
Huron Meadows								
Shelters	5	6	3	50%	\$ 1,000	\$ 1,200	\$ 667	50%
Hudson Mills								
Disc Golf Daily	732	1,192	1,386	-47%	\$ 2,196	\$ 3,576	\$ 4,158	-47%
Disc Golf Annual	10	17	12	-17%	\$ 550	\$ 935	\$ 628	-12%
Total Disc Golf	742	1,209	1,398	-47%	\$ 2,746	\$ 4,511	\$ 4,786	-43%
Shelters	13	15	14	-7%	\$ 2,600	\$ 3,000	\$ 2,800	-7%
Canoe Rental	0	1,006	902	-	\$ -	\$ 4,581	\$ 3,945	-
Lower Huron / Willow / Oakwoods								
Disc Golf Daily	96	268	89	7%	\$ 288	\$ 804	\$ 268	7%
Disc Golf Annual	3	3	1	200%	\$ 145	\$ 165	\$ 55	164%
Total Disc Golf	99	271	90	10%	\$ 433	\$ 969	\$ 323	34%
Shelters	39	50	43	-9%	\$ 8,750	\$ 10,750	\$ 9,383	-7%
Lake Erie								
Shelters	9	14	13	-29%	\$ 1,900	\$ 3,000	\$ 2,767	-31%
Boat Launches	2,237	2,403	2,154	4%	\$ -	\$ -	\$ -	-
Marina	572	12	27	2026%	\$ 33,237	\$ 27,227	\$ 26,126	27%

HURON-CLINTON METROPARKS MONTHLY STATISTICS

June, 2018

PARK	Seasonal Activities Y-T-D				Seasonal Revenue Y-T-D			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Lake St. Clair								
Welsh Center	42	31	27	58%	\$ 30,750	\$ 26,125	\$ 20,150	53%
Shelters	192	161	202	-5%	\$ 45,689	\$ 44,905	\$ 47,938	-5%
Boat Launches	1,870	2,191	2,029	-8%	\$ -	\$ -	\$ -	-
Marina	554	798	822	-33%	\$ 8,586	\$ 3,274	\$ 5,020	71%
Mini-Golf	2,776	3,247	3,123	-11%	\$ 10,097	\$ 11,800	\$ 11,361	-11%
Wolcott								
Activity Center	46	46	49	-5%	\$ 10,650	\$ 9,000	\$ 11,117	-4%
Stony Creek								
Disc Golf Daily	5,584	7,289	8,218	-32%	\$ 17,846	\$ 23,737	\$ 26,826	-33%
Disc Annual	102	122	118	-13%	\$ 5,590	\$ 6,550	\$ 5,973	-6%
Total Disc Golf	5,686	7,411	8,335	-32%	\$ 23,436	\$ 30,287	\$ 32,800	-29%
Shelters	249	258	277	-10%	\$ 56,025	\$ 57,950	\$ 58,170	-4%
Boat Rental	5,174	4,985	5,107	1%	\$ 54,536	\$ 52,094	\$ 56,179	-3%
Boat Launches	439	380	387	14%	\$ -	\$ -	\$ -	-
Indian Springs								
Shelters	26	19	35	-25%	\$ 4,950	\$ 3,650	\$ 5,100	-3%
Event Room	23	32	26	-12%	\$ 36,000	\$ 54,900	\$ 45,219	-20%
Kensington								
Disc Golf Daily	9,538	11,461	11,825	-19%	\$ 32,116	\$ 34,383	\$ 35,467	-9%
Disc Annual	169	118	152	11%	\$ 9,115	\$ 6,370	\$ 6,760	35%
Total Disc Golf	9,707	11,579	11,977	-19%	\$ 41,231	\$ 40,753	\$ 42,227	-2%
Shelters	314	276	298	5%	\$ 70,650	\$ 69,650	\$ 72,770	-3%
Boat Rental	5,228	4,423	5,013	4%	\$ 66,515	\$ 57,711	\$ 64,593	3%
Huron Meadows								
Shelters	22	17	18	20%	\$ 4,400	\$ 3,400	\$ 3,933	12%
Hudson Mills								
Disc Golf Daily	3,060	5,213	5,137	-40%	\$ 9,180	\$ 15,639	\$ 15,410	-40%
Disc Annual	159	152	140	13%	\$ 8,545	\$ 8,160	\$ 7,253	18%
Total Disc Golf	3,219	5,365	5,277	-39%	\$ 17,725	\$ 23,799	\$ 22,663	-22%
Shelters	73	79	78	-6%	\$ 16,000	\$ 15,800	\$ 15,600	3%
Canoe Rental	0	1,219	1,239	-	\$ -	\$ 10,279	\$ 7,223	-
Lower Huron / Willow / Oakwoods								
Disc Golf Daily	597	741	247	142%	\$ 1,791	\$ 2,223	\$ 741	142%
Disc Annual	15	12	4	275%	\$ 785	\$ 660	\$ 220	257%
Total Disc Golf	612	753	251	144%	\$ 2,576	\$ 2,883	\$ 961	168%
Shelters	214	203	196	9%	\$ 47,200	\$ 44,300	\$ 42,775	10%
Lake Erie								
Shelters	42	45	50	-16%	\$ 9,100	\$ 10,000	\$ 11,067	-18%
Boat Launches	8,391	8,287	7,694	9%	\$ -	\$ -	\$ -	-
Marina	924	12	30	3024%	\$ 81,526	\$ 74,888	\$ 76,933	6%

INTERPRETIVE FACILITIES

PARK	Monthly Patrons Served				YTD Patrons Served			
	(total program participants and non-program visitors)				(total program participants and non-program visitors)			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Lake St Clair	10,980	24,349	19,322	-43%	75,461	91,960	81,149	-7%
Wolcott Mill	2,859	3,874	4,720	-39%	19,282	17,843	20,426	-6%
Wolcott Farm	6,519	3,446	7,100	-8%	69,346	22,206	45,009	54%
Stony Creek	18,196	18,960	18,389	-1%	87,024	101,552	95,538	-9%
Eastern Mobile Center	2,015	1,465	1,449	39%	14,160	9,782	9,357	51%
Indian Springs	8,921	10,979	10,128	-12%	37,712	42,706	40,975	-8%
Kens NC	21,190	30,930	27,215	-22%	126,749	137,921	134,791	-6%
Kens Farm	31,877	36,390	26,822	19%	131,830	141,879	135,370	-3%
Western Mobile Center	588	840	815	-28%	5,670	5,820	7,029	-19%
Hudson Mills	3,907	4,099	3,914	0%	19,124	18,828	19,405	-1%
Oakwoods	16,928	15,629	15,765	7%	67,301	75,017	73,977	-9%
Lake Erie	17,638	14,731	14,359	23%	76,417	70,829	65,335	17%
Southern Mobile Center	0	1,233	1,138	-	7,054	5,247	5,573	27%
Totals	141,618	166,925	151,137	-6%	737,130	741,590	733,932	0%

PARK	Monthly Revenue				YTD Revenue			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Lake St Clair	\$ 3,933	\$ 7,331	\$ 6,119	-36%	\$ 14,808	\$ 22,579	\$ 20,129	-26%
Wolcott Mill	\$ 3,336	\$ 2,348	\$ 1,817	84%	\$ 12,426	\$ 8,697	\$ 7,783	60%
Wolcott Farm	\$ 4,624	\$ 7,291	\$ 6,777	-32%	\$ 44,944	\$ 47,279	\$ 43,834	3%
Wagon Rides	\$ 643	\$ 1,395	\$ 1,645	-61%	\$ 5,845	\$ 9,104	\$ 6,156	-5%
Livestock/Produce	\$ 1,250	\$ 1,093	\$ 2,306	-46%	\$ 11,929	\$ 14,146	\$ 13,984	-15%
FARM TOTAL	\$ 6,517	\$ 9,779	\$ 10,728	-39%	\$ 62,718	\$ 70,528	\$ 63,974	-2%
Stony Creek	\$ 3,260	\$ 3,542	\$ 3,782	-14%	\$ 15,624	\$ 16,590	\$ 15,981	-2%
Eastern Mobile Center	\$ 1,500	\$ 300	\$ 217	592%	\$ 11,813	\$ 2,930	\$ 1,187	895%
Indian Springs	\$ 6,808	\$ 10,168	\$ 7,502	-9%	\$ 18,960	\$ 23,090	\$ 21,921	-14%
Kens NC	\$ 3,835	\$ 4,477	\$ 3,987	-4%	\$ 16,612	\$ 18,077	\$ 16,672	0%
Kens Farm	\$ 6,356	\$ 2,857	\$ 6,647	-4%	\$ 80,516	\$ 21,103	\$ 36,677	120%
Wagon Rides	\$ 2,172	\$ 3,077	\$ 1,744	25%	\$ 10,287	\$ 19,797	\$ 15,427	-33%
Livestock/Produce	\$ 60	\$ 108	\$ 453	-87%	\$ 1,664	\$ 3,528	\$ 8,500	-80%
FARM TOTAL	\$ 8,588	\$ 6,042	\$ 8,843	-3%	\$ 92,466	\$ 44,428	\$ 60,605	53%
Western Mobile Center	\$ 688	\$ 350	\$ 708	-3%	\$ 10,825	\$ 10,160	\$ 12,180	-11%
Hudson Mills	\$ 984	\$ 2,868	\$ 1,905	-48%	\$ 8,850	\$ 8,573	\$ 9,044	-2%
Oakwoods	\$ 4,300	\$ 4,842	\$ 3,264	32%	\$ 11,037	\$ 12,646	\$ 10,138	9%
Lake Erie	\$ 1,460	\$ 1,591	\$ 1,020	43%	\$ 6,418	\$ 10,610	\$ 7,685	-16%
Southern Mobile Center	\$ 3,750	\$ 75	\$ 25	14900%	\$ 15,759	\$ 3,887	\$ 1,435	998%
Totals	\$ 48,958	\$ 53,713	\$ 49,918	-2%	\$ 298,316	\$ 252,795	\$ 248,734	20%

BREAKDOWN OF ATTENDANCE	ON-SITE Programs and Attendance				OFF-SITE Programs and Attendance			
	CURRENT YEAR		PREVIOUS YEAR		CURRENT YEAR		PREVIOUS YEAR	
	Programs	Attendance	Programs	Attendance	Programs	Attendance	Programs	Attendance
Lake St Clair	169	4,574	140	4,026	4	124	4	100
Wolcott Mill	8	321	10	567	-	-	1	100
Wolcott Farm	40	2,550	49	1,761	-	-	1	33
Stony Creek	34	846	58	1,515	-	-	11	700
Eastern Mobile Center					37	2,015	9	1,465
Indian Springs	47	2,582	59	2,974	-	-	-	-
Kens NC	52	2,695	68	1,899	-	-	-	-
Kens Farm	181	4,757	103	1,890	-	-	-	-
Western Mobile Center					20	588	8	840
Hudson Mills	13	321	25	599	2	86	-	-
Oakwoods	60	1,017	46	1,118	1	40	-	-
Lake Erie	51	1,227	38	1,087	-	-	-	-
Southern Mobile Center					-	-	9	1,233
Totals	655	20,890	596	17,436	64	2,853	43	4,471
BREAKDOWN OF ATTENDANCE	OTHER VISITORS (Non-programs)							
	Current	Previous						
Lake St Clair	6,282	20,223						
Wolcott Mill	2,538	3,207						
Wolcott Farm	3,969	1,652						
Stony Creek	17,350	16,745						
Indian Springs	6,339	8,005						
Kens NC	18,495	29,031						
Kens Farm	27,120	34,500						
Hudson Mills	3,500	3,500						
Oakwoods	15,871	14,511						
Lake Erie	16,411	13,644						
Totals	117,875	145,018						

"ON-SITE" - Statistics includes both programs offered to the public and programs offered to school and scout groups.

"OFF-SITE" - Statistics includes outreach programs at schools, special events such as local fairs, or outdoor related trade shows.

"OTHER VISITORS" - Represents patrons to interpretive centers who visit to view exhibits, walk trails, and generally just enjoy the outdoors.