

**AMENDED AGENDA**  
**Huron-Clinton Metropolitan Authority**  
**Board of Commission Meeting**  
**May 10, 2018 – 10:30 a.m.**  
**Willow Metropark – Pool Area Food Bar**

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1. Chairman's Statement
2. Public Participation
3. Approval – April 12, 2018 Regular Meeting Minutes
4. Approval – May 10, 2018 Full Agenda

**Consent Agenda**

5. **Approval – May 10, 2018 Consent Agenda**
  - a. Approval – April 2018 Financial Statements and Payment Registers
  - b. Approval – April 2018 Appropriation Adjustments **pg. 1**
  - c. Purchases
    1. Microsoft System Center Security Software, All Locations **pg. 5**
    2. Network Cable Installation, Various Locations **pg. 7**
    3. **Grounds and Golf Course Mowers and Equipment, Various Locations** **pg. 9**
    4. Chipper Truck **pg. 11**
    5. F-550 Truck Cab and Chassis **pg. 13**
    6. Glow Product Resale for Special Events **pg. 15**
  - d. Report – Purchases Over \$10,000 **pg. 17**
  - e. Bids – Invasive Shrub and Vine Control, Various Locations **pg. 19**
  - f. Bids – Roadway Overbanding, Various Locations **pg. 21**

**Regular Agenda**

6. Charter Township of Orion Corridor Improvement Authority Presentation **pg. 23**  
*(Board Vote Following Presentation)*
7. **Closed Session** – For the purpose of discussing material, which is exempt from discussion or disclosure under the Freedom of Information Act, this is a permissible purpose for closed session pursuant to MCL 15.268 Section 8 (h) of the Open Meetings Act.
8. **Reports**
  - A. *Finance Department*
    1. Approval – Pension Plan Actuarial Valuation and Contribution **pg. 25**
    2. Approval – Retiree Health Care Trust Contribution **pg. 73**
  - B. *Administrative Department*
    1. Approval – Motor City Canoe Rentals, Oakwoods Metropark **pg. 123**
  - C. *Planning Department*
    1. Report – Willow and Oakwoods Draft Master Plan **pg. 129**

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**8. Reports**

**D. *Natural Resources Department***

1. Report – 2018 Forest Service Great Lakes Restoration Initiative Grant Application **pg. 185**
2. Bids – Black Creek Shore Fishing Accessible Dock **pg. 191**

**E. *Engineering Department***

1. Approval – Change Order, Stony Landing Boat Launch Replacement, Stony Creek **pg. 195**

**9. Other Business**

1. Employees of the Year / Years of Service Recognition

**10. Staff Leadership Update**

**11. Commissioner Comments**

**12. Motion to Adjourn**

**A Pension Committee and Retiree Health Care Trust Meeting**

will take place prior to the Board meeting

Thursday, May 10, 2018 – **9:00 a.m.**

Willow Metropark – Pool Food Bar Area

The next regular Metroparks Board meeting will take place

**Thursday, June 14, 2018 – 10:30 a.m.**

Lake St. Clair Metropark – Thomas Welsh Activity Center

**HURON-CLINTON METROPOLITAN AUTHORITY**

To: Board of Commissioners  
From: Rebecca Franchock, Supervisor of Budget and Payroll  
Subject: Approval – April Appropriation Adjustments  
Date: May 3, 2018

**Action Requested: Motion to Approve**

That the Board of Commissioners' approve the April 2018 Appropriation Adjustments as recommended by Supervisor of Budget and Payroll Rebecca Franchock.

**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 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 April, \$96,292 represents funds transferred within and between the departments to cover over budget accounts or to move funds to the correct account. \$3,150 was returned to Fund Balance related to an equipment item purchased below budget. In addition, \$4,402 was received from the Foundation, related to increases in expenditure accounts totaling \$3,240; resulting in a \$1,162 net positive affect on Fund Balance. Finally, there were various adjustments to tax receivables resulting in a \$23,238 net increase.

The net impact on Fund Balance is an increase of \$27,550.

**Attachment: April 2018 Appropriation Adjustments**





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

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**Expense Accounts**

	<u>Location</u>	<u>Increase</u>	<u>Decrease</u>	<u>Difference</u>
<b>Capital</b>	Kensington	\$ 10,000	\$ -	\$ 10,000
	Stony Creek	-	5,800	(5,800)
	<b>Total</b>	<b>\$ 10,000</b>	<b>\$ 5,800</b>	<b>\$ 4,200</b>
<b>Major Maintenance</b>	Lower Huron	\$ 17,311	\$ 17,311	\$ -
	Stony Creek	20,531	20,531	-
	<b>Total</b>	<b>\$ 37,842</b>	<b>\$ 37,842</b>	<b>\$ -</b>
<b>Operations</b>	Lake St. Clair	\$ 200	\$ 200	\$ -
	Kensington	8,545	18,545	(10,000)
	Lower Huron	775	775	-
	Hudson Mills	545	545	-
	Stony Creek	3,550	900	2,650
	Wolcott Mill	5,100	5,100	-
	<b>Total</b>	<b>\$ 18,715</b>	<b>\$ 26,065</b>	<b>\$ (7,350)</b>
<b>Administrative Office</b>	Administrative	\$ 23,200	\$ 23,200	\$ -
	<b>Total Expense</b>	<b>\$ 89,757</b>	<b>\$ 92,907</b>	<b>\$ (3,150)</b>

**April 2018 Foundation/Donation Transfer Summary**

		<u>Expenditure Increase</u>	<u>Revenue Increase</u>	<u>Net</u>
<b>Operations</b>	Kensington	\$ -	\$ 500	\$ (500)
	Hudson Mills	2,750	2,500	250
	Wolcott Mill	490	1,402	(912)
	<b>Total</b>	<b>\$ 3,240</b>	<b>\$ 4,402</b>	<b>\$ (1,162)</b>

**April 2018 Net Tax Revenue Budget Adjustments**

		<u>Expenditure Increase</u>	<u>Revenue Increase</u>	<u>Net</u>
<b>Tax Revenue</b>	Current	\$ -	\$ 12,682	\$ (12,682)
	Prior	-	10,556	(10,556)
	<b>Total</b>	<b>\$ -</b>	<b>\$ 23,238</b>	<b>\$ (23,238)</b>





# HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Heidi Dziak, Senior Buyer  
 Project Title: Purchase – Microsoft System Center Security Software  
 Location: All Locations  
 Date: May 3, 2018

## Action Requested: Motion to Approve

That the Board of Commissioners' approve the purchase of Microsoft System Center Security Software in the amount of \$60,048.60 from CDW Government, The Metroparks partner for the Microsoft Enterprise Agreement entered into in March 2017, as recommended by Senior Buyer Heidi Dziak and staff.

**Fiscal Impact:** This is a 2018 Board approved purchase in the amount of \$60,048.60. As the purchase amount is the same as the budgeted amount, the purchase will have no impact on the Fund Balance.

**Scope of Work:** Provide Microsoft System Center Security Software for 300 desktops, servers and laptops at all locations throughout the Metroparks.

**Background:** The Microsoft System Center Security Software is necessary to protect Metroparks computer hardware and once purchased has a lifespan equal to the life of the Microsoft software used to operate its IT environment. All software is priced by Microsoft and offered through vendor providers in Microsoft Enterprise Agreements at the same cost.

<u>Vendor</u>	<u>Location</u>	<u>Price</u>
CDW	Vernon Hills, IL	\$60,048.60
Insight	Tempe, AZ	\$60,040.52
Dell	Round Rock, TX	\$59,754.80





# HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Heidi Dziak, Senior Buyer  
 Project No: RFP 2018-003  
 Project Title: Network Cable Installation Services  
 Location: All Locations  
 Date: May 3, 2018

## Action Requested: Motion to Approve

That the Board of Commissioners' award RFP 2018-003 to Bayview Technologies, Telecom Technicians, Thumb Communication Services and Enertron for a contract term of one year with up to four, one-year renewal options to provide network cable installation services as recommended by Senior Buyer Heidi Dziak and staff.

**Fiscal Impact:** Funds will come from the Board approved 2018 budget; however, no projects are planned at this time.

**Scope of Work:** Provide and install network cable at various locations throughout the Metroparks as required and scheduled by the Information Technology Department.

**Background:** The RFP was competitively bid and the RFP was posted on the Michigan Intergovernmental Trade Network (MITN) site, which provided notice of the solicitation 129 vendors, of which 58 downloaded the RFP. In addition, the RFP was emailed to six vendors.

Staff evaluated the proposals based on the vendor's qualifications, related experience, capacity, understanding of the project, methodology and approach, references and price, which included labor, material and travel fees when charged by vendors. The proposals were then ranked highest to lowest as follows:

Vendor	Location	Eval. Total Score	WkDay Labor Rate	Avg Material Cost	Avg Travel Fee	1 Hr Plus Avg Mat'l Cost
Bayview Technologies LLC	Redford	917	\$51.34	\$13.26	\$ 0.00	\$ 64.60
Telecom Technicians Inc	Sterling Heights	870	\$70.69	\$ 8.37	\$ 0.00	\$ 79.06
Thumb Communication	Lapeer	856	\$55.00	\$ 9.00	\$34.00	\$ 98.00
Enertron LLC	Clinton Twp	852	\$60.00	\$18.64	\$ 0.00	\$ 78.64
Western Tel-Com Inc	Livonia	800	\$78.00	\$13.55	\$78.00	\$169.55
Allcomm Inc	Commerce Twp	798	\$50.00	\$13.09	\$65.00	\$128.09
The DataCom Group	Holt	769	\$50.00	\$18.12	\$73.00	\$141.12
PCT Security	Clinton Twp	745	\$60.00	\$11.19	\$24.80	\$ 95.99

AT&T (was not responsive nor responsible)





# HURON-CLINTON METROPOLITAN AUTHORITY

**AMENDED**
**(changes in red)**

To: Board of Commissioners  
 From: Heidi Dziak, Senior Buyer  
 Project No: ITB #2018-007  
 Project Title: Purchase – Grounds and Golf Course Mowers and Equipment  
 Location: Huron Meadows, Lake Erie, Lower Huron/Willow/Oakwoods, Stony Creek Metroparks  
 Date: May 3, 2018

## Action Requested: Motion to Approve

That the Board of Commissioners' (1) approve ITB 2018-007 to the low responsive, responsible bidder, **Spartan Distributors** of **Auburn Hills**, Michigan for the purchase of six (6) new mowers in the total amount of **\$370,022.16**; and (2) approve the transfer of the remaining **\$8,977.84** budgeted amount to the Fund Balance as recommended by Senior Buyer Heidi Dziak and staff.

**Fiscal Impact:** Funds will come from the Board approved 2018 Capital Equipment Budget, which allowed \$379,000 for the equipment purchases listed below. The **\$370,022.16** for the cost of the equipment is **\$8,977.84** under budget and will have a positive impact on the Fund Balance.

**Scope of Work:** Furnish and deliver six (6) new pieces of equipment as follows:

<u>Description / Location / Unit Replaced</u>	<u>Cost</u>	<u>Budget</u>
<b><u>Huron Meadows</u></b>		
1. <b>Toro Groundsmaster 4700-D</b> <ul style="list-style-type: none"> <li>Replaces #1364: 2007 Toro Groundsmaster 4700-D with 4881 hours which will be sold at auction.</li> </ul>	<b>\$ 67,357.74</b>	\$ 64,000.00
<b><u>Lake Erie</u></b>		
2. <b>Toro Groundsmaster 4000-D 11-foot Rotary Mower</b> <ul style="list-style-type: none"> <li>Replaces #1008: 2007 Toro Groundsmaster with 3714 hours which will be sold at auction.</li> </ul>	<b>\$ 59,702.29</b>	\$ 60,000.00
3. <b>Toro Groundsmaster 4300-D</b> <ul style="list-style-type: none"> <li>Replaces #843: 2006 Toro Groundsmaster with 4050 hours which will be sold at auction.</li> </ul>	<b>\$ 47,351.13</b>	\$ 63,000.00
<b><u>Lower Huron/Willow/Oakwoods</u></b>		
4. <b>Toro Groundsmaster 5900</b> <ul style="list-style-type: none"> <li>Replaces #1775: 2008 Toro Mower 580D with 4423 hours which will be sold at auction.</li> </ul>	<b>\$ 83,410.50</b>	\$ 77,000.00
5. <b>Toro Reelmaster 5510-D</b> <ul style="list-style-type: none"> <li>Replaces #1816: 2002 JAC Fairway Mower with 3291 hours which will be sold at auction.</li> </ul>	<b>\$ 54,377.80</b>	\$ 59,000.00
<b><u>Stony Creek</u></b>		
6. <b>Toro Groundsmaster 4000-D 11 ft Rotary Mower</b> <ul style="list-style-type: none"> <li>Replaces #887: 2013 Toro Groundsmaster 4000-D with 2614 hours which will be transferred to Wolcott Mill to Replace <b>#1759 2007 Toro 4000-D with 4459 hours</b> which was sold at auction in 2017.</li> </ul>	<b>\$ 57,822.70</b>	<b>\$ 56,000.00</b>
<b>TOTAL</b>	<b>\$370,022.16</b>	<b>\$379,000.00</b>

## Equipment Purchases

### Page 2

**Background:** The proposed purchase of the equipment was competitively bid and posted on the Michigan Intergovernmental Trade Network (MITN) site, which provided notice of the solicitation to 157 vendors, of which 16 vendors downloaded the ITB.

The Metroparks has had years of experience with Toro mowers and the equipment has been reliable and relatively easy to maintain. Parts have been readily available and repairs, when necessary, have been completed in a timely fashion with loaner equipment provided to the Metroparks. Given the dependability of the equipment and service, the majority of mowers are Toro equipment. Maintenance garages throughout the Metroparks have accessories that can be shared among the Toro mowers such as reels and blades, and a supply of parts and supplies such as filters and belts for maintaining the equipment. The Metroparks operates with a lean fleet of equipment and does not have extra mowers to use when equipment fails, which makes keeping and maintaining tried and tested mowers extremely important.

<u>Item by Vendor</u>	<u>Location</u>	<u>Price</u>
<b>Toro Groundsmaster 4000-D (Configuration 1)</b>		
• Spartan Distributors, Inc. <ul style="list-style-type: none"><li>o offering Toro</li></ul>	Auburn Hills, MI	\$59,702.29*
• J.W.Turf <ul style="list-style-type: none"><li>o offering John Deere 1600 Turbo Series III</li></ul>	Elgin, IL/Wixom, MI	\$51,311.65
• Textron Golf <ul style="list-style-type: none"><li>o offering Jacobsen HR600</li></ul>	Novi, MI	\$50,778.65
<b>Toro Groundsmaster 4000-D (Configuration 2)</b>		
• Spartan Distributors, Inc. <ul style="list-style-type: none"><li>o offering Toro</li></ul>	Auburn Hills, MI	\$57,822.70*
• J.W.Turf <ul style="list-style-type: none"><li>o offering John Deere 1600 Turbo Series III</li></ul>	Elgin, IL/Wixom, MI	\$50,194.68
• Textron Golf <ul style="list-style-type: none"><li>o offering Jacobsen HR600</li></ul>	Novi, MI	\$50,472.65
<b>Toro Groundsmaster 4300-D</b>		
• Spartan Distributors, Inc. <ul style="list-style-type: none"><li>o offering Toro</li></ul>	Auburn Hills, MI	\$47,351.13*
• J.W.Turf <ul style="list-style-type: none"><li>o offering John Deere 8800 Terrain Cut</li></ul>	Elgin, IL/Wixom, MI	\$50,569.85
• Textron Golf <ul style="list-style-type: none"><li>o offering Jacobsen AR522</li></ul>	Novi, MI	\$41,838.60
<b>Toro Groundsmaster 4700-D 12.5-foot Mower</b>		
• Spartan Distributors, Inc. <ul style="list-style-type: none"><li>o offering Toro</li></ul>	Auburn Hills, MI	\$67,357.74*
• J.W.Turf <ul style="list-style-type: none"><li>o offering John Deere 9009A (9-foot Mower)</li></ul>	Elgin, IL/Wixom, MI	\$60,450.89
• Textron Golf <ul style="list-style-type: none"><li>o offering Jacobsen AR722 (10.3-foot Mower)</li></ul>	Novi, MI	\$51,141.60
<b>Toro Groundsmaster 5510-D</b>		
• Spartan Distributors, Inc. <ul style="list-style-type: none"><li>o offering Toro</li></ul>	Auburn Hills, MI	\$54,377.80*
• J.W.Turf <ul style="list-style-type: none"><li>o offering John Deere 7500A</li></ul>	Elgin, IL/Wixom, MI	\$50,735.25
• Textron Golf <ul style="list-style-type: none"><li>o offering Jacobsen LF570</li></ul>	Novi, MI	\$47,400.15



**Toro Groundsmaster 5900**

- |                                     |                  |                     |
|-------------------------------------|------------------|---------------------|
| • <b>Spartan Distributors, Inc.</b> | Auburn Hills, MI | <b>\$83,410.50*</b> |
| ◦ <i>offering Toro</i>              |                  |                     |
| • Textron Golf                      | Novi, MI         | \$69,006.36         |
| ◦ <i>offering Jacobsen HR800</i>    |                  |                     |

*(\*) indicates recommended award*





# HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Heidi Dziak, Senior Buyer  
 Project No: RFP 2018-023  
 Project Title: Purchase – Chipper Truck  
 Location: All Locations  
 Date: May 3, 2018

## Action Requested: Motion to Approve

That the Board of Commissioners' (1) approve RFP 2018-023 to the low responsive, responsible bidder, Wolverine Freightliner – Westside of Ypsilanti, Michigan for the purchase of one new Chipper Truck in the amount of \$101,926; and (2) approve the transfer of the remaining budgeted amount of \$38,074 to the Fund Balance as recommended by Senior Buyer Heidi Dziak and staff.

**Fiscal Impact:** This purchase was included in the 2018 Board approved capital equipment budget in the amount of \$140,000. This purchase is under budget and will have a positive net impact on the Fund Balance in the amount of \$38,074.

**Scope of Work:** Furnish and deliver one (1) Chipper Truck.

**Background:** The RFP was competitively bid and posted on the Michigan Intergovernmental Trade Network (MITN) site, which provided notice to vendors, of which 13 vendors downloaded the RFP. Three proposals were received in response to RFP 2018-023 and were found to match the specifications.

The new equipment replaces unit 34, a 2003 Sterling chipper truck with 40,095 miles, electrical problems and a rusted body, which will be sold at auction.

<u>Vendor</u>	<u>Location</u>	<u>Price</u>
Wolverine Freightliner – Westside	Ypsilanti, MI	<b>\$101,926.00*</b>
Tri-County International Trucks, Inc.	Dearborn, MI	
• Bid #1 with up fitting from Truck & Trailer Specialties		\$113,612.00
• Bid #2 with up fitting from NBC Truck Equipment		\$114,815.00

(\*) indicated recommended award





# HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Heidi Dziak, Senior Buyer  
 Project No: ITB 2018-024  
 Project Title: Purchase – Three (3) Cab and Chassis Trucks  
 Location: Lake St. Clair, Stony Creek and Kensington Metroparks  
 Date: May 3, 2018

## Action Requested: Motion to Approve

That the Board of Commissioners approve ITB 2018-214 to the low responsive, responsible bidder Signature Ford of Owosso, Michigan for the purchase of three (3) new 2018 four-wheel drive Ford F-550 cab and chassis trucks for a total amount of \$111,387 as recommended by Senior Buyer Heidi Dziak and staff.

**Fiscal Impact:** This is a Board approved 2018 Capital Equipment purchase, which was budgeted in the amount totaling \$236,500.00 for the purchase of three cab and chassis trucks and work bodies. The purchase of the cab and chassis trucks will total \$111,387 and the \$125,113 balance will be used for the purchase of the work bodies, which will be brought to the Board in June for approval.

**Scope of Work:** Furnish and deliver three cab and chassis trucks to replace worn and aging equipment. Vehicles being replaced have one or more of the following conditions: (1) 10 or more years old; (2) Significant amount of rust; (3) 100,000 or more miles; and (4) Major mechanical problems.

Description / Location / Unit Replaced	Cab and Chassis Cost	Cab, Chassis and Body Budget
<b><u>Kensington</u></b>		
1. 2018 Ford F-550 Regular Cab Chassis, 4x4	\$36,794.00	\$61,000.00
• Replaces #1: 2008 Ford F450 maintenance truck with 75,004 miles, rust and a shifting maintenance box, will be sold at auction.		
<b><u>Lake St. Clair</u></b>		
2. 2018 Ford F-550 Regular Cab Chassis, 4x4	\$37,614.00	\$107,500.00
• Replaces #804: 2001 International garbage truck, with 16,623 miles, will be transferred to Kensington.		
<b><u>Stony Creek</u></b>		
3. 2018 Ford F-550 Regular Cab Chassis, 4x4	\$36,979.00	\$68,000.00
• Replaces #355: 2000 GMC dump truck with 61,558 miles and rust, will be sold at auction.		
<b>TOTAL</b>	<b>\$111,387.00</b>	<b>\$236,500.00</b>

**Purchase – Cab Chassis Trucks**  
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**Background:** The proposed purchase of the trucks was competitively bid and posted on the Michigan Intergovernmental Trade Network (MITN) site, which provided notice of the solicitation to 71 vendors, from which 15 vendors downloaded the ITB.

<u>Vendor</u>	<u>Location</u>	<u>Total Price for all Cab and Chassis Trucks</u>
Signature Ford*	Owosso, MI	\$111,387.00
Jorgensen Ford Sales	Detroit, MI	\$112,000.00

*(\*) indicated recommended award*



# HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Heidi Dziak, Senior Buyer  
 Project No: RFP 2018-019  
 Project Title: Glow Products Resale  
 Location: Hudson Mills, Kensington, Lake Erie, Stony Creek and Willow Metroparks  
 Date: May 3, 2018

## Action Requested: Motion to Approve

That the Board of Commissioners' award RFP 2018-019 to Gloworks, Inc. of Warren, Michigan for a contract term of one year with up to four, one-year renewal options to sell glow products at Metroparks firework events for which Gloworks, Inc. will pay the Metroparks a \$1,300 commission fee per fireworks event as recommended by Senior Buyer Heidi Dziak and staff.

**Fiscal Impact:** The vendor will pay a \$1,300 flat commission fee per each of the five fireworks events, for a total anticipated commission of \$6,500. The commission will be waived in the event a firework show is cancelled due to inclement weather and not rescheduled.

**Scope of Work:** The vendor will sell a variety of glow products and novelty items at Metroparks firework events with pricing starting as low as \$5. The vendors will be clearly identifiable for Metroparks staff.

**Background:** The proposed opportunity to sell glow products was competitively bid and posted on the Michigan Intergovernmental Trade Network (MITN) site, which provided notice of the solicitation to 46 vendors, of which five vendors downloaded the RFP. In addition, staff also email the RFP notice to three vendors.

In 2017, the Metroparks earned a total commission of \$6,007.20, which was based on a flat commission of \$1,000 per event plus 20 percent of gross sales over \$4,000. Seven fireworks events were scheduled for 2017, however one was cancelled due to rain and not rescheduled which left six events in which the vendor could sell products.

<u>Vendor</u>	<u>Location</u>	<u>Commission to Metroparks</u>
Gloworks Inc.	Warren	\$1300 per show
Global Glow Toys LLC	St. Clair Shores	\$875 per show plus 20% of gross sales over \$4,375







# HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Amy McMillan, Director  
 Project Title: Update – Purchases over \$10,000.00  
 Date: May 3, 2018

## Action Requested: Motion to Approve

That the Board of Commissioners' receive and file the update 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>
1. Fraser Mechanical	Condenser Replacement (walk-in cooler) Eastwood Beach Stony Creek Metropark	\$18,531.00
2. Control Dynamics, Inc.	Pump and Motor Repairs Lake Erie Golf Course	\$12,350.00
3. Johnson and Anderson	Squirt Zone Repairs Lake St. Clair Metropark	\$11,450.00
4. Fiori Concrete	Concrete Work for Freezer Turtle Cove Lower Huron Metropark	\$12,894.55

*The vendors were selected consistent with the purchasing policy.*





# HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Ryan Colliton, Manager of Natural Resources and Regulatory Compliance  
 Projects: ITB 2018-026-035  
 Project Title: Bids – Invasive Shrub Control  
 Location: Delhi and Dexter-Huron, Hudson Mills, Huron Meadows, Indian Springs, Kensington, Lower Huron, Oakwoods, Willow, Stony Creek and Wolcott Metroparks  
 Date: May 3, 2018

## Action Requested: Motion to Approve

That the Board of Commissioners' award ITB 2018-026-035 to the low responsive, responsible bidders for invasive shrub and swallow-wort control as indicated for a total not to exceed amount of \$280,000 as recommended by Manager of Natural Resources and Regulatory Compliance Ryan Colliton and staff.

- Award a contract to GEI Consultants of Allendale, Michigan for an amount not-to-exceed \$155,000 for invasive shrub control at Lower Huron, Oakwoods, Willow, Stony Creek and Wolcott Metroparks and for invasive swallow-wort control at Indian Springs Metropark.
- Award a contract to Plantwise LLC of Ann Arbor, Michigan for an amount not-to-exceed \$55,000 for invasive shrub control at Delhi-Dexter-Huron and Huron Meadows Metroparks.
- Award a contract to Wildtype Design Native Plants and Seed of Mason, Michigan for an amount not-to-exceed \$70,000 for invasive shrub control at Hudson Mills and Kensington Metroparks.

**Fiscal Impact:** A total of \$280,000.00 is available in the Board approved 2018 budget.

**Scope of Work:** Provide invasive control for shrubs and swallow-wart plants.

**Background:** The ITBs were competitively bid posted on the Michigan Intergovernmental Trade Network (MITN) site, which provided notice of the solicitations to 14 vendors, of which 10 downloaded the ITBs. Staff received bids from four vendors that offered the following hourly rates per Metropark:

Location	Wildtype Design	PLM Lake & Land Management	GEI Consultants	Plantwise LLC
Delhi-Dexter-Huron	\$70.50	No Bid	\$72.00	<b>\$70.00*</b>
Hudson Mills	<b>\$68.80*</b>	No Bid	\$72.00	\$70.00
Huron Meadows	\$67.80	No Bid	\$72.00	<b>\$66.00*</b>
Indian Springs	\$78.00	\$130.00	<b>\$72.00*</b>	\$76.00
Kensington	<b>\$68.00*</b>	No Bid	\$72.00	\$72.00
Lower Huron	\$79.00	No Bid	<b>\$72.00*</b>	\$73.00
Oakwoods	\$80.00	No Bid	<b>\$72.00*</b>	\$74.00
Stony Creek	\$82.00	No Bid	<b>\$72.00*</b>	\$95.00
Willow	No BID	No Bid	<b>\$72.00*</b>	\$74.00
Wolcott Mill	\$82.00	No Bid	<b>\$72.00*</b>	\$95.00

(\*) indicated recommended award





# HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Mike Henkel, Manager of Engineering  
 Project No: 700-18-020  
 Project Title: Bids – Roadway Overbanding  
 Project Type: Major Maintenance  
 Location: Lake St. Clair, Stony Creek, Dexter-Huron, Indian Springs, Kensington and Oakwoods  
 Date: May 3, 2018

Bids Opened: April 10, 2018 at 2:00 p.m.

## Action Requested: Motion to Approve

That the Board of Commissioners' award Contract No. 700-18-020 to the low responsive, responsible bidder, T&M asphalt Paving, Inc. of Milford, Michigan, in the amount of \$61,028 as recommended by Manager of Engineering Mike Henkel and staff.

**Fiscal Impact:** The project is under budget. In the 2018 budget \$51,000 was budgeted for roadway/lot crack-filling and \$25,000 for path crack-filling. Previously, \$7,200 was used for path crack-filling leaving a balance of \$7,772 to use for other projects.

**Scope of Work:** Work includes the overband crack sealing of roadways along multiple routes throughout the parks. The project was bid on a per mile basis.

**Background:** The project is part of the annual preventative maintenance program to extend the life of the existing pavement surfaces. Crack sealing extends the life of the surface by mitigating water intrusion. This is particularly important during the freeze and thaw during the winter months due to the cold weather and salting roads.

<u>Contractor</u>	<u>City</u>	<u>Amount</u>
T & M Asphalt Sealcoat, Inc.	Milford	\$61,028.00
Highway Maintenance & Construction	Romulus	\$63,702.93
Michigan Joint Sealing, Inc.	Farmington Hills	\$66,700.00
Wolverine Sealcoating LLC	Jackson	\$66,960.00
Carr's Outdoor Services, Inc.	Canton	\$91,380.00
Scodeller Construction, Inc.	Wixom	\$96,620.00

### Budget Amount for Contract Services and Administration:

Roadway/Lot Crack Filling	\$ 51,000.00
Path Crack Filling	<u>\$ 10,028.00</u>
Work Order Amount	\$ 61,028.00
Contract Administration	<u>\$ 2,000.00</u>
Total Proposed Work Order Amount	\$ 63,028.00

*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: Amy McMillan, Director  
Subject: Charter Township of Orion Corridor Improvement Authority Presentation  
Date: May 3, 2018

Representatives from Oakland County and Orion Township will be at the May 10 meeting to give a presentation on the Orion Corridor Improvement Authority (CIA); after which, Board members will discuss the issue and act on the CIA.







# HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Rebecca L. Franchock, Pension Trustee  
 Subject: Approval – 2018 Pension Plan Actuarial Valuation and Contribution  
 Date: May 3, 2018

## **Action Requested: Motion to Receive and File Report / Approve Contribution**

That the Board of Commissioners' (1) receive and file the Annual Actuarial Valuation and GASB Statement No. 67 and No. 68 Report; and (2) approve of the 2018 Pension Contribution at the budgeted amount of \$3 million as recommended by the Pension Committee and staff.

**Fiscal Impact:** None.

**Background:** It is anticipated that the Pension Committee will review this report and recommend approval of the contribution to the full Board at its meeting prior to the May meeting.

The actuarial valuation of the Authority's Pension Plan as of Dec. 31, 2015 was performed by Gabriel, Roeder, Smith & Company (GRS). In order to remain in compliance with Governmental Accounting Standards Board (GASB) Statement No. 67 and No. 68 additional work was completed. The reporting related to these statements is included in Appendix I. The valuation results will be reviewed by the Pension Committee at their May 10, 2018 meeting prior to the Board meeting.

The actuarial valuation process calculates the required contribution to adequately fund the Authority's pension costs for the 135 active participants for the 2018 Pension Plan year. Based on an update of employee census data for 2017, wage/service levels, plan benefits and asset values, GRS is recommending a \$2,655,734 contribution. This represents a decrease of \$340,474 (11.4 percent) from the recommended contribution for the 12-month period ending Dec. 31, 2016 of \$2,717,265. With this contribution the Funded Ratio will increase to 74.7 percent, an improvement of 1.5 percent.

During development of the 2018 budget, staff anticipated that the annual required contribution would be \$3 million. In order to bolster the percentage funded ratio and leverage Metroparks assets by taking advantage of the investment options available to the pension system, staff is recommending that the full budgeted amount be contributed to the pension, providing \$344,266 of additional funding, which will result in a Funded Ratio of 75.1 percent.

In addition, active participants in the plan contribute 1 percent of covered wages to the Pension Plan, which amounts to approximately \$95,000 annually. Historically, the Metroparks have not counted this amount as part of the annual required contribution and have instead treated it as additional funding.

**Attachment: Metroparks Employees' Retirement Plan Annual Actuarial Valuation/GASB 67/GASB 68**



# Huron-Clinton Metropolitan Authority Employees' Retirement Plan

Annual Actuarial Valuation and GASB Statements No. 67  
and No. 68 Plan Reporting and Accounting Schedules  
December 31, 2017





April 3, 2018

Huron-Clinton Metropolitan Authority  
Employees' Retirement Plan  
Brighton, Michigan

**Re: Huron-Clinton Metropolitan Authority Employees' Retirement Plan Actuarial Valuation  
as of December 31, 2017**

Ladies and Gentlemen:

The results of the December 31, 2017 Annual Actuarial Valuation of the Huron-Clinton Metropolitan Authority Employees' Retirement Plan are presented in this report.

This report was prepared at the request of the Authority and is intended for use by the Authority and those designated or approved by the Authority. This report may be provided to parties other than the Authority only in its entirety and only with the permission of the Authority. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation is to measure the Plan's funding progress, to determine the employer contribution rate for the fiscal year ending December 31, 2018, and to provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) Statements. This report should not be relied upon for any other purposes.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

James D. Anderson and Laura Frankowiak are experienced in performing valuations for public retirement systems, are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Please see the following page for additional disclosures required by the Actuarial Standards of Practice.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Huron-Clinton Metropolitan Authority Employees' Retirement Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Respectfully submitted,



James D. Anderson, FSA, EA, FCA, MAAA



Laura Frankowiak, ASA, MAAA

JDA/LF:sc

## Additional Disclosures Required by Actuarial Standards of Practice

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

This report should not be relied on for any purpose other than the purpose described in the primary communication. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The signing actuaries are independent of the plan sponsor.

The valuation was based upon information furnished by the Authority, concerning Plan benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Authority.

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## Appendix I

## Accounting Disclosures

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## A. Basic Data

Data necessary for the valuation was provided to us by the Authority for employees who are covered under the Plan as of December 31, 2017. Table 4 sets forth a distribution of the 135 active employees. In addition, there are 165 retirees and beneficiaries and 18 terminated vested employees included in this valuation. This compares with 144 active participants, 156 retirees and beneficiaries, and 17 terminated vested employees valued in the previous valuation of December 31, 2016.

## B. Plan Provisions

This valuation is based on the provisions of the Plan as of December 31, 2017 which are summarized in Table 5.

Plan funding is provided through a combination of Authority contributions and income from invested assets. The December 31, 2017 actuarial value of assets is developed in Table 2. The actuarial value of assets is \$58,900,828 as of the valuation date.

## C. Valuation Results

As indicated above, the more detailed results of our valuation are presented in Table 1. In Section A of the table, we show the number of covered employees, total annual earnings, average annual pension for current retirees and beneficiaries, and actuarial accrued liability based on the Plan in effect on December 31, 2017.

Section B contains the calculation of the recommended contribution on a closed 30-year funding basis. This funding basis amortizes the effect of Plan improvements, gains and losses, and changes in assumptions over 30 years with 23.75 years remaining as of the valuation date. Gains and losses are not separately amortized. The Increase in liability associated with the 2013 Early Retirement Window was amortized over 5 years. The recommended contribution based on the December 31, 2017 valuation is \$2,655,734, a decrease of \$340,474 from the 2016 valuation result.

One way in which the Plan's experience impacts the cost is the effect on the unfunded accrued liability. This is referred to as the experience gain or loss for the year. There was a net gain to the plan of \$64,318, as shown in Table 3. The primary source of the gain was due to lower than expected pay increases for continuing active members. Partially offsetting the gain were losses due to retirees living longer than expected and prior year asset losses continuing to be phased in.

For the plan year ending December 31, 2017, the return on the market value of assets was 13.58%. Asset gains or losses are not recognized immediately in the funding value of assets, but rather are spread equally over a 5-year period.

## C. Valuation Results (Concluded)

Table 7 has been prepared to show a comparison of the December 31, 2017 valuation results with the results from the prior valuation. The recommended contribution developed in the December 31, 2016 valuation for the Fiscal Year ending December 31, 2017 was \$2,996,208. The recommended contribution for the Fiscal Year ending December 31, 2018 equals \$2,655,734. The funded status has increased from 73.20% last year to 74.71%.

The Pension Committee of the Huron-Clinton Metropolitan Authority Employees' Retirement Plan confirms that the Plan provides for payment of the required employer contribution as described in Section 20m of Michigan Public Act No. 728.

We also note that GASB Statement Nos. 67 and 68 are effective for the fiscal years beginning after June 15, 2013, and June 15, 2014. This information is shown in the Appendix of this report.

## D. Actuarial Disclosure

The computed contribution shown on page 3 may be considered as a minimum contribution rate that complies with the Authority's funding objective. Users of this report should be aware that contributions made at the rate do not guarantee benefit security. Given the importance of benefit security to any retirement system, we suggest that contributions to the System in excess of those presented in this report be considered.

# Table 1

## Summary of Results

### A. Basic Data, Unfunded Actuarial Accrued Liability and Annual Normal Cost as of December 31, 2017

1. Active Participants	
(a) Number	135
(b) Total Annual Earnings	\$ 9,259,465
(c) Average Annual Earnings	\$ 68,589
2. Retired Participants	
(a) Number	165
(b) Average Annual Pension	\$ 25,957
3. Actuarial Accrued Liability	
(a) Active Participants	\$32,363,334
(b) Retirees	45,149,000
(c) Terminated with Vested Rights	1,331,856
(d) Total	<u>78,844,190</u>
4. Actuarial Value of Assets as of December 31, 2017*	\$58,900,828
5. Unfunded Actuarial Accrued Liability on December 31, 2017	\$19,943,362
(a) Portion due to 2012 Early Retirement Window^	0
(b) Portion due to 2013 Early Retirement Window	40,495
(c) Remaining portion	19,902,867
6. Funded Ratio	74.7%

### B. Determination of Recommended Contribution

1. Annual Normal Cost	\$ 966,866
2. Amortization Payment	\$ 1,688,868
(a) Portion due to 2012 Early Retirement Window	0
(b) Portion due to 2013 Early Retirement Window	39,140
(c) Remaining portion (23.75 years)	\$ 1,649,728
3. Recommended Contribution **	\$ 2,655,734

\* See Table 2.

\*\* Please note that this is the total recommended contribution and should be reduced by any expected member contributions to determine the amount of employer contribution.

^ The increased liability due to the 2012 Early Retirement Window has been fully recognized.

**Table 2**  
**Development of Actuarial Value of Assets**

Year Ended December 31:	2016	2017	2018	2019	2020	2021
A. Funding Value Beginning of Year	\$54,429,972	\$56,383,307				
B. Market Value End of Year	53,816,221	59,897,338				
C. Market Value Beginning of Year	51,241,923	53,816,221				
D. Non-Investment Net Cash Flow	(1,158,803)	(1,150,391)				
E. Investment Income						
E1. Market Total: B - C - D	3,733,101	7,231,508				
E2. Assumed Rate of Investment Return	7.25%	6.75%				
E3. Amount for Immediate Recognition	3,904,166	3,767,048				
E4. Amount for Phased-in Recognition: E1 - E3	(171,065)	3,464,460				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20 x E4	(34,213)	692,892				
F2. First Prior Year	(914,605)	(34,213)	\$ 692,892			
F3. Second Prior Year	156,790	(914,605)	(34,213)	\$ 692,892		
F4. Third Prior Year	0	156,790	(914,605)	(34,213)	\$ 692,892	
F5. Fourth Prior Year	0	0	156,792	(914,603)	(34,216)	\$ 692,892
F6. Total Recognized Investment Gain	(792,028)	(99,136)	(99,134)	(255,924)	658,676	692,892
G. Funding Value End of Year: A + D + E3 + F6	56,383,307	58,900,828				
H. Difference Between Funding & Market Value	(2,567,086)	996,510	1,095,644	1,351,568	692,892	0
I. Recognized Funding Value Rate of Return	5.78 %	6.57 %				
J. Recognized Market Value Rate of Return	7.37%	13.58%				

### Table 3

## Derivation of Actuarial Gain (Loss)

Actual experience will usually not coincide exactly with assumed experience. It is expected that gains and losses will cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below.

Year Ended December 31:	2017
(1) UAAL* at start of year (December 31, 2016)	\$ 20,646,238
(2) Employer normal cost from last valuation	1,030,377
(3) Actual employer contributions	2,996,209
(4) Interest accrual	1,327,274
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	20,007,680
(6) Change from benefit improvements / Early Retirement Window	0
(7) Change from revised actuarial assumptions/methods	0
(8) Expected UAAL after changes: (5) + (6) + (7)	20,007,680
(9) Actual UAAL at end of year (December 31, 2017)	19,943,362
(10) Gain (loss): (8) - (9)	64,318
(11) Gain (loss) as percent of actuarial accrued liabilities at start of year (\$77,029,545)	0.1%

\* *Unfunded actuarial accrued liability.*

**Table 4**  
**Distribution of Participants as of December 31, 2017**

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34			2					2	\$ 126,880
35-39			6					6	437,879
40-44		1	8	8	2			19	1,301,598
45-49		2	5	11	7	3		28	1,941,626
50-54			1	6	7	9	1	24	1,599,576
55-59		4	2	7	2	11	8	34	2,235,383
60		1		1	2	1	3	8	612,594
61			1	1	1	1	2	6	433,389
62		1		1			1	3	233,227
63						2		2	143,499
66						1		1	68,286
67			1					1	62,629
68							1	1	62,899
<b>Totals</b>	<b>0</b>	<b>9</b>	<b>26</b>	<b>35</b>	<b>21</b>	<b>28</b>	<b>16</b>	<b>135</b>	<b>\$9,259,465</b>

Average Age: 51.77

Average Age at Hire: 31.27

Approximate No. Fully Vested: 126

Percentage of Females in Total: 24%

Average Projected Retirement Age: 61.7

## Table 4

### Distribution of Participants as of December 31, 2017 (Concluded)

#### A. Retired Participants (and Beneficiaries)

<u>Age Group</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>	<u>Annual Pension Being Paid</u>
Under 50	1	1	2	\$ 38,985
50-54	1	1	2	40,666
55-59	8	6	14	268,620
60-64	23	16	39	1,167,297
65-69	32	9	41	1,301,471
70-74	25	11	36	845,822
75-79	12	6	18	410,017
80-84	5	1	6	118,062
85-89	2	3	5	54,694
Over 89	2	0	2	37,300
<b>Total</b>	<b>111</b>	<b>54</b>	<b>165</b>	<b>\$4,282,934</b>

#### B. Terminated Vested Participants

<u>Age Group</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>	<u>Annual Pension Being Paid at Age 65</u>
Under 50	3	3	6	\$ 106,452
50-54	4	2	6	89,211
55-59	1	1	2	26,863
60-64	2	2	4	39,720
<b>Total</b>	<b>10</b>	<b>8</b>	<b>18</b>	<b>\$262,246</b>

## Table 5

### Summary of Plan Provisions

1. **Effective Date:** October 1, 1952 (as amended and restated effective January 1, 1998, and as of October 1, 2013).
  
2. **Eligibility for Participation:** Full-time employees who have attained age 21 and completed one year of service become participants on the October 1 anniversary date following completion of these requirements. Seasonal Employees become participants on date of hire. The Plan was closed to new entrants effective January 1, 2013 and to Seasonal Employees effective January 1, 2014.
  
3. **Normal Retirement:** Age 65. Monthly normal retirement benefit equal to 2.0% of highest consecutive five-year average August 1 monthly earnings in last 10 years times service. Effective January 1, 1998, accrual changed from 1.9% to 2.0%.  
  
Benefits normally payable for life subject to the following:
  - (a) Minimum of \$279.41 per month, reduced by 1/25 for each year of service less than 25 at retirement.
  - (b) Maximum of 71% of final five-year average monthly earnings. Effective January 1, 1998, maximum percentage changed from 67% to 71%.
  
4. **Delayed Retirement:** Employee may voluntarily delay Normal Retirement but not past age 70. Benefit is calculated the same as Normal Retirement.
  
5. **Early Retirement:** Age 55, 10 years of service. Accrued benefit reduced ½ of 1% for each month prior to Normal Retirement. If employee has 25 or more years of service at Early Retirement, Accrued Benefit reduced by ½ of 1% for each month by which retirement precedes age 60. Early retirement reductions are applied prior to the 71% maximum.
  
6. **Disability Retirement:** Accrued benefit (without actuarial reduction), but reduced by the amount of any benefits received through an insured LTD Plan.



## Table 5

### Summary of Plan Provisions (Continued)

**7. Death Benefit:** A death benefit equal to the 50% joint and survivor 10-year certain option has been added for employees with 25 years of credited service as of each October 1<sup>st</sup>. If the spouse dies before the expiration of the guaranteed period, such payment will be continued to a designated beneficiary who must be a legal dependent of the employee at the time of death. In the event there is not a spouse at time of death, a 50% benefit would be payable to a legal dependent for a period not to exceed 10 years or until the dependent reaches age 25, whichever comes first. Employees with 25 years of credited service as of October 1, 1994 had a one-time option of waiving this Pension Plan death benefit.

**8. Joint and Survivor Option Increase:** For employees who elect the joint annuity option, if the spouse dies before the retired employee, the joint annuity retirement benefit will revert to the life only option.

**9. Vesting:** Accrued Benefit payable at age 65 adjusted by the following vesting table:

Full Years of Continuous Service	Vested Interest in Accrued Benefit
Less than 1	None
1 but less than 2	10%
2 but less than 3	20
3 but less than 4	30
4 but less than 5	40
5 but less than 6	50
6 but less than 7	60
7 but less than 8	70
8 but less than 9	80
9 but less than 10	90
10 or more	100

**10. Options:** Prior to retirement or termination, a participant may elect an optional method of payment that is the actuarial equivalent of the Normal Benefit.

## Table 5

### Summary of Plan Provisions (Concluded)

- 11. Calculation of Lump Sums:** The lump sum option will be calculated based on the 1984 Unisex Pension Mortality Table and an interest rate of 8.0%. This provision was effective as contracts were approved by the bargaining units as follows:
- (a) Park Superintendent/Department Head and Police Officers Association of Michigan Units February 10, 1994
  - (b) Supervisory and Professional Units – March 10, 1994
  - (c) Non-Supervisory Unit – July 14, 1994
- The calculation of seasonal employee lump sum benefits would also be calculated based on the Pension Plan's actuarial interest rate assumption.
- 12. Lump Sum Eligibility:** The lump sum option is not available for employees hired after January 1, 1994.
- 13. Significant Changes:** There are no significant changes in regular Plan provisions since the last valuation. There was a one-time change allowing members to retire under an Early Retirement Window in 2012 and another one-time change allowing members to retire under an Early Retirement Window in 2013. The additional accrued liabilities associated with the 2012 Early Retirement Window have been fully amortized and no longer have an impact on the contribution.

## Table 6

### Actuarial Assumptions, Methods and Data

1. **Mortality:**

**Healthy Pre-Retirement:** The RP-2014 Employee Generational Mortality Tables, with blue-collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2015.

**Healthy Post-Retirement:** The RP-2014 Healthy Annuitant Generational Mortality Tables, with blue-collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2015.

**Disability Retirement:** The RP-2014 Disabled Mortality Table, extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2015.
2. **Interest:** 6.75% compounded annually.
3. **Expenses:** No loading; to be met directly.
4. **Withdrawal:** The rates at the following illustrative ages indicate the withdrawal rates assumed:

Age	Rates of Withdrawal
	Male or Female
25	7.40%
35	3.40%
45	1.40%
55	0.20%
57	NIL

## Table 6

### Actuarial Assumptions, Methods and Data (Continued)

#### 5. Salary Scale:

Final average earnings were estimated from present earnings based on the assumption that future compensation will increase by a base wage inflation of 3.50% per year, and a merit and seniority portion as shown in the table below:

<u>Service</u>	<u>% Increase</u>
1	3.75 %
2	3.75 %
3	3.38 %
4	3.00 %
5	2.63 %
6	2.25 %
7	1.88 %
8	1.50 %
9	1.13 %
10	0.75 %
11	0.38 %
12+	0.19 %

#### 6. Retirement Age:

The rates at the following illustrative ages indicate the retirement rates assumed:

<b>Rates of Retirement</b>		
<b>Age</b>	<b>Less than 25</b>	<b>25 or More</b>
	<b>Years of Service</b>	<b>Years of Service</b>
55	1%	1%
56	1	5
57	1	10
58	1	10
59	5	20
60	12	20
61	12	20
62	12	30
63	20	40
64	25	50
65	30	60
66	60	50
67	100	100

## Table 6

### Actuarial Assumptions, Methods and Data (Concluded)

**7. Rates of Disability:**

Disability Rates were as follows:

Sample Ages	% of Active Members Becoming Disabled within Next Year
	Male or Female
25	0.00%
30	0.12%
35	0.16%
40	0.24%
45	0.46%
50	1.04%
55	2.14%
60	6.70%

**8. Funding Method:**

Individual Entry Age Actuarial Cost Method. Benefits are funded on a level dollar.

**9. Asset Method:**

Smoothed asset value that spreads market value gains and losses over a 5-year period.

**10. Data:**

This actuarial valuation has been prepared based upon employee data compiled by the Employer. The actuary has no reason to believe that this data is not complete and accurate and knows of no further information that is essential to the preparation of the actuarial valuation, although no independent audit of the data has been performed by the actuary.

**11. Amortization of the Unfunded Actuarial Accrued Liability:**

The unfunded actuarial accrued liability (excluding the amount attributable to the Early Retirement Window) was amortized over a 23.75-year period, declining to 20 years, as a level dollar.

The unfunded actuarial accrued liability attributable to the Early Retirement Window in 2013 was amortized over a 5-year period as a level dollar, starting with the October 1, 2013 valuation.

**12. Loads for Optional Forms of Payment:**

1.0% for pop-up options of current retirees electing a J&S option.  
17.0% for non-spouse beneficiaries of a non-duty death participant.

**13. Assumption Rationale:**

The actuarial assumptions were based upon the results of an experience study for HCMA covering the period October 1, 2010 through December 31, 2015. A report dated September 28, 2016 presented the results of this study. The actuarial assumptions represent estimates of future experience.

**Table 7**  
**Comparison of 2016 and 2017 Results**

Item for Comparison	2016 Results	2017 Results
1. Active Participants		
(a) Number	144	135
(b) Total Annual Earnings	\$ 9,706,228	\$ 9,259,465
(c) Average Annual Earnings	67,404	68,589
2. Retired Participants		
(a) Number	156	165
(b) Average Annual Pension	26,257	25,957
3. Actuarial Accrued Liability		
(a) Active Participants	\$31,840,285	\$32,363,334
(b) Retirees	43,742,523	45,149,000
(c) Terminated with Vested Rights	1,446,737	1,331,856
(d) Total	\$77,029,545	\$78,844,190
4. Actuarial Value of Assets	\$56,383,307	\$58,900,828
5. Actuarial Value of Assets as a Percentage of the Actuarial Accrued Liability	73.20%	74.71%
6. Unfunded Actuarial Accrued Liability	\$20,646,238	\$19,943,362
(a) Portion due to 2012 Early Retirement Window <sup>1</sup>	280,039	0
(b) Portion due to 2013 Early Retirement Window <sup>2</sup>	76,237	40,495
(c) Remaining Portion <sup>3</sup>	20,289,962	19,902,867
7. Annual Normal Cost	\$ 1,030,377	\$ 966,866
8. Recommended Contribution on Funding Basis at the Beginning of the Plan Year	\$ 2,996,208	\$ 2,655,734

<sup>1</sup> UAAL attributable to Early Retirement Window amortized over 5 years, starting with the October 1, 2012 valuation.

<sup>2</sup> UAAL attributable to Early Retirement Window amortized over 5 years, starting with the October 1, 2013 valuation.

<sup>3</sup> UAAL not attributable to Early Retirement Window amortized over 23.75 years this year, and 24.75 years last year.

## Table 8

### Present Value of Accrued Benefits as of December 31, 2017

Actives*	\$25,226,397
Retirees	45,149,000
Vested	<u>1,331,856</u>
 Total	 \$71,707,253

*\* Based on benefit service and salary as of the valuation date.*

**Table 9**  
**Schedule of Funding Progress**

Valuation Date (1)	Actuarial Value of Assets (AVA) (2)	Unfunded Actuarial		Funded Ratio (2) / (3)	Annual Covered Payroll (6)	UAAL as % of Payroll (4) / (6) (7)
		Actuarial Accrued Liability (AAL) (3)	Accrued Liability (UAAL) (3) - (2) (4)			
October 1, 2008	\$37,743,805	\$53,367,499	\$15,623,694	70.72%	\$14,399,783	108.50%
October 1, 2009	39,334,862	55,596,422	16,261,560	70.75%	14,265,682	113.99%
October 1, 2010	40,754,922	58,938,351	18,183,429	69.15%	14,234,287	127.74%
October 1, 2011	42,456,045	60,578,588	18,122,543	70.08%	13,809,019	131.24%
October 1, 2012	43,992,245	64,836,490	20,844,245	67.85%	12,232,592	170.40%
October 1, 2013	45,492,667	66,307,795	20,815,128	68.61%	11,171,076	186.33%
December 31, 2014	50,712,814	68,503,084	17,790,270	74.03%	10,418,891	170.75%
December 31, 2015	54,429,972	69,050,692	14,620,720	78.83%	10,067,888	145.22%
December 31, 2016	56,383,307	77,029,545	20,646,238	73.20%	9,706,228	212.71%
December 31, 2017	58,900,828	78,844,190	19,943,362	74.71%	9,259,465	215.38%



**Table 10**  
**Schedule of Annual Required Contributions**

<b>Fiscal Year Ending</b>	<b>Annual Required Contribution</b>	<b>Percentage Contributed*</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
9/30/2009	\$1,981,249	100%
9/30/2010	2,024,612	100%
9/30/2011	2,146,504	100%
9/30/2012	2,315,472	100%
9/30/2013	2,579,654	100%
9/30/2014	3,029,289	100%
12/31/2014	757,322	100%
12/31/2015	2,717,265	100%
12/31/2016	2,449,953	100%
12/31/2017	2,996,208	100%
12/31/2018	2,655,734	

\* 100% indicates at least 100%.

This information is presented in draft form for review by the Plan's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan's financial statements.

## Table 10

### Schedule of Annual Required Contributions (Concluded)

**Valuation Date:** December 31, 2017

**Actuarial Cost Method:** Entry Age

**Amortization Method:**

- *Non-Early Retirement Window* 30-year, level dollar  
The unfunded actuarial accrued liability not attributable to the Early Retirement Window is amortized over 30 years, declining to 20 years. Effective for the October 1, 2013 valuation, the amortization method is changed from level percent of payroll to level dollar amortization.
- *2013 Early Retirement Window* 5-year, level dollar  
The total unfunded actuarial accrued liability attributable to the 2013 Early Retirement Window is amortized over 5 years, declining to 0 years.

**Remaining Amortization Period:**

- *Non-Early Retirement Window* 23.75 years
- *2013 Early Retirement Window* 0.75 years

**Asset Valuation Method:** Smoothed asset value that spreads the difference between the assumed return and the actual investment return over a 5-year period.

**Actuarial Assumptions:**

- *Investment rate of return* 6.75%
- *Projected salary increases\** 3.69% - 7.25%  
\* Includes wage inflation at 3.50%
- *Cost-of-living adjustments* None

This information is presented in draft form for review by the Plan's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan's financial statements.

## APPENDIX I

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### ACCOUNTING DISCLOSURES

This information is presented in draft form for review by the Plan's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan's financial statements.

## Information Required by GASB Statements No. 67 and No. 68

The Governmental Accounting Standards Board Statement No. 67 (GASB Statement No. 67) contains certain requirements regarding the accounting and disclosure of financial information. In addition to disclosing the plan's fiduciary net position, retirement systems are also required to disclose information regarding the plan's total pension liability, net pension liability, and change in net pension liability from the prior year. In actuarial terms, these are the plan's actuarial accrued liability and unfunded actuarial accrued liability on a market value of asset basis. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements. This section of the report contains information that is part of the Retirement plan's disclosure requirements under these accounting standards.

### Determination of the Total Pension Liability

The total pension liability shown in this subsection is also shown as of the last date of the pension plan's fiscal year, December 31, 2017.

A Single Discount Rate of 6.75% was used to measure the total pension liability. This Single Discount Rate was based on the expected rate of return on pension plan investments of 6.75%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

### Measurement Statement of Net Pension Liability

The net pension liability is to be measured as the total pension liability, less the amount of the pension plan's fiduciary net position. As of the plan year ending December 31, 2017, the net pension liability is \$18,946,852. If a Single Discount Rate that is one percent lower was used, the net pension liability would have been \$28,002,490. Similarly, if a Single Discount Rate that was one percent higher was used, the net pension liability would have been \$11,273,431.

# Executive Summary as of December 31, 2017

	<b>2017</b>
Actuarial Valuation Date	December 31, 2017
Measurement Date of the Net Pension Liability	December 31, 2017
Employer's Fiscal Year Ending Date (Reporting Date)	December 31, 2017

## Membership

Number of	
- Retirees and Beneficiaries	165
- Inactive, Nonretired Members	18
- Active Members	135
- Total	318
Covered Payroll	\$ 9,259,465

## Net Pension Liability

Total Pension Liability	\$ 78,844,190
Plan Fiduciary Net Position	59,897,338
Net Pension Liability	\$ 18,946,852
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	75.97%
Net Pension Liability as a Percentage of Covered Payroll	204.62%

## Development of the Single Discount Rate

Single Discount Rate	6.75%
Long-Term Expected Rate of Investment Return	6.75%
Long-Term Municipal Bond Rate*	3.31%
Last year ending December 31 in the 2018 to 2117 projection period for which projected benefit payments are fully funded	2106

<b>Total Pension Expense</b>	<b>\$ 3,754,302</b>
------------------------------	---------------------

## Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
Difference between expected and actual experience	\$ -	\$ 540,377
Changes in assumptions	3,244,375	0
Net difference between projected and actual earnings on pension plan investments	1,763,957	3,329,732
<b>Total</b>	<b>\$ 5,008,332</b>	<b>\$ 3,870,109</b>

\* Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of December 29, 2017. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax exempt securities.

## Pension Expense Under GASB Statement No. 68

### Fiscal Year Ended December 31, 2017

#### A. Expense

1. Service Cost	\$ 966,866
2. Interest on the Total Pension Liability	5,089,192
3. Current-Period Benefit Changes	0
4. Employee Contributions (made negative for addition here)	(88,475)
5. Projected Earnings on Plan Investments (made negative for addition here)	(3,585,113)
6. Pension Plan Administrative Expense	256,479
7. Other Changes in Plan Fiduciary Net Position	0
8. Recognition of Outflow (Inflow) of Resources due to Liabilities	1,083,093
9. Recognition of Outflow (Inflow) of Resources due to Assets	32,260
<b>10. Total Pension Expense</b>	<b>\$ 3,754,302</b>

# Statement of Outflows and Inflows

## Arising from the Current Reporting Period

### Fiscal Year Ended December 31, 2017

#### A. Outflows (Inflows) of Resources Due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ (6,338)
2. Assumption Changes (gains) or losses	\$ -
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	4.2325
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$ (1,497)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ -
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$ (1,497)
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for difference between expected and actual experience of the Total Pension Liability	\$ (4,841)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ -
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$ (4,841)

#### B. Outflows (Inflows) of Resources Due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (3,902,874)
2. Recognition period for Assets {in years}	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$ (780,575)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ (3,122,299)

# Statement of Outflows and Inflows

## Arising from the Current and Prior Reporting Periods

### Fiscal Year Ended December 31

#### A. Outflows and Inflows of Resources due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ 1,390,646	\$ 307,553	\$ 1,083,093
2. Due to Assets	881,979	849,719	32,260
<b>3. Total</b>	<b>\$ 2,272,625</b>	<b>\$ 1,157,272</b>	<b>\$ 1,115,353</b>

#### B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ 307,553	\$ (307,553)
2. Assumption Changes	1,390,646	-	1,390,646
3. Net Difference between projected and actual earnings on pension plan investments	881,979	849,719	32,260
<b>4. Total</b>	<b>\$ 2,272,625</b>	<b>\$ 1,157,272</b>	<b>\$ 1,115,353</b>

#### C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ 540,377	\$ (540,377)
2. Assumption Changes	3,244,375	-	3,244,375
3. Net Difference between projected and actual earnings on pension plan investments	1,763,957	3,329,732	(1,565,775)
<b>4. Total</b>	<b>\$ 5,008,332</b>	<b>\$ 3,870,109</b>	<b>\$ 1,138,223</b>

#### D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending December 31	Net Deferred Outflows of Resources
2018	\$ 1,115,353
2019	1,192,416
2020	(388,622)
2021	(780,924)
2022	0
Thereafter	0
<b>Total</b>	<b>\$ 1,138,223</b>



# Schedule of Changes in the Net Pension Liability and Related Ratios

## Current Period

### Fiscal Year Ended December 31, 2017

#### A. Total Pension Liability

1. Service Cost	\$ 966,866
2. Interest on the Total Pension Liability	5,089,192
3. Changes of benefit terms	0
4. Difference between expected and actual experience	(6,338)
5. Changes of assumptions	0
6. Benefit payments, including refunds of employee contributions	(4,235,075)
7. Net change in Total Pension Liability	\$ 1,814,645
8. Total Pension Liability – Beginning	77,029,545
9. Total Pension Liability – Ending	<u><u>\$ 78,844,190</u></u>

#### B. Plan Fiduciary Net Position

1. Contributions – employer	\$ 2,996,209
2. Contributions – employee	88,475
3. Net investment income	7,487,987
4. Benefit payments, including refunds of employee contributions	(4,235,075)
5. Pension Plan Administrative Expense	(256,479)
6. Other	-
7. Net change in Plan Fiduciary Net Position	\$ 6,081,117
8. Plan Fiduciary Net Position – Beginning	53,816,221
9. Plan Fiduciary Net Position – Ending	<u><u>\$ 59,897,338</u></u>

#### C. Net Pension Liability

\$ 18,946,852

#### D. Plan Fiduciary Net Position as a Percentage of the Total Pension Liability

75.97%

#### E. Covered-Employee Payroll

\$ 9,259,465

#### F. Net Pension Liability as a Percentage of Covered-Employee Payroll

204.62%

# Schedules of Required Supplementary Information

## Schedule of Changes in the Employers' Net Pension Liability and Related Ratios Multiyear

Fiscal year ending December 31,	Last 10 Fiscal Years (which may be built prospectively)									
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Total Pension Liability</b>										
Service Cost	\$ 966,866	\$ 1,030,377	\$ 962,488	\$ 1,004,715						
Interest on the Total Pension Liability	5,089,192	4,899,597	4,862,474	4,726,571						
Benefit Changes	-	-	-	-						
Difference between expected and actual experience	(6,338)	(6,336)	(1,445,906)	109,029						
Assumption Changes	-	6,025,667	-	-						
Benefit Payments and Refunds	(4,235,075)	(3,970,452)	(3,831,448)	(4,057,900)						
<b>Net Change in Total Pension Liability</b>	<b>1,814,645</b>	<b>7,978,853</b>	<b>547,608</b>	<b>1,782,415</b>						
<b>Total Pension Liability - Beginning</b>	<b>77,029,545</b>	<b>69,050,692</b>	<b>68,503,084</b>	<b>66,720,669</b>						
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 78,844,190</b>	<b>\$ 77,029,545</b>	<b>\$ 69,050,692</b>	<b>\$ 68,503,084</b>						
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 2,996,209	\$ 2,700,000	\$ 4,500,000	\$ 3,100,000						
Employee Contributions	88,475	111,649	101,817	107,492						
Pension Plan Net Investment Income	7,487,987	4,008,761	(667,117)	2,225,505						
Benefit Payments and Refunds	(4,235,075)	(3,970,452)	(3,831,448)	(4,057,900)						
Pension Plan Administrative Expense	(256,479)	(275,660)	(201,301)	(73,710)						
Other	-	-	-	-						
<b>Net Change in Plan Fiduciary Net Position</b>	<b>6,081,117</b>	<b>2,574,298</b>	<b>(98,049)</b>	<b>1,301,387</b>						
<b>Plan Fiduciary Net Position - Beginning</b>	<b>53,816,221</b>	<b>51,241,923</b>	<b>51,339,972</b>	<b>50,038,585</b>						
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 59,897,338</b>	<b>\$ 53,816,221</b>	<b>\$ 51,241,923</b>	<b>\$ 51,339,972</b>						
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>18,946,852</b>	<b>23,213,324</b>	<b>17,808,769</b>	<b>17,163,112</b>						
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	<b>75.97 %</b>	<b>69.86 %</b>	<b>74.21 %</b>	<b>74.95 %</b>						
<b>Covered-Employee Payroll</b>	<b>\$ 9,259,465</b>	<b>\$ 9,706,228</b>	<b>\$ 10,067,888</b>	<b>\$ 10,418,891</b>						
<b>Net Pension Liability as a Percentage of Covered-Employee Payroll</b>	<b>204.62 %</b>	<b>239.16 %</b>	<b>176.89 %</b>	<b>164.73 %</b>						
Notes to Schedule:										

# Schedules of Required Supplementary Information

## Schedule of the Employers' Net Pension Liability

### Multiyear

Last 10 Fiscal Years (which may be built prospectively)

<u>FY Ending December 31,</u>	<u>Total Pension Liability</u>	<u>Plan Net Position</u>	<u>Net Pension Liability</u>	<u>Plan Net Position as a % of Total Pension Liability</u>	<u>Covered Payroll</u>	<u>Net Pension Liability as a % of Covered Payroll</u>
2008						
2009						
2010						
2011						
2012						
2013						
2014	\$68,503,084	\$51,339,972	\$17,163,112	74.95%	\$10,418,891	164.73%
2015	69,050,692	51,241,923	17,808,769	74.21%	10,067,888	176.89%
2016	77,029,545	53,816,221	23,213,324	69.86%	9,706,228	239.16%
2017	78,844,190	59,897,338	18,946,852	75.97%	9,259,465	204.62%

# Schedule of Contributions Multiyear

Last 10 Fiscal Years (which may be built prospectively)

<u>FY Ending December 31,</u>	<u>Actuarially Determined Contribution*</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll</u>	<u>Actual Contribution as a % of Covered Payroll</u>
2008					
2009					
2010					
2011					
2012					
2013					
2014	\$ 3,029,289	\$ 3,100,000	\$ (70,711)	\$ 10,418,891	29.75%
2015*	3,474,587	4,500,000	(1,025,413)	10,067,888	44.70%
2016	2,449,953	2,700,000	(250,047)	9,706,228	27.82%
2017	2,996,208	2,996,209	(1)	9,259,465	32.36%

\* Includes contributions for short plan year October 1, 2014 – December 31, 2014.

# Schedule of Investment Returns Multiyear

Last 10 Fiscal Years (which may be built prospectively)

<u>FY Ending December 31,</u>	<u>Annual Return<sup>1</sup></u>
2008	
2009	
2010	
2011	
2012	
2013	
2014	4.43 %
2015	(1.68)%
2016	7.33 %
2017	13.40 %

<sup>1</sup> Annual money-weighted rate of return, net of investment expenses.

## Asset Allocation

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
US Large Cap Fundamental Equity	5.00%	9.13%
US Large Cap Index	14.00%	8.00%
US Small Cap Equity	2.00%	10.15%
US Small/Mid Cap Equity Index	4.00%	8.00%
World Equity ex-US	15.00%	9.33%
Emerging Markets Equity	2.00%	9.67%
Core Fixed Income	20.00%	6.54%
Limited Duration Bonds	12.00%	5.65%
US High Yield	2.00%	7.82%
Emerging Markets Debt	3.00%	8.75%
Diversified Short Term Fixed Income	4.00%	5.89%
Dynamic Asset Allocation	6.00%	10.32%
Multi-Asset	3.00%	6.50%
Structured Credit	3.00%	10.52%
Private Real Estate	5.00%	7.30%
<b>Total</b>	<b>100.00%</b>	

The figures in the above table were supplied by the Huron-Clinton Metropolitan Authority Employees' Retirement Plan's investment consultant and are based upon the investment manager's inflation assumption of 2.50%. Gabriel, Roeder, Smith & Company does not provide investment advice.

# Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption

## Single Discount Rate

A Single Discount Rate of 6.75% was used to measure the total pension liability. This Single Discount Rate was based on the expected rate of return on pension plan investments of 6.75%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 6.75%, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

	Current Single Discount Rate Assumption		
	1% Decrease 5.75%	6.75%	1% Increase 7.75%
Total Pension Liability	\$ 87,899,828	\$ 78,844,190	\$ 71,170,769
Plan Fiduciary Net Position	59,897,338	59,897,338	59,897,338
Net Pension Liability/(Asset)	\$ 28,002,490	\$ 18,946,852	\$ 11,273,431

## Calculation of the Single Discount Rate

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a “risk-free” rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects: (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits); and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Bond Buyer Index) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.75%; the municipal bond rate is 3.31%; and the resulting SDR is 6.75%.

The tables in this section provide background for the development of the SDR.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

Expected Contributions are developed based on the following:

- Member Contributions for current members
- Normal Cost contributions for current members
- Unfunded Liability contributions for current and future members

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the SDR. It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

Results in this section of the report are not rounded, and are shown as dollar amounts without the additional digits.

The projections in this section are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection of the ongoing plan.



# Single Discount Rate Development

## Projection of Contributions

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost and Expense Contributions	UAL Contributions	Total Contributions
0	\$ 9,259,465				
1	9,023,291	\$ -	\$ 966,866	\$ 1,688,868	\$ 2,655,734
2	8,616,740	-	921,414	1,674,615	2,596,028
3	8,254,103	-	882,455	1,610,154	2,492,610
4	7,815,026	-	834,470	1,536,213	2,370,683
5	7,346,238	-	782,150	1,536,213	2,318,363
6	6,892,117	-	731,063	1,536,213	2,267,276
7	6,447,975	-	680,530	1,536,213	2,216,743
8	6,035,201	-	634,891	1,536,213	2,171,104
9	5,641,094	-	591,765	1,536,213	2,127,978
10	5,227,611	-	546,393	1,536,213	2,082,606
11	4,812,228	-	501,155	1,536,213	2,037,368
12	4,423,645	-	459,263	1,536,213	1,995,476
13	4,041,368	-	418,831	1,536,213	1,955,044
14	3,637,064	-	376,153	1,536,213	1,912,366
15	3,221,873	-	332,246	1,536,213	1,868,459
16	2,810,286	-	288,550	1,536,213	1,824,763
17	2,417,135	-	246,791	1,536,213	1,783,004
18	2,045,054	-	207,331	1,536,213	1,743,543
19	1,683,664	-	169,063	1,536,213	1,705,276
20	1,365,290	-	135,742	1,536,213	1,671,955
21	1,100,610	-	108,391	1,536,213	1,644,604
22	870,727	-	84,680	1,536,213	1,620,893
23	674,079	-	64,624	1,536,213	1,600,837
24	506,568	-	47,627	1,536,213	1,583,839
25	373,260	-	34,141	-	34,141
26	269,283	-	23,856	-	23,856
27	190,459	-	16,169	-	16,169
28	132,104	-	10,749	-	10,749
29	88,262	-	6,880	-	6,880
30	58,802	-	4,330	-	4,330
31	38,963	-	2,753	-	2,753
32	23,422	-	1,583	-	1,583
33	12,821	-	855	-	855
34	5,637	-	362	-	362
35	2,458	-	157	-	157
36	839	-	55	-	55
37	-	-	-	-	-
38	-	-	-	-	-
39	-	-	-	-	-
40	-	-	-	-	-
41	-	-	-	-	-
42	-	-	-	-	-
43	-	-	-	-	-
44	-	-	-	-	-
45	-	-	-	-	-
46	-	-	-	-	-
47	-	-	-	-	-
48	-	-	-	-	-
49	-	-	-	-	-
50	-	-	-	-	-

## Single Discount Rate Development Projection of Contributions (Concluded)

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost and Expense Contributions	UAL Contributions	Total Contributions
51	-	-	-	-	-
52	-	-	-	-	-
53	-	-	-	-	-
54	-	-	-	-	-
55	-	-	-	-	-
56	-	-	-	-	-
57	-	-	-	-	-
58	-	-	-	-	-
59	-	-	-	-	-
60	-	-	-	-	-
61	-	-	-	-	-
62	-	-	-	-	-
63	-	-	-	-	-
64	-	-	-	-	-
65	-	-	-	-	-
66	-	-	-	-	-
67	-	-	-	-	-
68	-	-	-	-	-
69	-	-	-	-	-
70	-	-	-	-	-
71	-	-	-	-	-
72	-	-	-	-	-
73	-	-	-	-	-
74	-	-	-	-	-
75	-	-	-	-	-
76	-	-	-	-	-
77	-	-	-	-	-
78	-	-	-	-	-
79	-	-	-	-	-
80	-	-	-	-	-
81	-	-	-	-	-
82	-	-	-	-	-
83	-	-	-	-	-
84	-	-	-	-	-
85	-	-	-	-	-
86	-	-	-	-	-
87	-	-	-	-	-
88	-	-	-	-	-
89	-	-	-	-	-
90	-	-	-	-	-
91	-	-	-	-	-
92	-	-	-	-	-
93	-	-	-	-	-
94	-	-	-	-	-
95	-	-	-	-	-
96	-	-	-	-	-
97	-	-	-	-	-
98	-	-	-	-	-
99	-	-	-	-	-
100	-	-	-	-	-

# Single Discount Rate Development

## Projection of Plan Fiduciary Net Position

Year	Projected Beginning		Projected Total		Projected Benefit		Projected Investment	Projected Ending Plan
	Plan Net Position		Contributions		Payments		Earnings at 6.75%	
	(a)		(b)		(c)		(d)	(e)=(a)+(b)-(c)+(d)
1	\$ 59,897,338	\$	2,655,734	\$	4,458,794	\$	3,983,211	\$ 62,077,489
2	62,077,489		2,596,028		4,706,070		4,120,179	64,087,626
3	64,087,626		2,492,610		4,889,724		4,246,333	65,936,845
4	65,936,845		2,370,683		5,151,044		4,358,432	67,514,916
5	67,514,916		2,318,363		5,409,735		4,454,627	68,878,171
6	68,878,171		2,267,276		5,640,009		4,537,305	70,042,744
7	70,042,744		2,216,743		5,876,361		4,606,390	70,989,516
8	70,989,516		2,171,104		6,077,833		4,662,093	71,744,879
9	71,744,879		2,127,978		6,259,603		4,705,614	72,318,868
10	72,318,868		2,082,606		6,424,823		4,737,367	72,714,017
11	72,714,017		2,037,368		6,592,553		4,756,969	72,915,801
12	72,915,801		1,995,476		6,768,617		4,763,353	72,906,013
13	72,906,013		1,955,044		6,909,254		4,756,681	72,708,485
14	72,708,485		1,912,366		7,033,747		4,737,798	72,324,902
15	72,324,902		1,868,459		7,150,006		4,706,589	71,749,945
16	71,749,945		1,824,763		7,264,302		4,662,534	70,972,941
17	70,972,941		1,783,004		7,354,611		4,605,702	70,007,036
18	70,007,036		1,743,543		7,420,044		4,537,021	68,867,557
19	68,867,557		1,705,276		7,482,693		4,456,756	67,546,896
20	67,546,896		1,671,955		7,477,489		4,366,678	66,108,040
21	66,108,040		1,644,604		7,430,159		4,270,218	64,592,702
22	64,592,702		1,620,893		7,349,775		4,169,815	63,033,635
23	63,033,635		1,600,837		7,238,453		4,067,608	61,463,627
24	61,463,627		1,583,839		7,109,983		3,965,333	59,902,816
25	59,902,816		34,141		6,945,735		3,813,983	56,805,204
26	56,805,204		23,856		6,749,178		3,611,078	53,690,960
27	53,690,960		16,169		6,528,082		3,407,951	50,586,998
28	50,586,998		10,749		6,286,427		3,206,277	47,517,597
29	47,517,597		6,880		6,030,337		3,007,466	44,501,606
30	44,501,606		4,330		5,762,950		2,812,678	41,555,665
31	41,555,665		2,753		5,486,788		2,622,943	38,694,574
32	38,694,574		1,583		5,208,960		2,439,004	35,926,201
33	35,926,201		855		4,927,056		2,261,474	33,261,473
34	33,261,473		362		4,651,283		2,090,744	30,701,297
35	30,701,297		157		4,378,006		1,926,998	28,250,446
36	28,250,446		55		4,105,389		1,770,612	25,915,724
37	25,915,724		-		3,839,115		1,621,857	23,698,466
38	23,698,466		-		3,579,780		1,480,802	21,599,488
39	21,599,488		-		3,328,478		1,347,464	19,618,474
40	19,618,474		-		3,085,699		1,221,805	17,754,580
41	17,754,580		-		2,851,803		1,103,757	16,006,534
42	16,006,534		-		2,627,064		993,225	14,372,696
43	14,372,696		-		2,411,673		890,092	12,851,115
44	12,851,115		-		2,205,815		794,220	11,439,520
45	11,439,520		-		2,009,731		705,447	10,135,236
46	10,135,236		-		1,823,635		623,586	8,935,186
47	8,935,186		-		1,647,649		548,425	7,835,962
48	7,835,962		-		1,481,807		479,733	6,833,888
49	6,833,888		-		1,326,145		417,261	5,925,004
50	5,925,004		-		1,180,679		360,741	5,105,066

# Single Discount Rate Development

## Projection of Plan Fiduciary Net Position (Concluded)

Year	Projected Investment					Projected Ending Plan Net Position
	Projected Beginning	Projected Total	Projected Benefit	Earnings at		
	Plan Net Position	Contributions	Payments	6.75%		
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)	
51	\$ 5,105,066	\$ -	\$ 1,045,353	\$ 309,887	\$ 4,369,601	
52	4,369,601	-	920,055	264,403	3,713,949	
53	3,713,949	-	804,617	223,979	3,133,310	
54	3,133,310	-	698,875	188,297	2,622,732	
55	2,622,732	-	602,660	157,027	2,177,099	
56	2,177,099	-	515,697	129,834	1,791,235	
57	1,791,235	-	437,628	106,380	1,459,987	
58	1,459,987	-	368,062	86,330	1,178,255	
59	1,178,255	-	306,595	69,354	941,014	
60	941,014	-	252,803	55,126	743,336	
61	743,336	-	206,201	43,330	580,465	
62	580,465	-	166,257	33,662	447,870	
63	447,870	-	132,427	25,835	341,278	
64	341,278	-	104,161	19,578	256,695	
65	256,695	-	80,867	14,642	190,470	
66	190,470	-	61,926	10,801	139,346	
67	139,346	-	46,741	7,854	100,459	
68	100,459	-	34,755	5,627	71,330	
69	71,330	-	25,447	3,970	49,853	
70	49,853	-	18,339	2,756	34,270	
71	34,270	-	12,997	1,882	23,155	
72	23,155	-	9,050	1,262	15,367	
73	15,367	-	6,189	832	10,010	
74	10,010	-	4,155	538	6,393	
75	6,393	-	2,735	341	3,999	
76	3,999	-	1,762	211	2,448	
77	2,448	-	1,110	128	1,466	
78	1,466	-	685	76	858	
79	858	-	412	44	489	
80	489	-	241	25	274	
81	274	-	137	14	151	
82	151	-	77	8	81	
83	81	-	42	4	43	
84	43	-	23	2	22	
85	22	-	12	1	11	
86	11	-	6	1	5	
87	5	-	3	0	2	
88	2	-	2	0	1	
89	1	-	1	0	0	
90	0	-	0	0	0	
91	0	-	0	0	0	
92	0	-	0	0	0	
93	0	-	-	0	0	
94	0	-	-	0	0	
95	0	-	-	0	0	
96	0	-	-	0	0	
97	0	-	-	0	0	
98	0	-	-	0	0	
99	0	-	-	0	0	
100	0	-	-	0	0	

# Single Discount Rate Development

## Present Values of Projected Benefit Payments

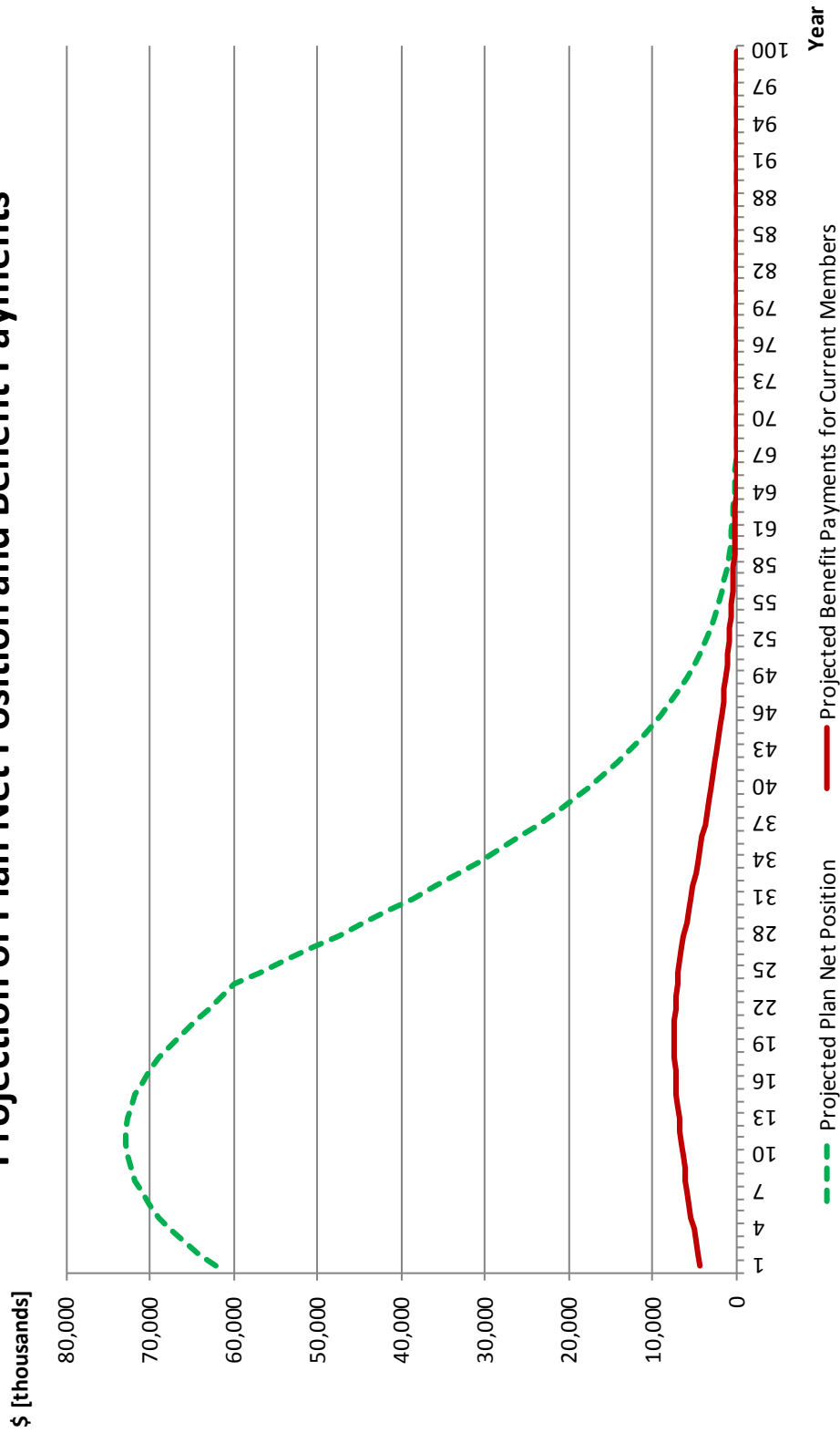
Year	Projected	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of	Present Value of	Present Value of
	Beginning Plan Net Position				Funded Benefit Payments using Expected Return Rate (v)	Unfunded Benefit Payments using Municipal Bond Rate (vf)	Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=(c)/(1+sdr)^(a-.5)
1	\$ 59,897,338	\$ 4,458,794	\$ 4,458,794	\$ -	\$ 4,315,523	\$ -	\$ 4,315,523
2	62,077,489	4,706,070	4,706,070	-	4,266,842	-	4,266,842
3	64,087,626	4,889,724	4,889,724	-	4,153,026	-	4,153,026
4	65,936,845	5,151,044	5,151,044	-	4,098,337	-	4,098,337
5	67,514,916	5,409,735	5,409,735	-	4,032,000	-	4,032,000
6	68,878,171	5,640,009	5,640,009	-	3,937,825	-	3,937,825
7	70,042,744	5,876,361	5,876,361	-	3,843,414	-	3,843,414
8	70,989,516	6,077,833	6,077,833	-	3,723,828	-	3,723,828
9	71,744,879	6,259,603	6,259,603	-	3,592,690	-	3,592,690
10	72,318,868	6,424,823	6,424,823	-	3,454,350	-	3,454,350
11	72,714,017	6,592,553	6,592,553	-	3,320,403	-	3,320,403
12	72,915,801	6,768,617	6,768,617	-	3,193,517	-	3,193,517
13	72,906,013	6,909,254	6,909,254	-	3,053,744	-	3,053,744
14	72,708,485	7,033,747	7,033,747	-	2,912,194	-	2,912,194
15	72,324,902	7,150,006	7,150,006	-	2,773,142	-	2,773,142
16	71,749,945	7,264,302	7,264,302	-	2,639,318	-	2,639,318
17	70,972,941	7,354,611	7,354,611	-	2,503,166	-	2,503,166
18	70,007,036	7,420,044	7,420,044	-	2,365,748	-	2,365,748
19	68,867,557	7,482,693	7,482,693	-	2,234,869	-	2,234,869
20	67,546,896	7,477,489	7,477,489	-	2,092,098	-	2,092,098
21	66,108,040	7,430,159	7,430,159	-	1,947,406	-	1,947,406
22	64,592,702	7,349,775	7,349,775	-	1,804,532	-	1,804,532
23	63,033,635	7,238,453	7,238,453	-	1,664,824	-	1,664,824
24	61,463,627	7,109,983	7,109,983	-	1,531,875	-	1,531,875
25	59,902,816	6,945,735	6,945,735	-	1,401,861	-	1,401,861
26	56,805,204	6,749,178	6,749,178	-	1,276,056	-	1,276,056
27	53,690,960	6,528,082	6,528,082	-	1,156,210	-	1,156,210
28	50,586,998	6,286,427	6,286,427	-	1,043,007	-	1,043,007
29	47,517,597	6,030,337	6,030,337	-	937,253	-	937,253
30	44,501,606	5,762,950	5,762,950	-	839,059	-	839,059
31	41,555,665	5,486,788	5,486,788	-	748,338	-	748,338
32	38,694,574	5,208,960	5,208,960	-	665,522	-	665,522
33	35,926,201	4,927,056	4,927,056	-	589,700	-	589,700
34	33,261,473	4,651,283	4,651,283	-	521,493	-	521,493
35	30,701,297	4,378,006	4,378,006	-	459,816	-	459,816
36	28,250,446	4,105,389	4,105,389	-	403,919	-	403,919
37	25,915,724	3,839,115	3,839,115	-	353,837	-	353,837
38	23,698,466	3,579,780	3,579,780	-	309,073	-	309,073
39	21,599,488	3,328,478	3,328,478	-	269,204	-	269,204
40	19,618,474	3,085,699	3,085,699	-	233,788	-	233,788
41	17,754,580	2,851,803	2,851,803	-	202,405	-	202,405
42	16,006,534	2,627,064	2,627,064	-	174,664	-	174,664
43	14,372,696	2,411,673	2,411,673	-	150,205	-	150,205
44	12,851,115	2,205,815	2,205,815	-	128,696	-	128,696
45	11,439,520	2,009,731	2,009,731	-	109,842	-	109,842
46	10,135,236	1,823,635	1,823,635	-	93,368	-	93,368
47	8,935,186	1,647,649	1,647,649	-	79,024	-	79,024
48	7,835,962	1,481,807	1,481,807	-	66,576	-	66,576
49	6,833,888	1,326,145	1,326,145	-	55,815	-	55,815
50	5,925,004	1,180,679	1,180,679	-	46,550	-	46,550

# Single Discount Rate Development

## Present Values of Projected Benefit Payments (Concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf^((a)-.5)	(h)=(c)/(1+sdr)^(a-.5)
51	\$ 5,105,066	\$ 1,045,353	\$ 1,045,353	\$ -	\$ 38,609	\$ -	\$ 38,609
52	4,369,601	920,055	920,055	-	31,832	-	31,832
53	3,713,949	804,617	804,617	-	26,078	-	26,078
54	3,133,310	698,875	698,875	-	21,219	-	21,219
55	2,622,732	602,660	602,660	-	17,140	-	17,140
56	2,177,099	515,697	515,697	-	13,740	-	13,740
57	1,791,235	437,628	437,628	-	10,922	-	10,922
58	1,459,987	368,062	368,062	-	8,605	-	8,605
59	1,178,255	306,595	306,595	-	6,715	-	6,715
60	941,014	252,803	252,803	-	5,187	-	5,187
61	743,336	206,201	206,201	-	3,963	-	3,963
62	580,465	166,257	166,257	-	2,993	-	2,993
63	447,870	132,427	132,427	-	2,233	-	2,233
64	341,278	104,161	104,161	-	1,646	-	1,646
65	256,695	80,867	80,867	-	1,197	-	1,197
66	190,470	61,926	61,926	-	859	-	859
67	139,346	46,741	46,741	-	607	-	607
68	100,459	34,755	34,755	-	423	-	423
69	71,330	25,447	25,447	-	290	-	290
70	49,853	18,339	18,339	-	196	-	196
71	34,270	12,997	12,997	-	130	-	130
72	23,155	9,050	9,050	-	85	-	85
73	15,367	6,189	6,189	-	54	-	54
74	10,010	4,155	4,155	-	34	-	34
75	6,393	2,735	2,735	-	21	-	21
76	3,999	1,762	1,762	-	13	-	13
77	2,448	1,110	1,110	-	8	-	8
78	1,466	685	685	-	4	-	4
79	858	412	412	-	2	-	2
80	489	241	241	-	1	-	1
81	274	137	137	-	1	-	1
82	151	77	77	-	0	-	0
83	81	42	42	-	0	-	0
84	43	23	23	-	0	-	0
85	22	12	12	-	0	-	0
86	11	6	6	-	0	-	0
87	5	3	3	-	0	-	0
88	2	2	2	-	0	-	0
89	1	1	1	-	0	-	0
90	0	0	0	-	0	-	0
91	0	0	0	-	0	-	0
92	0	0	0	0	0	0	0
93	0	-	-	-	-	-	-
94	0	-	-	-	-	-	-
95	0	-	-	-	-	-	-
96	0	-	-	-	-	-	-
97	0	-	-	-	-	-	-
98	0	-	-	-	-	-	-
99	0	-	-	-	-	-	-
100	0	-	-	-	-	-	-
Totals					\$ 85,964,762	\$ -	\$ 85,964,762

## Projection of Plan Net Position and Benefit Payments



# **GASB Statement No. 67 Supplementary Information**

## **Summary of Actuarial Methods and Assumptions**

### **Used to Determine Contribution Rates**

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation is provided below:

**Valuation Date:** Actuarially determined contribution amounts for fiscal year 2017 are calculated based upon the results of the December 31, 2016 actuarial valuation

**Methods and Assumptions Used to Determine Contribution Rates for the Fiscal Year Ending December 31, 2017:**

Actuarial Cost Method	Entry-Age Normal
Amortization Method	Level Dollar
Remaining Amortization Period	24.75 years
Asset Valuation Method	5-Year Smoothed Market
Wage Inflation	3.50%
Salary Increases	3.69% to 7.25% including inflation
Investment Rate of Return	6.75% (net of administrative expenses)
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2014 Generational Mortality Table for males and females, extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2015.
<b>Other Information:</b>	
Notes	N/A



**HURON-CLINTON METROPOLITAN AUTHORITY**

To: Board of Commissioners  
From: Rebecca L. Franchock, Retiree Health Care Administrator  
Subject: Approval – 2018 Retiree Health Care Trust Contribution  
Date: May 3, 2018

**Action Requested: Motion to Receive and File / Approve Contribution**

That the Board of Commissioners' (1) receive the Governmental Accounting Standards Board Statement No. 74; and (2) approve the 2018 Retiree Health Care Trust contribution at the budgeted amount of \$1.5 million as recommended by Retiree Health Care Administrator Franchock and staff.

**Fiscal Impact:** None.

**Background:** It is anticipated that the Retiree Health Care Trust Board will review this report and recommend approval of the contribution to the full Board at its meeting prior to the May meeting.

Governmental Accounting Standards Board (GASB) Statement 45 requires that an actuarial valuation be done at least once every other year for other post-employment benefit plans (OPEB's). The actuarial valuation of the Authority's Retiree Health Care Trust was last performed as of Dec. 31, 2016 by Gabriel, Roeder, Smith & Company (GRS). In addition, to remain in compliance with Governmental accounting standards, GRS performed additional work related to GASB Statement No. 74 for the year ended Dec. 31, 2017.

The actuarial valuation process calculates the required contribution to adequately fund the Authority's OPEB costs for the 144 active participants for the 2018 Plan year. Based on the employee census data for 2016 plan benefits and asset values, GRS recommended a \$1,395,565 contribution, which represents a \$20,095 decrease (1.4 percent) from the contribution for the 12-month period ending Dec. 31, 2016 (\$1,415,660). At the time of the Dec. 31, 2016 valuation, the funded ratio was 68.1 percent.

**Attachments: Metroparks Retiree Health Care Plan GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans December 31, 2017**



# Huron-Clinton Metropolitan Authority Retiree Health Care Plan

GASB Statement No. 74, Financial Reporting for  
Postemployment Benefit Plans Other Than Pension Plans  
December 31, 2017





April 12, 2018

Ms. Rebecca Franchock  
Supervisor of Budget and Payroll  
Huron-Clinton Metropolitan Authority  
13000 High Ridge Drive  
Brighton, MI 48114-9058

Dear Ms. Franchock:

This report provides information on behalf of the Huron-Clinton Metropolitan Authority Retiree Health Care Plan in connection with the Governmental Accounting Standards Board (GASB) Statement No. 74 "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans."

The calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement No. 74. The Net OPEB Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligation. The Net OPEB Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. The calculation of the plan's liability for this report is not applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement No. 74 may produce significantly different results. This report may be provided to parties other than the Huron-Clinton Metropolitan Authority Retiree Health Care Plan only in its entirety and only with the permission of the Huron-Clinton Metropolitan Authority Retiree Health Care Plan. GRS is not responsible for unauthorized use of this report.

This report complements the actuarial valuation report prepared as of December 31, 2016, and information herein should be considered along with the information from that report, especially for additional discussions of the nature of actuarial calculations and for more information related to participant data, economic, demographic, health care trend, morbidity assumptions, and benefit provisions.

This report is based upon information, furnished to us by the Authority, concerning Other Postemployment Benefits (OPEB), active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited.

This information is intended to assist in preparation of the financial statements of the Huron-Clinton Metropolitan Authority Retiree Health Care Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Based on the available data, the information contained in this report is accurate and fairly represents the actuarial position of the Huron-Clinton Metropolitan Authority Retiree Health Care Plan as of the reporting date. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as the Actuarial Standards of Practice. If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the authors of the report prior to making such decision.

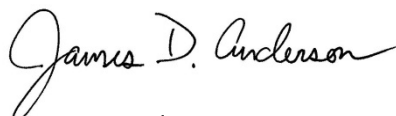
Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

Section I of the report details the calculation of the single discount rate and is not required to be included in your financial statements. However, this information may be requested by your auditors, therefore, we have included it in this report.

The signing individuals are independent of the plan sponsor.

James D. Anderson and Laura Frankowiak are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,



James D. Anderson, FSA, EA, FCA, MAAA



Laura Frankowiak, ASA, MAAA

JDA/LF:bd

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## SECTION A

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### EXECUTIVE SUMMARY



# Executive Summary as of December 31, 2017

	<b>2017</b>
Actuarial Valuation Date	December 31, 2016
OPEB Plan's Fiscal Year Ending Date (Reporting Date)	December 31, 2017
<b>Membership</b>	
Number of <sup>#@</sup>	
- Retirees and Beneficiaries	154
- Inactive, Nonretired Members	0
- Active Members	144
- Total	298
Covered Payroll <sup>^</sup>	\$ 8,866,219
<b>Net OPEB Liability</b>	
Total OPEB Liability	\$ 38,621,826
Plan Fiduciary Net Position	28,911,807
Net OPEB Liability	\$ 9,710,019
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	74.86 %
Net OPEB Liability as a Percentage of Covered Payroll	109.52 %
<b>Development of the Single Discount Rate</b>	
Single Discount Rate	6.75 %
Long-Term Expected Rate of Return	6.75 %
Long-Term Municipal Bond Rate*	3.31 %
Last year ending December 31 in the 2018 to 2117 projection period for which projected benefit payments are fully funded	2117

<sup>#</sup> As of the Actuarial Valuation Date. GRS does not have the membership counts as of December 31, 2017. Huron-Clinton Metropolitan Authority staff and auditors may decide that providing membership counts as of the valuation date is sufficient to meet GASB disclosure requirements. Alternatively, the Authority staff may decide to update the membership counts to be as of the Plan's fiscal year end.

<sup>^</sup> Payroll separately provided by the employer.

\* Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of December 29, 2017. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax exempt securities.

<sup>@</sup> Includes 7 members eligible for life insurance only.

# Discussion

## Accounting Standard

For post-employment (OPEB) benefit plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 74, “Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans,” replaces the requirements of GASB Statement No. 43, “Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans.” GASB Statement No. 74 establishes standards of financial reporting for separately issued financial reports of state and local government OPEB plans.

Reporting under GASB Statement No. 74 is effective for plan fiscal years commencing after June 15, 2016.

The following discussion provides a summary of the information that is required to be disclosed under this new accounting standard. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report, and internal staff will be responsible for preparing that information to comply with this accounting standard.

## Financial Statements

GASB Statement No. 74 requires defined benefit OPEB plans to present two financial statements: a statement of fiduciary net position and a statement of changes in fiduciary net position.

The *statement of fiduciary net position* presents the following items as of the end of the OPEB plan’s reporting period:

- Assets;
- Receivables (deferred inflows and outflows of resources);
- Investments;
- Liabilities; and
- Fiduciary net position (assets, plus deferred outflows, minus liabilities, minus deferred inflows).

The *statement of changes in fiduciary net position* presents the following for the plan’s reporting period:

- Additions, such as contributions and investment income;
- Deductions, such as benefit payments and expenses; and
- Net increase or decrease in the fiduciary net position (the difference between additions and deductions).

## Notes to Financial Statements

GASB Statement No. 74 also requires the notes of the plan's financial statements to include additional disclosure information. This disclosure information should include:

- **Plan Description:**
  - The name of the OPEB plan, the administrator of the OPEB plan, and the identification of whether the OPEB plan is a single-employer, agent, or cost-sharing OPEB plan.
  - The number of participating employers (if agent or cost-sharing OPEB plan) and the number of nonemployer contributing entities.
  - The composition of the OPEB plan's Board and the authority under which benefit terms may be amended.
  - The number of plan members by category and if the plan is closed.
  - The authority under which benefit terms are established or may be changed, the types of benefit provided and the classes of plan members covered. A brief description of the benefits and the description of automatic postemployment benefit changes and the sharing of benefit-related costs with inactive plan members.
  - A brief description of contribution requirements, including (a) identification of the authority under which contribution requirements of employers, nonemployer contributing entities, and plan members are established or may be amended; (b) the contribution rates of the employer, nonemployer contributing entities, and plan members; and (c) legal or contractual maximum contribution rates. If the OPEB plan of the entity that administers the OPEB plan has the authority to establish or amend contribution requirements, disclose the basis for determining contributions.
- **Plan Investments:**
  - A description of investment policies, including procedures for making and amending investment decisions; policies for asset allocation; and description of any significant changes in investment policy occurring during the reporting period.
  - Identification of investments that represent 5% or more of the fiduciary net position.
  - The annual money-weighted rate of return on the OPEB plan investments.
- **Receivables:**
  - The terms of any long-term contracts for contributions to the OPEB plan and the outstanding balance on any such long-term contracts.
- **Allocated insurance contracts excluded from OPEB plan assets**
- **Reserves:**
  - A description of the policy related to reserves;
  - The authority for the reserve policy;
  - The conditions under which the reserves can be used; and
  - The balances of the reserves.

## **In addition, Single-Employer and Cost-Sharing OPEB plans should disclose the following information in notes to financial statements:**

- The components of the net OPEB liability:
  - The total OPEB liability;
  - The fiduciary net position;
  - The net OPEB liability; and
  - The OPEB plan's fiduciary net position as a percentage of the total OPEB liability.
- Significant assumptions and other inputs used to measure the total OPEB liability:
  - Significant assumptions include inflation, healthcare cost trend rates, salary changes, ad hoc postemployment benefit changes, and the sharing of benefit-related costs with inactive plan members.
  - If applicable, the patterns of practice relied upon for projecting the sharing of benefit-related costs with inactive plan members.
  - The source of the assumptions for mortality.
  - The dates of experience studies on which assumption are based.
- Measure of the net OPEB liability using +/- 1% on the healthcare trend rate.
- On the discount rate:
  - The discount rate used and the change in the discount rate since the prior fiscal year-end.
  - Assumptions about projected cash flows.
  - The long-term expected rate of return on OPEB investments and a description of how it was determined.
  - The municipal bond rate used and the source of that rate.
  - The periods of projected benefit payments to which the long-term expected rate of return are used.
  - The assumed asset allocation of the portfolio and the long-term expected real rate of return for each major asset class, and whether the returns are arithmetic or geometric.
  - Measure of the net OPEB liability using +/- 1% on the discount rate.
- The date of the valuation and, if applicable, the fact that update procedures were used to roll forward the total OPEB liability.

## **Required Supplementary Information**

For Single-Employer and Cost-Sharing OPEB Plans, GASB Statement No. 74 requires a 10-year fiscal history of:

- Sources of changes in the net OPEB liability;
- Information about the components of the net OPEB liability and related ratios, including the OPEB plan's fiduciary net position as a percentage of the total OPEB liability, and the net OPEB liability as a percent of covered-employee payroll;
- Comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy along with the significant methods and assumptions used in calculating the actuarially determined contributions; and
- The annual money-weighted rate of return on OPEB plan investments for each year.

For Agent OPEB Plans, GASB Statement No. 74 requires a 10-year history of the annual money-weighted rate of return on OPEB plan investments.

Notes to the required schedules should include factors that significantly affect trends in the amounts reported (for example, changes of benefit terms, changes in the size or composition of the population covered, or the use of different assumptions). Information about investment-related factors that significantly affect trends in the amounts reported should be limited to those factors over which the OPEB plan or the participating governments have influence.

## **Measurement of the Net OPEB Liability**

The net OPEB liability is to be measured as the total OPEB liability, less the amount of the OPEB plan's fiduciary net position. In actuarial terms, this will be the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement). The net OPEB liability should be measured as of the OPEB plan's most recent fiscal year end.

## **Frequency and Timing of the Actuarial Valuation**

An actuarial valuation to determine the total OPEB liability is required to be performed at least every two years. If the actuarial valuation is not calculated as of the plan's fiscal year end, the total OPEB liability is required to be rolled forward from the actuarial valuation date to the OPEB plan's fiscal year end. If update procedures are used to roll forward the total OPEB liability, the date of the actuarial valuation must be no more than 24 months earlier than the OPEB plan's most recent fiscal year-end.

The total OPEB liability shown in this report is based on an actuarial valuation performed as of December 31, 2016 and a measurement date of December 31, 2017.

## **Single Discount Rate**

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on OPEB plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on OPEB plan investments is 6.75%; the municipal bond rate is 3.31% (based on the daily rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index"); and the resulting Single Discount Rate is 6.75%.

## Actuarial Assumptions

The actuarial assumptions used to value the liabilities are outlined in detail in Section H. The assumptions include details on the healthcare trend assumption, as well as the cost method used to develop the OPEB expense. Certain actuarial assumptions were based upon the result of an experience study dated September 28, 2016.

## Future Uncertainty or Risk

Future results may differ from those anticipated in this valuation. Reasons include, but are not limited to:

- Actual medical trend differing from expected;
- Changes in the healthcare plan designs offered to active and retired members; and
- Participant behavior differing from expected, e.g.,
  - Elections at retirement;
  - One-person versus two-person coverage elections; and
  - Time of retirement or termination.

## Benefits Valued

The benefit provisions that were valued are described in Section E. The valuation is required to be performed on the current benefit terms and existing legal agreements. Consideration is to be given to the written plan document as well as other communications between the employer and plan members and an established pattern of practice for cost sharing. The summary of major plan provisions is designed to outline principal plan benefits. If the plan summary is not in accordance with the actual provisions, please alert the actuaries immediately, so they can both be sure the proper provisions are valued.

## Effective Date and Transition

GASB Statement No. 74 is effective for an OPEB plan's fiscal years beginning after June 15, 2016.

## SECTION B

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### FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Huron-Clinton Metropolitan Authority Retiree Health Care Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

# Statement of Fiduciary Net Position as of December 31, 2017

	<u>2017</u>
<b>Assets</b>	
Cash and Deposits	\$ 0
Receivables	
Accounts Receivable - Sale of Investments	\$ 0
Accrued Interest and Other Dividends	\$ 57,276
Contributions	\$ 0
Accounts Receivable - Other	\$ 0
Total Receivables	<u>\$ 57,276</u>
Investments	
Fixed Income	\$ 13,642,432
Domestic Equities	\$ 9,207,435
International Equities	\$ 5,057,633
Real Estate	\$ 850,000
Other - Prepaid Expenses	\$ 123,469
Total Investments	<u>\$ 28,880,969</u>
<b>Total Assets</b>	<u>\$ 28,938,245</u>
<b>Liabilities</b>	
Payables	
Accounts Payable - Purchase of Investments	\$ 0
Accrued Expenses	\$ 26,438
Accounts Payable - Other	\$ 0
<b>Total Liabilities</b>	<u>\$ 26,438</u>
<b>Net Position Restricted for OPEB</b>	<u>\$ 28,911,807</u>



# Statement of Changes in Fiduciary Net Position for Year Ended December 31, 2017

	<u>2017</u>
<b>Additions</b>	
Contributions	
Employer	\$ 2,149,330
Nonemployer contributing entities	0
Active Employees	420
Other	<u>0</u>
Total Contributions	<u>\$ 2,149,750</u>
Investment Income	
Net Appreciation in Fair Value of Investments	\$ 2,856,331
Interest and Dividends	624,309
Less Investment Expense	<u>0</u>
Net Investment Income	<u>\$ 3,480,640</u>
Other	<u>\$ 0</u>
<b>Total Additions</b>	<u><u>\$ 5,630,390</u></u>
 <b>Deductions</b>	
Benefit Payments	\$ 1,609,094
OPEB Plan Administrative Expense	101,359
Other	<u>0</u>
<b>Total Deductions</b>	<u>\$ 1,710,453</u>
 <b>Net Increase in Net Position</b>	 \$ 3,919,937
 <b>Net Position Restricted for OPEB</b>	
Beginning of Year	<u>\$ 24,991,870</u>
End of Year	<u><u>\$ 28,911,807</u></u>

## SECTION C

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### **REQUIRED SUPPLEMENTARY INFORMATION**

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Huron-Clinton Metropolitan Authority Retiree Health Care Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

# Schedules of Required Supplementary Information

## Schedule of Changes in Net OPEB Liability and Related Ratios Multiyear

Fiscal year ending December 31,	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Total OPEB liability</b>										
Service cost	\$ 458,291									
Interest on the total OPEB liability	2,446,452									
Changes of benefit terms	623,336									
Difference between expected and actual experience	(116,301)									
Changes of assumptions	0									
Benefit payments, including refunds of employee contributions	(1,609,094)									
<b>Net change in total OPEB liability</b>	<b>1,802,684</b>									
<b>Total OPEB liability - beginning</b>	<b>36,819,142</b>									
<b>Total OPEB liability - ending (a)</b>	<b>\$ 38,621,826</b>									
<b>Plan fiduciary net position</b>										
Employer contributions	\$ 2,149,330									
Nonemployer contributing entities contributions	0									
Employee contributions	420									
OPEB plan net investment income	3,480,640									
Benefit payments, including refunds of employee contributions	(1,609,094)									
OPEB plan administrative expense	(101,359)									
Other	0									
<b>Net change in plan fiduciary net position</b>	<b>3,919,937</b>									
<b>Plan fiduciary net position - beginning</b>	<b>24,991,870</b>									
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 28,911,807</b>									
<b>Net OPEB liability - ending (a) - (b)</b>	<b>\$ 9,710,019</b>									
<b>Plan fiduciary net position as a percentage of total OPEB liability</b>	<b>74.86 %</b>									
<b>Covered-employee payroll<sup>^</sup></b>	<b>\$ 8,866,219</b>									
<b>Net OPEB liability as a percentage of covered-employee payroll</b>	<b>109.52 %</b>									
Notes to Schedule:										
N/A										

<sup>^</sup> Payroll separately provided by the employer.

## Schedules of Required Supplementary Information

### Schedule of the Net OPEB Liability Multiyear

<u>FY Ending December 31,</u>	<u>Total OPEB Liability</u>	<u>Plan Net Position</u>	<u>Net OPEB Liability</u>	<u>Plan Net Position as a % of Total OPEB Liability</u>	<u>Covered Payroll<sup>^</sup></u>	<u>Net OPEB Liability as a % of Covered Payroll</u>
2008						
2009						
2010						
2011						
2012						
2013						
2014						
2015						
2016						
2017	\$ 38,621,826	\$ 28,911,807	\$ 9,710,019	74.86 %	\$ 8,866,219	109.52 %

<sup>^</sup> Payroll separately provided by the employer.

## Schedule of Contributions Multiyear

<u>FY Ending December 31,</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll<sup>^</sup></u>	<u>Actual Contribution as a % of Covered Payroll</u>
2008					
2009					
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017	\$ 1,415,660	\$ 2,149,330	\$ (733,670)	\$ 8,866,219	24.24 %

<sup>^</sup> Payroll separately provided by the employer.

# Notes to Schedule of Contributions

## Methods and Assumptions Used to Determine Contribution Amounts for the Fiscal Year Ending December 31, 2017\*:

Actuarial Cost Method	Entry-Age Normal
Amortization Method	Level Dollar
Remaining Amortization Period	24.75 years, Closed
Asset Valuation Method	5-Year Smoothed Market
Wage Inflation	3.50%
Salary Increases	3.69% to 7.25%, including wage inflation
Investment Rate of Return	6.75%, net of OPEB plan expenses
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2014 Generational Mortality Table for males and females, extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2015.
Health Care Trend Rates	Initial trend of 9.00%, gradually decreasing to an ultimate trend rate of 3.50% in year 10.
Aging factors	Based on the 2013 SOA Study "Health Care Costs - From Birth to Death"

### Other Information:

Notes	Benefit provisions for employees hired between January 1, 2004 and December 31, 2008 were updated to match the benefit group hired between March 14, 1991 and December 31, 2003. This change will be reflected in the December 31, 2018 actuarial valuation that will determine the contribution rates for fiscal years ending December 31, 2019 and December 31, 2020.
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\* Based on valuation assumptions used in the December 31, 2016 actuarial valuation.

## SECTION D

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### NOTES TO FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Huron-Clinton Metropolitan Authority Retiree Health Care Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

## Long-Term Expected Return on Plan Assets

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These real rates of return are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. For each major asset class that is included in the OPEB plan's target asset allocation as of December 31, 2017, these best estimates of arithmetic returns are summarized in the following table:

### Asset Allocation

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
U.S. Large Cap Fundamental Equity	4.00 %	9.13 %
U.S. Large Cap Index	15.00 %	8.00 %
U.S. Small/Mid Cap Equity Index	6.00 %	8.00 %
World Equity ex-U.S.	15.00 %	9.33 %
Emerging Markets Equity	2.00 %	9.67 %
Core Fixed Income	20.00 %	6.54 %
Limited Duration Bonds	13.00 %	5.65 %
U.S. High Yield	2.00 %	7.82 %
Emerging Markets Debt	4.00 %	8.75 %
Diversified Short Term Fixed Income	7.00 %	5.89 %
Dynamic Asset Allocation	6.00 %	10.32 %
Mutli-Asset	3.00 %	6.50 %
Private Real Estate	3.00 %	7.30 %
<b>Total</b>	<b>100.00 %</b>	

*\* The rates of return shown above were provided by the Retirement Plan's investment manager and are based upon the investment manager's inflation assumption of 2.5%.*

Gabriel, Roeder, Smith & Company does not provide investment advice.



# Single Discount Rate

A Single Discount Rate of 6.75% was used to measure the total OPEB liability. This Single Discount Rate was based on the expected rate of return on OPEB plan investments of 6.75%. The projection of cash flows used to determine this Single Discount Rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate. Based on these assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

## Summary of Membership Information<sup>#@</sup>

The following table provides a summary of the number of participants in the plan:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	154
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	-
Active Plan Members	144
Total Plan Members	298

<sup>#</sup> As of the Actuarial Valuation Date. GRS does not have the membership counts as of December 31, 2017. Huron-Clinton Metropolitan Authority staff and auditors may decide that providing membership counts as of the valuation date is sufficient to meet the GASB disclosure requirements. Alternatively, the Authority Staff may decide to update the membership counts to be as of the Plan's fiscal year end.

<sup>@</sup> Includes 7 members eligible for life insurance only.

## Sensitivity of Net OPEB Liability

Regarding the sensitivity of the net OPEB liability to changes in the Single Discount Rate, the following presents the plan's net OPEB liability, calculated using a Single Discount Rate of 6.75%, as well as what the plan's net OPEB liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

### Sensitivity of Net OPEB Liability to the Single Discount Rate Assumption

<b>1% Decrease</b>	<b>Current Single Discount</b>	<b>1% Increase</b>
<b>5.75%</b>	<b>Rate Assumption</b>	<b>7.75%</b>
\$ 14,696,870	\$ 9,710,019	\$ 5,576,089

Regarding the sensitivity of the net OPEB liability to changes in the healthcare cost trend rates, the following presents the plan's net OPEB liability, calculated using the assumed trend rates as well as what the plan's net OPEB liability would be if it were calculated using a trend rate that is one percent lower or one percent higher:

### Sensitivity of Net OPEB Liability to the Healthcare Cost Trend Rate Assumption

<b>1% Decrease</b>	<b>Current Healthcare Cost</b>	<b>1% Increase</b>
	<b>Trend Rate Assumption</b>	
\$ 5,496,359	\$ 9,710,019	\$ 14,621,265

## SECTION E

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### SUMMARY OF BENEFITS

## Summary of Plan Provisions

### Employees Hired Prior to 3/14/1991

- |                          |  |
|--------------------------|--|
| 1. Benefit Eligibility   | Retirement after ten years continuous, full-time service with the Authority. Employees who elect to defer pension benefits are not eligible.   |
| 2. Benefit Provisions    | <p>Hospitalization (Blue Cross/Blue Shield):</p> <ul style="list-style-type: none"><li>- Prior to Age 65: Retirees and eligible dependents are covered on the same basis as employees.</li><li>- Age 65 or older: Retirees and eligible dependents are covered as a supplement to Medicare.</li></ul> <p>Dental: Retirees and eligible dependents are covered on the same basis as employees.</p> <p>Optical: Retirees and eligible dependents are covered on the same basis as employees.</p> <p>Group Life: Continued for lifetime of retiree in the amount of \$10,000.</p> |
| 3. Retiree Contributions | None.  |
| 4. Spouse Coverage       | Spouses of retirees are eligible to continue to receive benefits for three years following the death of the retiree except for hospitalization.  |

## Summary of Plan Provisions

### Employees Hired 3/14/1991 to 12/31/2008

- |                          |   |
|--------------------------|---|
| 1. Benefit Eligibility   | Retirement after ten years continuous, full-time service with the Authority. Employees who elect to defer pension benefits are not eligible.  |
| 2. Benefit Provisions    | <p>Hospitalization (Blue Cross/Blue Shield):</p> <ul style="list-style-type: none"> <li>- Prior to Age 65: Under 25 years of service - full coverage for retiree only. Over 25 years of service - full coverage for retiree and spouse.</li> <li>- Age 65 or older: Retirees and eligible dependents are covered as a supplement to Medicare.</li> </ul> <p>Dental: Under 25 years of service - no coverage. Over 25 years of service - Retirees and eligible dependents are covered on the same basis as employees.</p> <p>Optical: Under 25 years of service - no coverage. Over 25 years of service - Retirees and eligible dependents are covered on the same basis as employees.</p> <p>Group Life: Continued for lifetime of retiree in the amount of \$10,000.</p> |
| 3. Retiree Contributions | None.   |
| 4. Spouse Coverage       | Spouses of retirees are eligible to continue to receive benefits for three years following the death of the retiree except for hospitalization, which continues for life of spouse if over 25 years of service.   |

## **Summary of Plan Provisions**

### **Employees Hired After 1/1/2009**

Members hired on or after January 1, 2009 are not covered under retiree hospitalization, dental, or optical plans, but are covered under the Authority's Retirement Health Savings Plan. Liabilities and expenses associated with the Retirement Health Savings Plan are not included in this report. Retirees with over 25 years of service are covered by group life insurance in the amount of \$10,000.

Members hired on or after January 1, 2013 are not covered under retiree hospitalization, dental, or optical plans, but are covered under the Authority's Retirement Health Savings Plan. Liabilities and expenses associated with the Retirement Health Savings Plan are not included in this report. These members are not eligible for group life insurance.

## SECTION F

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### DEVELOPMENT OF BASELINE CLAIMS COSTS

## Development of Baseline Claims Costs

This report complements the actuarial valuation report prepared as of December 31, 2016, and information herein should be considered along with the information from that report, especially for additional discussions of the nature of actuarial calculations and for more information related to baseline claims costs.



## SECTION G

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### SUMMARY OF PARTICIPANT DATA

## Summary of Participant Data

This report complements the actuarial valuation report prepared as of December 31, 2016, and information herein should be considered along with the information from that report, especially for additional discussions of the nature of actuarial calculations and for more information related to participant data.

## SECTION H

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### VALUATION METHODS AND ACTUARIAL ASSUMPTIONS

## Valuation Methods and Actuarial Assumptions

This report complements the actuarial valuation report prepared as of December 31, 2016, and information herein should be considered along with the information from that report, especially for additional discussions of the nature of actuarial calculations and for more information related to valuation methods and actuarial assumptions.

## Miscellaneous and Technical Assumptions

This report complements the actuarial valuation report prepared as of December 31, 2016, and information herein should be considered along with the information from that report, especially for additional discussions of the nature of actuarial calculations and for more information related to miscellaneous and technical assumptions.

### **Experience Studies**

Certain actuarial assumptions were based upon the results of an experience study dated September 28, 2016.

The tables used to model the impact of aging on claims utilization were developed by the Society of Actuaries in 2013. The other OPEB specific assumptions (health care trend, plan elections, etc.) are reviewed during each OPEB valuation and updated as needed.

### **Roll-Forward Disclosure**

The total OPEB liability shown in this report is based on an actuarial valuation performed as of December 31, 2016 and a measurement date of December 31, 2017. The roll-forward procedure increases the December 31, 2016 actuarial accrued liability with normal cost and interest and decreases it with expected benefit payments.

## SECTION I

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### **CALCULATION OF THE SINGLE DISCOUNT RATE**

## Calculation of the Single Discount Rate

GASB Statement No. 74 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total OPEB Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on OPEB plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on OPEB plan investments is 6.75%; the municipal bond rate is 3.31%; and the resulting SDR is 6.75%.

The tables in this section provide background for the development of the SDR.

- The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).
- The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.
- The **Present Values of Projected Benefit Payments** table shows the development of the SDR. It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan. There may be cases when schedules do not add or where they do not exactly balance to other related schedules due to rounding.

The projection of cash flows used to determine this Single Discount Rate assumed the following:

- The Authority will continue their current contribution policy. Namely, it is assumed that the Authority is willing and able to contribute the full amount of the Actuarially Computed Employer Contribution; and
- Contributions and benefit payments occur halfway through the year.

# Single Discount Rate Development

## Projection of Contributions

Year	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
1	\$ 0	\$ 438,196	\$ 957,369	\$ 1,395,566
2	0	472,352	859,276	1,331,628
3	0	450,227	820,476	1,270,703
4	0	424,883	778,147	1,203,030
5	0	398,256	778,147	1,176,403
6	0	372,371	778,147	1,150,518
7	0	346,651	778,147	1,124,798
8	0	322,033	778,147	1,100,180
9	0	298,524	778,147	1,076,671
10	0	273,854	778,147	1,052,001
11	0	248,893	778,147	1,027,040
12	0	225,678	778,147	1,003,825
13	0	203,430	778,147	981,577
14	0	181,127	778,147	959,274
15	0	158,839	778,147	936,986
16	0	136,964	778,147	915,111
17	0	116,850	778,147	894,997
18	0	98,445	778,147	876,592
19	0	80,885	778,147	859,032
20	0	65,350	778,147	843,497
21	0	52,107	778,147	830,254
22	0	40,479	778,147	818,626
23	0	30,605	778,147	808,752
24	0	22,340	778,147	800,487
25	0	15,973	0	15,973
26	0	11,177	0	11,177
27	0	7,614	0	7,614
28	0	5,096	0	5,096
29	0	3,292	0	3,292
30	0	2,099	0	2,099
31	0	1,340	0	1,340
32	0	779	0	779
33	0	418	0	418
34	0	181	0	181
35	0	78	0	78
36	0	27	0	27
37	0	0	0	0
38	0	0	0	0
39	0	0	0	0
40	0	0	0	0
41	0	0	0	0
42	0	0	0	0
43	0	0	0	0
44	0	0	0	0
45	0	0	0	0
46	0	0	0	0
47	0	0	0	0
48	0	0	0	0
49	0	0	0	0
50	0	0	0	0

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.



# Single Discount Rate Development

## Projection of Plan Net Position

Year		Projected Beginning Plan Net Position		Projected Total Contributions		Projected Benefit Payments		Projected Investment Earnings at 6.75%		Projected Ending Plan Net Position
		(a)		(b)		(c)		(d)		(e)=(a)+(b)-(c)+(d)
1	\$	28,911,807	\$	1,395,566	\$	1,920,413	\$	1,934,123	\$	30,321,082
2		30,321,082		1,331,628		2,087,206		2,021,589		31,587,092
3		31,587,092		1,270,703		2,223,746		2,100,489		32,734,537
4		32,734,537		1,203,030		2,359,508		2,171,187		33,749,247
5		33,749,247		1,176,403		2,488,632		2,234,510		34,671,528
6		34,671,528		1,150,518		2,617,788		2,291,616		35,495,874
7		35,495,874		1,124,798		2,704,594		2,343,524		36,259,603
8		36,259,603		1,100,180		2,829,054		2,390,126		36,920,854
9		36,920,854		1,076,671		2,918,953		2,430,996		37,509,568
10		37,509,568		1,052,001		2,940,136		2,469,212		38,090,646
11		38,090,646		1,027,040		3,016,177		2,505,081		38,606,590
12		38,606,590		1,003,825		3,092,632		2,536,599		39,054,382
13		39,054,382		981,577		3,180,234		2,563,178		39,418,902
14		39,418,902		959,274		3,290,139		2,583,394		39,671,432
15		39,671,432		936,986		3,411,829		2,595,660		39,792,248
16		39,792,248		915,111		3,519,785		2,599,504		39,787,079
17		39,787,079		894,997		3,580,610		2,596,468		39,697,935
18		39,697,935		876,592		3,662,306		2,587,128		39,499,348
19		39,499,348		859,032		3,717,190		2,571,318		39,212,508
20		39,212,508		843,497		3,727,646		2,551,094		38,879,454
21		38,879,454		830,254		3,736,850		2,527,867		38,500,724
22		38,500,724		818,626		3,723,857		2,502,348		38,097,841
23		38,097,841		808,752		3,713,246		2,475,178		37,668,525
24		37,668,525		800,487		3,689,194		2,446,723		37,226,541
25		37,226,541		15,973		3,627,534		2,392,892		36,007,872
26		36,007,872		11,177		3,577,356		2,312,138		34,753,831
27		34,753,831		7,614		3,533,026		2,228,844		33,457,262
28		33,457,262		5,096		3,470,525		2,143,317		32,135,149
29		32,135,149		3,292		3,400,860		2,056,327		30,793,909
30		30,793,909		2,099		3,331,814		1,968,046		29,432,240
31		29,432,240		1,340		3,263,412		1,878,379		28,048,546
32		28,048,546		779		3,180,621		1,787,710		26,656,414
33		26,656,414		418		3,094,569		1,696,585		25,258,849
34		25,258,849		181		2,999,261		1,605,406		23,865,175
35		23,865,175		78		2,894,640		1,514,803		22,485,416
36		22,485,416		27		2,794,584		1,424,989		21,115,848
37		21,115,848		0		2,684,607		1,336,194		19,767,435
38		19,767,435		0		2,569,563		1,248,995		18,446,867
39		18,446,867		0		2,455,654		1,163,638		17,154,851
40		17,154,851		0		2,338,746		1,080,309		15,896,414
41		15,896,414		0		2,219,718		999,316		14,676,012
42		14,676,012		0		2,099,175		920,940		13,497,777
43		13,497,777		0		1,978,108		845,429		12,365,098
44		12,365,098		0		1,858,219		772,953		11,279,832
45		11,279,832		0		1,739,228		703,648		10,244,252
46		10,244,252		0		1,621,781		637,646		9,260,116
47		9,260,116		0		1,506,360		575,048		8,328,805
48		8,328,805		0		1,392,947		515,950		7,451,808
49		7,451,808		0		1,282,072		460,434		6,630,170
50		6,630,170		0		1,174,114		408,557		5,864,613

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

## Single Discount Rate Development Projection of Plan Net Position (Concluded)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 6.75%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
51	\$ 5,864,613	\$ 0	\$ 1,069,508	\$ 360,355	\$ 5,155,460
52	5,155,460	0	968,289	315,847	4,503,019
53	4,503,019	0	871,071	275,035	3,906,983
54	3,906,983	0	778,638	237,871	3,366,217
55	3,366,217	0	691,148	204,274	2,879,343
56	2,879,343	0	609,049	174,136	2,444,429
57	2,444,429	0	532,549	147,319	2,059,199
58	2,059,199	0	462,039	123,657	1,720,817
59	1,720,817	0	397,844	102,947	1,425,920
60	1,425,920	0	339,500	84,979	1,171,398
61	1,171,398	0	287,009	69,541	953,930
62	953,930	0	240,590	56,403	769,743
63	769,743	0	199,882	45,322	615,183
64	615,183	0	164,378	36,068	486,873
65	486,873	0	133,701	28,425	381,596
66	381,596	0	107,632	22,184	296,149
67	296,149	0	85,795	17,142	227,496
68	227,496	0	67,671	13,109	172,935
69	172,935	0	52,842	9,919	130,011
70	130,011	0	40,738	7,423	96,696
71	96,696	0	31,088	5,495	71,103
72	71,103	0	23,528	4,018	51,594
73	51,594	0	17,590	2,899	36,902
74	36,902	0	12,980	2,060	25,982
75	25,982	0	9,438	1,440	17,984
76	17,984	0	6,754	990	12,221
77	12,221	0	4,750	667	8,138
78	8,138	0	3,278	440	5,300
79	5,300	0	2,215	284	3,370
80	3,370	0	1,459	179	2,090
81	2,090	0	937	110	1,263
82	1,263	0	587	66	741
83	741	0	357	38	422
84	422	0	210	22	234
85	234	0	120	12	125
86	125	0	66	6	65
87	65	0	36	3	33
88	33	0	18	2	16
89	16	0	10	1	7
90	7	0	4	0	3
91	3	0	2	0	1
92	1	0	1	0	0
93	0	0	0	0	0
94	0	0	0	0	0
95	0	0	0	0	0
96	0	0	0	0	0
97	0	0	0	0	0
98	0	0	0	0	0
99	0	0	0	0	0
100	0	0	0	0	0

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

# Single Discount Rate Development

## Present Values of Projected Benefits

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=(c)/(1+SDR)^(a-.5)
1	\$ 28,911,807	\$ 1,920,413	\$ 1,920,413	\$ 0	\$ 1,858,706	\$ 0	\$ 1,858,706
2	30,321,082	2,087,206	2,087,206	0	1,892,403	0	1,892,403
3	31,587,092	2,223,746	2,223,746	0	1,888,711	0	1,888,711
4	32,734,537	2,359,508	2,359,508	0	1,877,300	0	1,877,300
5	33,749,247	2,488,632	2,488,632	0	1,854,835	0	1,854,835
6	34,671,528	2,617,788	2,617,788	0	1,827,726	0	1,827,726
7	35,495,874	2,704,594	2,704,594	0	1,768,931	0	1,768,931
8	36,259,603	2,829,054	2,829,054	0	1,733,334	0	1,733,334
9	36,920,854	2,918,953	2,918,953	0	1,675,329	0	1,675,329
10	37,509,568	2,940,136	2,940,136	0	1,580,784	0	1,580,784
11	38,090,646	3,016,177	3,016,177	0	1,519,127	0	1,519,127
12	38,606,590	3,092,632	3,092,632	0	1,459,142	0	1,459,142
13	39,054,382	3,180,234	3,180,234	0	1,405,596	0	1,405,596
14	39,418,902	3,290,139	3,290,139	0	1,362,222	0	1,362,222
15	39,671,432	3,411,829	3,411,829	0	1,323,283	0	1,323,283
16	39,792,248	3,519,785	3,519,785	0	1,278,833	0	1,278,833
17	39,787,079	3,580,610	3,580,610	0	1,218,672	0	1,218,672
18	39,697,935	3,662,306	3,662,306	0	1,167,661	0	1,167,661
19	39,499,348	3,717,190	3,717,190	0	1,110,220	0	1,110,220
20	39,212,508	3,727,646	3,727,646	0	1,042,944	0	1,042,944
21	38,879,454	3,736,850	3,736,850	0	979,409	0	979,409
22	38,500,724	3,723,857	3,723,857	0	914,289	0	914,289
23	38,097,841	3,713,246	3,713,246	0	854,036	0	854,036
24	37,668,525	3,689,194	3,689,194	0	794,852	0	794,852
25	37,226,541	3,627,534	3,627,534	0	732,147	0	732,147
26	36,007,872	3,577,356	3,577,356	0	676,365	0	676,365
27	34,753,831	3,533,026	3,533,026	0	625,746	0	625,746
28	33,457,262	3,470,525	3,470,525	0	575,809	0	575,809
29	32,135,149	3,400,860	3,400,860	0	528,572	0	528,572
30	30,793,909	3,331,814	3,331,814	0	485,097	0	485,097
31	29,432,240	3,263,412	3,263,412	0	445,094	0	445,094
32	28,048,546	3,180,621	3,180,621	0	406,372	0	406,372
33	26,656,414	3,094,569	3,094,569	0	370,377	0	370,377
34	25,258,849	2,999,261	2,999,261	0	336,272	0	336,272
35	23,865,175	2,894,640	2,894,640	0	304,020	0	304,020
36	22,485,416	2,794,584	2,794,584	0	274,952	0	274,952
37	21,115,848	2,684,607	2,684,607	0	247,430	0	247,430
38	19,767,435	2,569,563	2,569,563	0	221,852	0	221,852
39	18,446,867	2,455,654	2,455,654	0	198,611	0	198,611
40	17,154,851	2,338,746	2,338,746	0	177,195	0	177,195
41	15,896,414	2,219,718	2,219,718	0	157,543	0	157,543
42	14,676,012	2,099,175	2,099,175	0	139,567	0	139,567
43	13,497,777	1,978,108	1,978,108	0	123,201	0	123,201
44	12,365,098	1,858,219	1,858,219	0	108,416	0	108,416
45	11,279,832	1,739,228	1,739,228	0	95,057	0	95,057
46	10,244,252	1,621,781	1,621,781	0	83,034	0	83,034
47	9,260,116	1,506,360	1,506,360	0	72,247	0	72,247
48	8,328,805	1,392,947	1,392,947	0	62,584	0	62,584
49	7,451,808	1,282,072	1,282,072	0	53,960	0	53,960
50	6,630,170	1,174,114	1,174,114	0	46,291	0	46,291

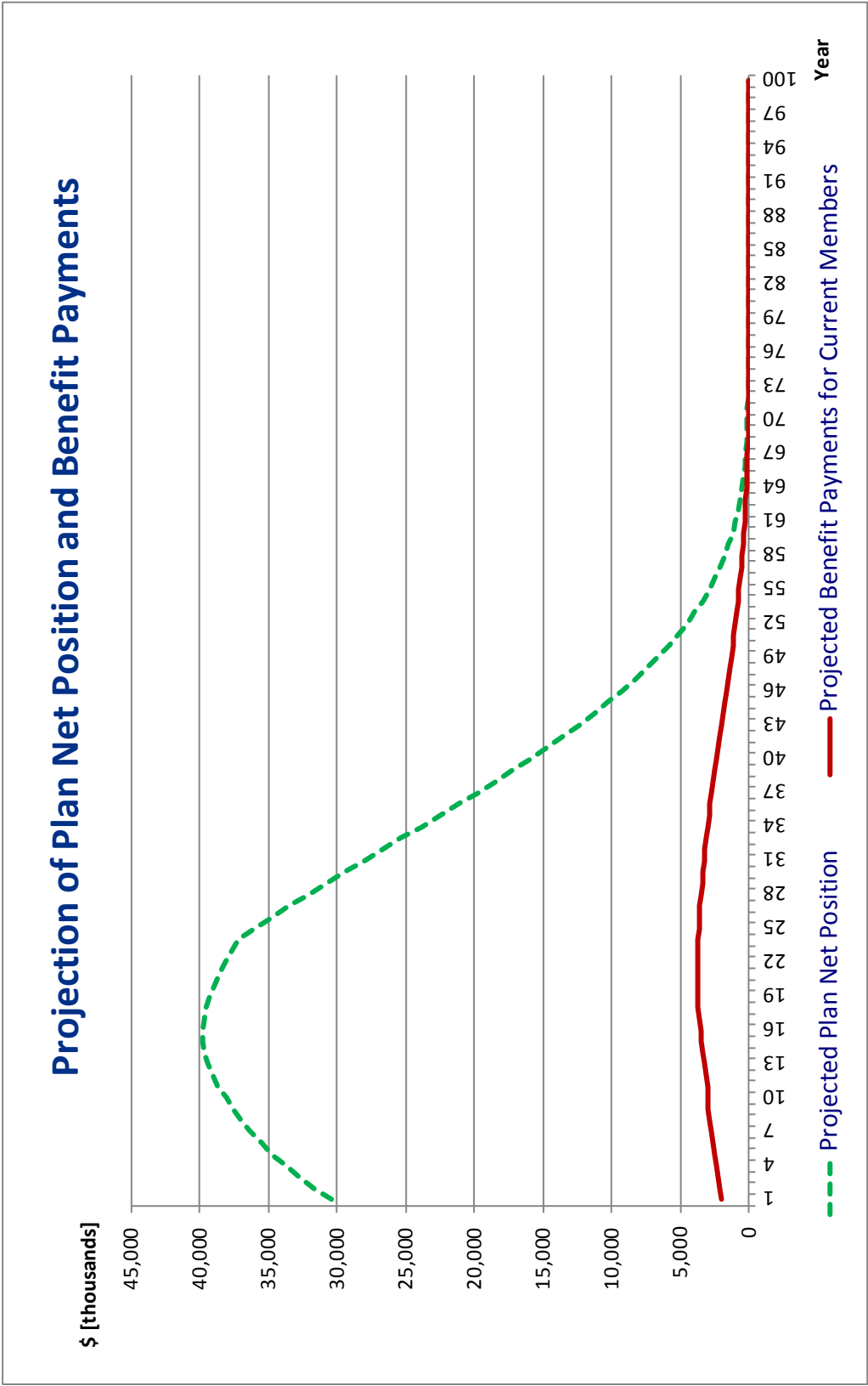
The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

# Single Discount Rate Development

## Present Values of Projected Benefits (Concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=(c)/(1+SDR)^(a-.5)
51	\$ 5,864,613	\$ 1,069,508	\$ 1,069,508	\$ 0	\$ 39,501	\$ 0	\$ 39,501
52	5,155,460	968,289	968,289	0	33,501	0	33,501
53	4,503,019	871,071	871,071	0	28,232	0	28,232
54	3,906,983	778,638	778,638	0	23,640	0	23,640
55	3,366,217	691,148	691,148	0	19,657	0	19,657
56	2,879,343	609,049	609,049	0	16,227	0	16,227
57	2,444,429	532,549	532,549	0	13,292	0	13,292
58	2,059,199	462,039	462,039	0	10,803	0	10,803
59	1,720,817	397,844	397,844	0	8,713	0	8,713
60	1,425,920	339,500	339,500	0	6,965	0	6,965
61	1,171,398	287,009	287,009	0	5,516	0	5,516
62	953,930	240,590	240,590	0	4,332	0	4,332
63	769,743	199,882	199,882	0	3,371	0	3,371
64	615,183	164,378	164,378	0	2,597	0	2,597
65	486,873	133,701	133,701	0	1,979	0	1,979
66	381,596	107,632	107,632	0	1,492	0	1,492
67	296,149	85,795	85,795	0	1,114	0	1,114
68	227,496	67,671	67,671	0	823	0	823
69	172,935	52,842	52,842	0	602	0	602
70	130,011	40,738	40,738	0	435	0	435
71	96,696	31,088	31,088	0	311	0	311
72	71,103	23,528	23,528	0	220	0	220
73	51,594	17,590	17,590	0	154	0	154
74	36,902	12,980	12,980	0	107	0	107
75	25,982	9,438	9,438	0	73	0	73
76	17,984	6,754	6,754	0	49	0	49
77	12,221	4,750	4,750	0	32	0	32
78	8,138	3,278	3,278	0	21	0	21
79	5,300	2,215	2,215	0	13	0	13
80	3,370	1,459	1,459	0	8	0	8
81	2,090	937	937	0	5	0	5
82	1,263	587	587	0	3	0	3
83	741	357	357	0	2	0	2
84	422	210	210	0	1	0	1
85	234	120	120	0	0	0	0
86	125	66	66	0	0	0	0
87	65	36	36	0	0	0	0
88	33	18	18	0	0	0	0
89	16	10	10	0	0	0	0
90	7	4	4	0	0	0	0
91	3	2	2	0	0	0	0
92	1	1	1	0	0	0	0
93	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0
99	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
Totals					\$ 42,159,947	\$ 0	\$ 42,159,947

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.



## SECTION J

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### GLOSSARY OF TERMS

## Glossary of Terms

<b>Accrued Service</b>	Service credited under the system that was rendered before the date of the actuarial valuation.
<b>Actuarial Accrued Liability (AAL)</b>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
<b>Actuarial Assumptions</b>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<b>Actuarial Cost Method</b>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the OPEB trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<b>Actuarial Equivalent</b>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<b>Actuarial Gain (Loss)</b>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<b>Actuarial Present Value (APV)</b>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<b>Actuarial Valuation</b>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total OPEB liability, and related actuarial present value of projected benefit payments for OPEB.
<b>Actuarial Valuation Date</b>	The date as of which an actuarial valuation is performed.

## Glossary of Terms

<b>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</b>	A calculated contribution into an OPEB plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.
<b>Amortization Method</b>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<b>Amortization Payment</b>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<b>Cost-of-Living Adjustments</b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b>Cost-Sharing Multiple-Employer Defined Benefit OPEB Plan (cost-sharing OPEB plan)</b>	A multiple-employer defined benefit OPEB plan in which the OPEB obligations to the employees of more than one employer are pooled and OPEB plan assets can be used to pay the benefits of the employees of any employer that provides benefits through the OPEB plan.
<b>Covered-Employee Payroll</b>	The payroll of employees that are provided with benefits through the OPEB plan.
<b>Deferred Inflows and Outflows</b>	The deferred inflows and outflows of OPEB resources are amounts used under GASB Statement No. 75 in developing the annual OPEB expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in the OPEB expense should be included in the deferred inflows or outflows of resources.
<b>Discount Rate</b>	<p>For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically:</p> <ol style="list-style-type: none"><li>1. The benefit payments to be made while the OPEB plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and</li><li>2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.</li></ol>



## Glossary of Terms

<b>Entry Age Actuarial Cost Method (EAN)</b>	The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
<b>Fiduciary Net Position</b>	The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.
<b>GASB</b>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<b>Long-Term Expected Rate of Return</b>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
<b>Money-Weighted Rate of Return</b>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 74, the money-weighted rate of return is calculated as the internal rate of return on OPEB plan investments, net of OPEB plan investment expense.
<b>Multiple-Employer Defined Benefit OPEB Plan</b>	A multiple-employer plan is a defined benefit OPEB plan that is used to provide OPEB payments to the employees of more than one employer.
<b>Municipal Bond Rate</b>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<b>Net OPEB Liability (NOL)</b>	The NOL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit OPEB plan.
<b>Non-Employer Contributing Entities</b>	Non-employer contributing entities are entities that make contributions to an OPEB plan that is used to provide OPEB payments to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.

## Glossary of Terms

<b>Normal Cost</b>	The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.
<b>Other Postemployment Benefits (OPEB)</b>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
<b>Real Rate of Return</b>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<b>Service Cost</b>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
<b>Total OPEB Expense</b>	<p>The total OPEB expense is the sum of the following items that are recognized at the end of the employer's fiscal year:</p> <ol style="list-style-type: none"><li>1. Service Cost</li><li>2. Interest on the Total OPEB Liability</li><li>3. Current-Period Benefit Changes</li><li>4. Employee Contributions (made negative for addition here)</li><li>5. Projected Earnings on Plan Investments (made negative for addition here)</li><li>6. OPEB Plan Administrative Expense</li><li>7. Other Changes in Plan Fiduciary Net Position</li><li>8. Recognition of Outflow (Inflow) of Resources due to Liabilities</li><li>9. Recognition of Outflow (Inflow) of Resources due to Assets</li></ol>
<b>Total OPEB Liability (TOL)</b>	The TOL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<b>Unfunded Actuarial Accrued Liability (UAAL)</b>	The UAAL is the difference between actuarial accrued liability and valuation assets.
<b>Valuation Assets</b>	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 74 and 75, the valuation assets are equal to the market value of assets.

**HURON-CLINTON METROPOLITAN AUTHORITY**

To: Board of Commissioners  
From: David Kirbach, Deputy Director  
Subject: Approval – Motor City Canoe Rental  
Location: Oakwoods Metropark  
Date: May 3, 2018

**Action Requested: Motion to Approve**

That the Board of Commissioners' approve staff to work with Motor City Canoe Rental (MCCR) on a service agreement for a canoe livery operation at Oakwoods Metropark as recommended by Deputy Director Dave Kirbach and staff.

**Fiscal Impact:** No negative fiscal impact. MCCR proposes giving the Metroparks 20 percent of its rental fees at this time.

**Background:** MCCR approached staff regarding operating a canoe livery service from the Cedar Knoll picnic area at Oakwoods Metropark. The operation would be similar to that of the Simple Adventures concessionaire that operates out of Lake St. Clair Metropark.

**Attachment: Motor City Canoe Rental Proposal**





A presentation to Huron-Clinton Metroparks

## **Mission Statement**

Motor City Canoe Rentals mission is to bring fun and affordable paddle sport opportunities to the Metro Detroit area by providing safe quality equipment and friendly knowledgeable customer service. We strive to maintain business practices that are sound in reducing environmental impact. We look forward to working with our partners in expanding environmental education opportunities for local residents and youth.

## **Our Vision**

Since 2015, Motor City Canoe Rental has offered two and four-hour trips on the Huron River from Flat Rock to Lake Erie. As of recent, our business has reached its maximum capacity at our current location in downtown Flat Rock due to limitations on parking and property size. Between Memorial Day and Labor Day we had to turn down hundreds of customers every weekend because of lack of boats. We have found most customers were still willing to drive 45 minutes and pay much higher prices to have a similar experience. Spring 2018 we will be opening our second location and would like to also open a third in Oakwoods Metropark. By offering trips through a much more scenic area, that is only 15 minutes from our sold-out location, we can keep those unspent dollars downriver and give the customers better service without them having to spend more time and money.

Although Oakwoods does not have as much foot traffic as Lower Huron or Willow, we know that we have the customer base to sustain a profitable operation, increasing the parks income by not only park passes, but also through the 20 percent of gross sales going to the Metroparks. Even by raising our prices to match the other rentals in the Metropark system and the customers having to buy passes to get to the location, we would still have some of the most competitive rates in southeast Michigan.

Cedar Knoll Picnic Area would be an ideal location as we can run a three hundred percent more profitable operation by having the customers meet at their trips ending location, as opposed to having them meet upriver and needing to keep shuttles and staff waiting at multiple pickup locations. Cedar Knoll is also far enough from the nature center that the sound of business operations would not disrupt anyone.

## Services We Would Like to Offer

### **Hourly Rentals**

This beautiful paddle through the Metroparks would begin with our customers meeting us at Cedar Knoll Picnic area in Oakwoods Metropark. Customers would park their cars and we would shuttle them to a canoe landing at Willow or Lower Huron Metropark. Customers would then paddle down the river back to Cedar Knoll Picnic Area. These two (\$25), four (\$35), or six-hour (\$45) trips would be offered by appointment from May through October, and walk ups would be available while school is out of session. One tubing trip would also be offered at \$20 per tube for a 1.5-hour float.

### **Porter Service**

Customers would bring their own vessel to Cedar Knoll Picnic Area, from there we would transport them and their watercraft to the put in point desired for \$10 per boat. Transport for personal boats will also be provided between launches at Oakwoods, Willow, and Lower Huron Metroparks with prices depending on availability.

## What We Will Need

Motor City Canoe Rental would provide staff, shuttle service, management, ten canoes and eight kayaks designated to the Metropark location (numbers of boats will increase if there is an increased demand throughout the season).

Motor City Canoe Rental will pay 20 percent of gross revenue to the Metroparks on a regular schedule determined by the Metroparks. Any profits on our end from this location would be put back into expansion until we've reached an agreed upon number of boats or customers. We are prepared to help the Metroparks put in a launch at any agreed upon location through labor and some materials we have readily available. We are already fully insured.

All we really need from you is permission and a place to park for all of us to start making a profit. Life jackets, paddles, and dry boxes would be locked in our enclosed trailer nightly, our boats can be locked and stacked tightly onto our small racks that would keep them 18-inches off the ground to prevent critters from nesting, and our shuttle vans and trailers would only take up four spots in a currently empty parking lot.

This summer we would need to have two vans/short busses and two trailers parked overnight along with the boats locked to the temporary racks. If all goes well throughout the summer and both parties decide to extend the contract, we would like to discuss the possibility of constructing a more permanent structure such as a pavilion with attached storage for jackets, paddles, etc.

## Operation Hours

We would like to open the operation in May and operate 10am to 5pm on Saturdays and Sundays, or by appointment for the remainder of the week. Through June, July, and August we would like to extend the hours to 9am to 6pm seven days a week, returning to the weekend hours through September and October.

## Giving Back

Along with offering the best customer service in the state, Motor City Canoe Rental aims to give back to the local community and do what we can to help it thrive. To accomplish this, we currently have our “clean up days” and “Paddle for a Purpose” program that raises money for various charities throughout the paddle sport season.

Below are just a couple of preliminary ideas we would like to try while operating in the park...

### **Race for Education**

At some point during our operating season we would like to host a canoe race down the Huron River. At the end of the race there would be a picnic set up for participants and spectators. The proceeds from this event would go to education throughout the Metroparks if possible.

### **Clean up days**

As part of our effort to keep this area beautiful we would also like to host events to clean trash from the area, participants would use our equipment free of charge for the day and collect trash as they paddle to our picnic set up down the river, the groups who collect the most amount of garbage would receive an award. This is a style of event that we already put on at our main location and would love to expand to more of the Huron River.



**HURON-CLINTON METROPOLITAN AUTHORITY**

To: Board of Commissioners  
From: Nina Kelly, Manager of Planning  
Subject: Report – Willow and Oakwoods Draft Master Plan  
Date: May 3, 2018

**Action Requested: Motion to Receive and File**

That the Board of Commissioners' receive and file the Willow and Oakwoods Draft Master Plan as presented by Manager of Planning 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 Board approval of the final plan at the June 2018 meeting.

**Attachment: Willow and Oakwoods Draft Master Plan**







# WILLOW AND OAKWOODS MASTER PLAN







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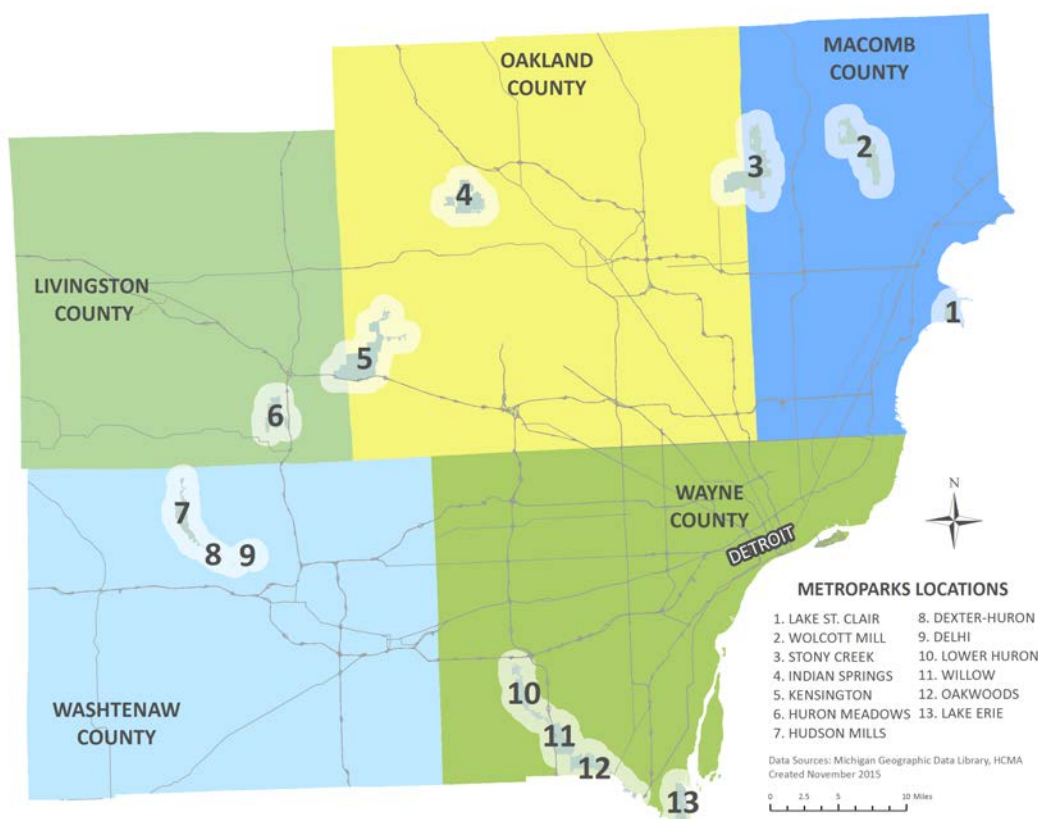
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# INTRODUCTION

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## About the Metroparks ⓘ

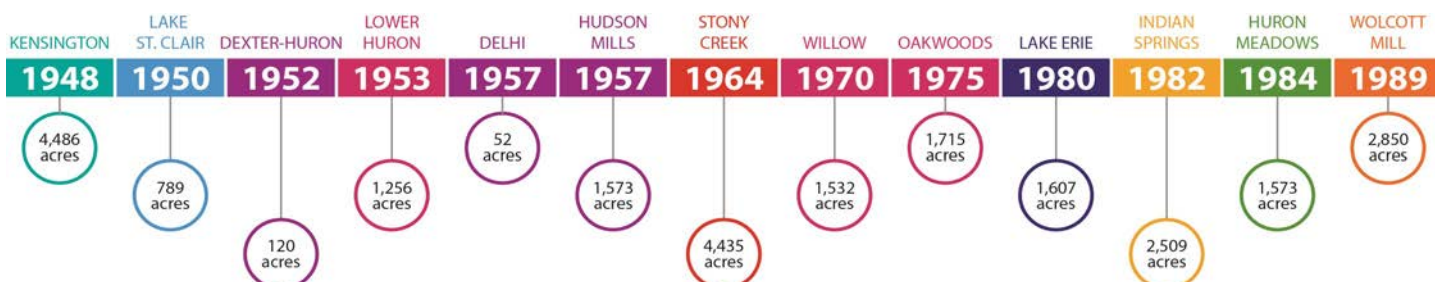


The Huron-Clinton Metropolitan Authority was sanctioned by the Michigan State Legislature in Act No. 147 of the Public Acts of 1939. Named after the two longest rivers within its boundaries, the Huron-Clinton Metropolitan Authority is a regional park agency consisting of 13 Metroparks encompassing approximately 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 .2146 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.





## Planning Process

Several factors contribute to the recommendations that will be proposed for Willow and Oakwoods 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 parks and significantly influences plan recommendations. A master plan steering committee was formed to include park employees with exceptional knowledge of both Willow and Oakwoods along with the surrounding community, who along with the experienced Metroparks department heads provide their professional opinions.

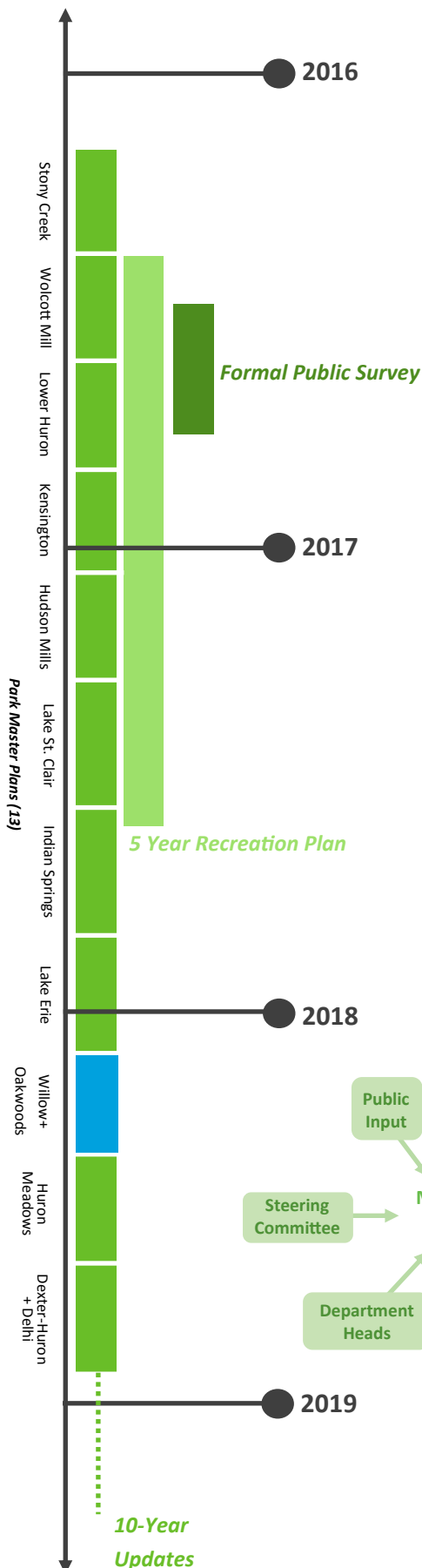
In 2016, the Metroparks Planning Department scheduled an aggressive timeline for completing all 13 park master plans in three years. Each park will be given a planning window of six months, with overlap between parks. Some master plan timelines may be extended or delayed if the Board of Commissioner's 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 Willow Master Plan Open House on 1/27/2018



# WILLOW & OAKWOODS TODAY DRAFT

## Character



The following responses to our questionnaire highlight the many facets of Willow and Oakwoods that form a unique experience. Visitors appreciate the wide range of recreational activities available at the parks, especially those related to the trails, natural resources, and golf. They see them 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

Miles and miles of **connected bike and water trails**.

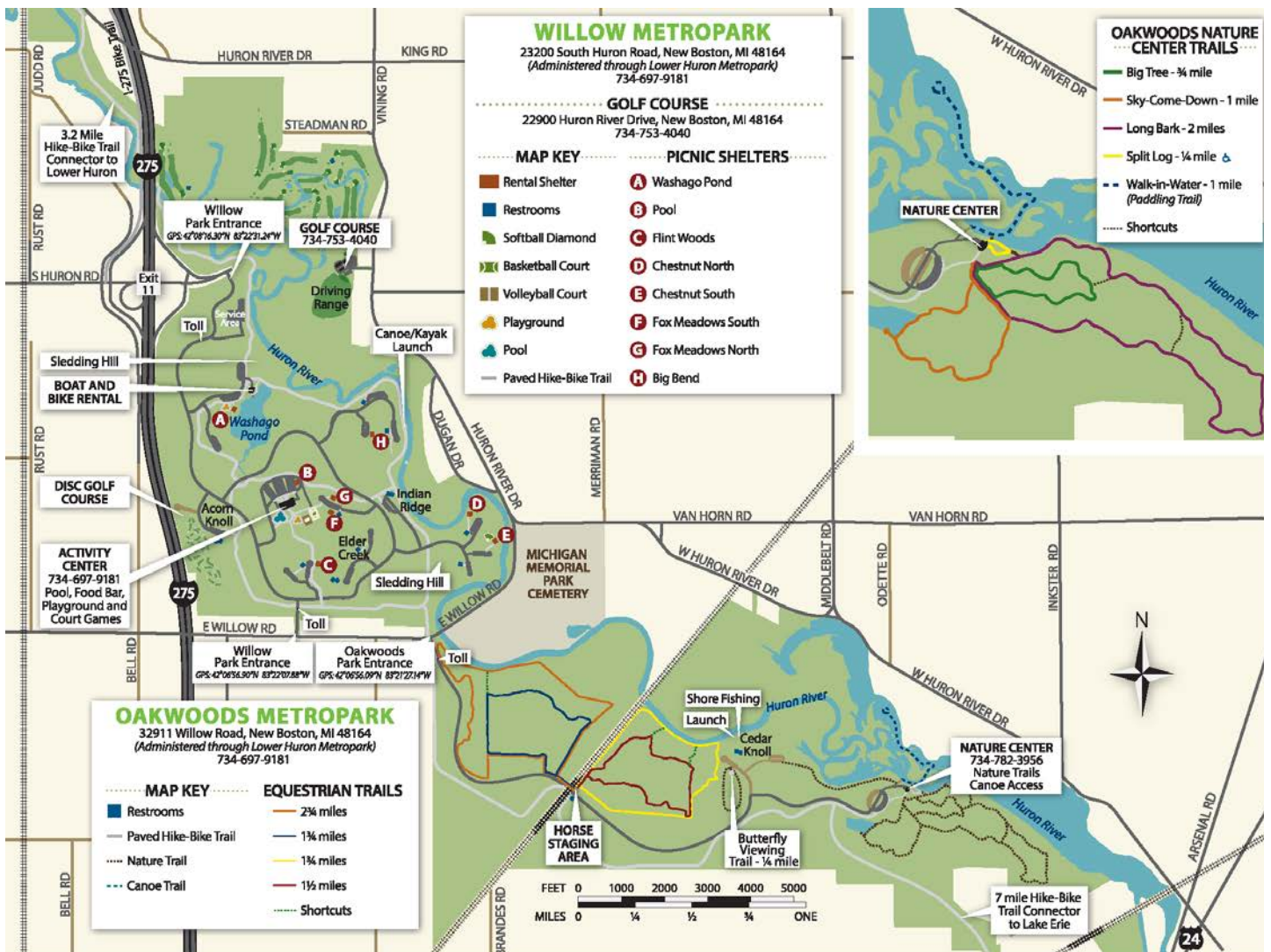
Our family loves the **Nature Center** with all the animals and learning about nature!

We really enjoy the metroparks! **Very well maintained and all of the staff are friendly and knowledgeable.**

The metroparks are a world class disc golf system. **They have embraced and successfully integrated this sport into the park system.**

This is a beautiful and safe park. My husband enjoys **kayaking on the Huron River and the access to the river** is very helpful.

Love **Washago Pond!**

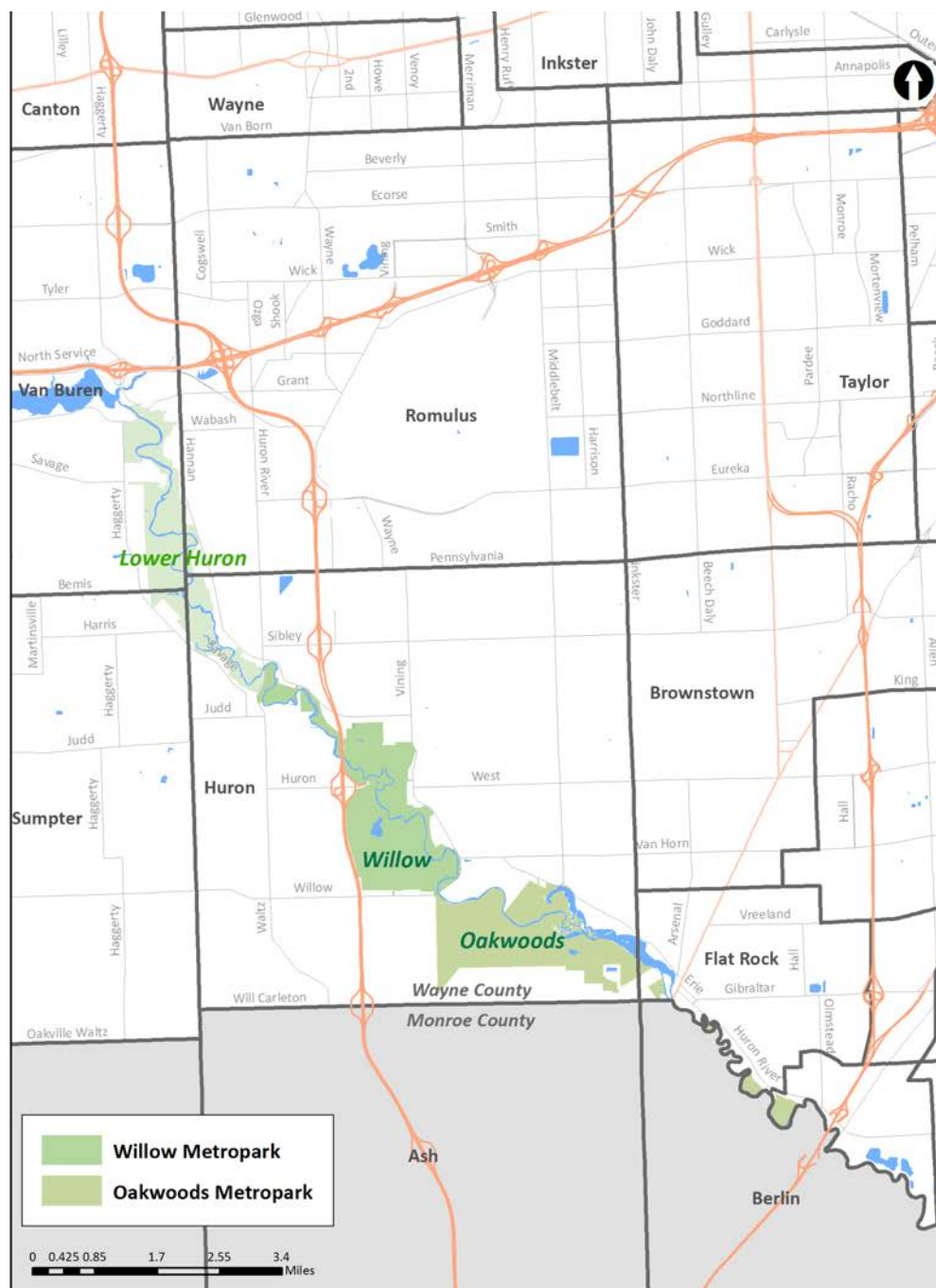




## Location

Willow and Oakwoods Metroparks are located in Wayne County, near the border with Monroe County. Both parks are within Huron Township. Oakwoods partially extends into the City of Flat Rock.

At their northernmost extent, Willow reaches Huron-River Drive, and to the east Oakwoods abuts the Huron River. Their western boundary is Waltz Road, and to the south they extend to the county line. The parks are situated on the Lower Huron River, and include a portion of the trail running from Lower Huron Metropark to Lake Erie Metropark, a segment of the Iron Belle Trail.



## 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.

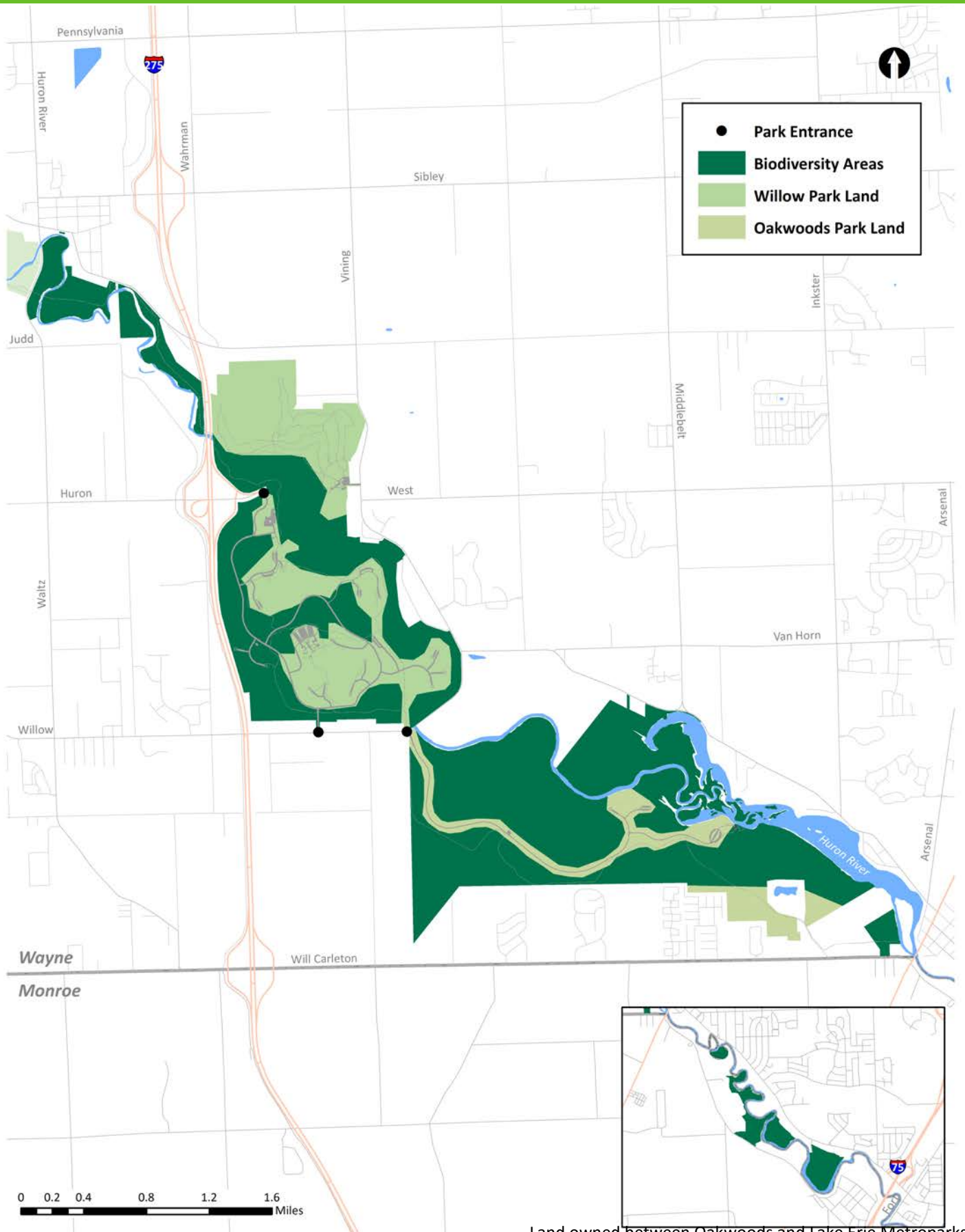


## Biodiversity Areas

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 Willow and Oakwoods.

Metric	What	Why	Metric	What	Why
<b>Elemental Occurrence</b>	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	<b>Percent Invasive Species Cover</b>	percentage of total acreage with invasive plant coverage	areas with few invasive species require less work, have greater return on investment
<b>FQA (Floristic Quality Assessment)</b>	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	<b>Community Ranking</b>	rank assigned by the state due to natural community rarity or rate of decline	assesses the vulnerability of each natural community within the state
<b>FQI (Floristic Quality Assessment) Connectivity</b>	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	<b>Wetlands</b>	the presence of wetlands	wetlands tend to have greatest diversity, and are also critical to promote healthy water resources
<b>Size</b>	acreage of the habitat in question	large habitats provide more diverse resources and facilitate migration, increase species fitness, resilience	<b>Habitat Connectivity</b>	the presence of a complementary habitat within 100 feet of another	connected wetlands promote genetic diversity conservation and water quality



Land owned between Oakwoods and Lake Erie Metroparks

## NEEDS

Better educate the importance of  
preserving cultural features

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

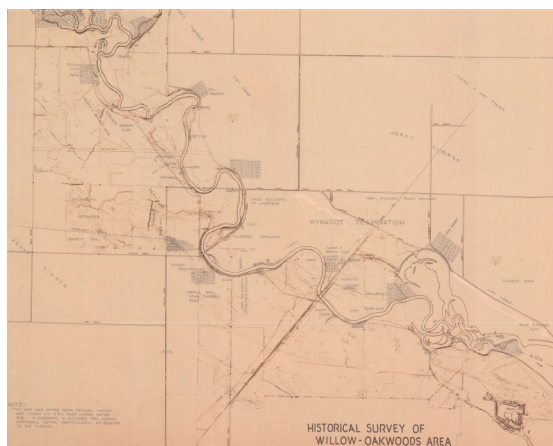
## OPPORTUNITIES

## Huron River

A large portion of both Willow and Oakwoods are recognized for important historic and cultural resources known to be present along both sides of the Huron River. Activities, management, and development within these areas shall be sensitive to the cultural resources and provide opportunities for visitor understanding and education.

## Willow

The portion of Willow near the north entrance was part of the Wyandot Reservation from 1818-1842. A cabin once stood here where Mary McKee, granddaughter of a Wyandot chief, was born in 1838. She would remain here until 1843, when her family was relocated to Kansas. Later, she would return to the Midwest and share her knowledge of Wyandot culture and history with an anthropologist. The Wyandot of Anderdon today operate as a tribal government and also as a 501 (C)(3) non-profit and actively participate as a stakeholder for both parks. Willow Metropark contains



Original survey map of 1818 with additional notes added in 1852, particularly as related to the Native Americans.

## Cultural History



Voyageur canoe ride as an interpreter shares a bit of history along the Huron River.

a historic cemetery, known as the Huron Township Cemetery or "Fay and Smith Cemetery." It is located between Big Bend and Indian Ridge.

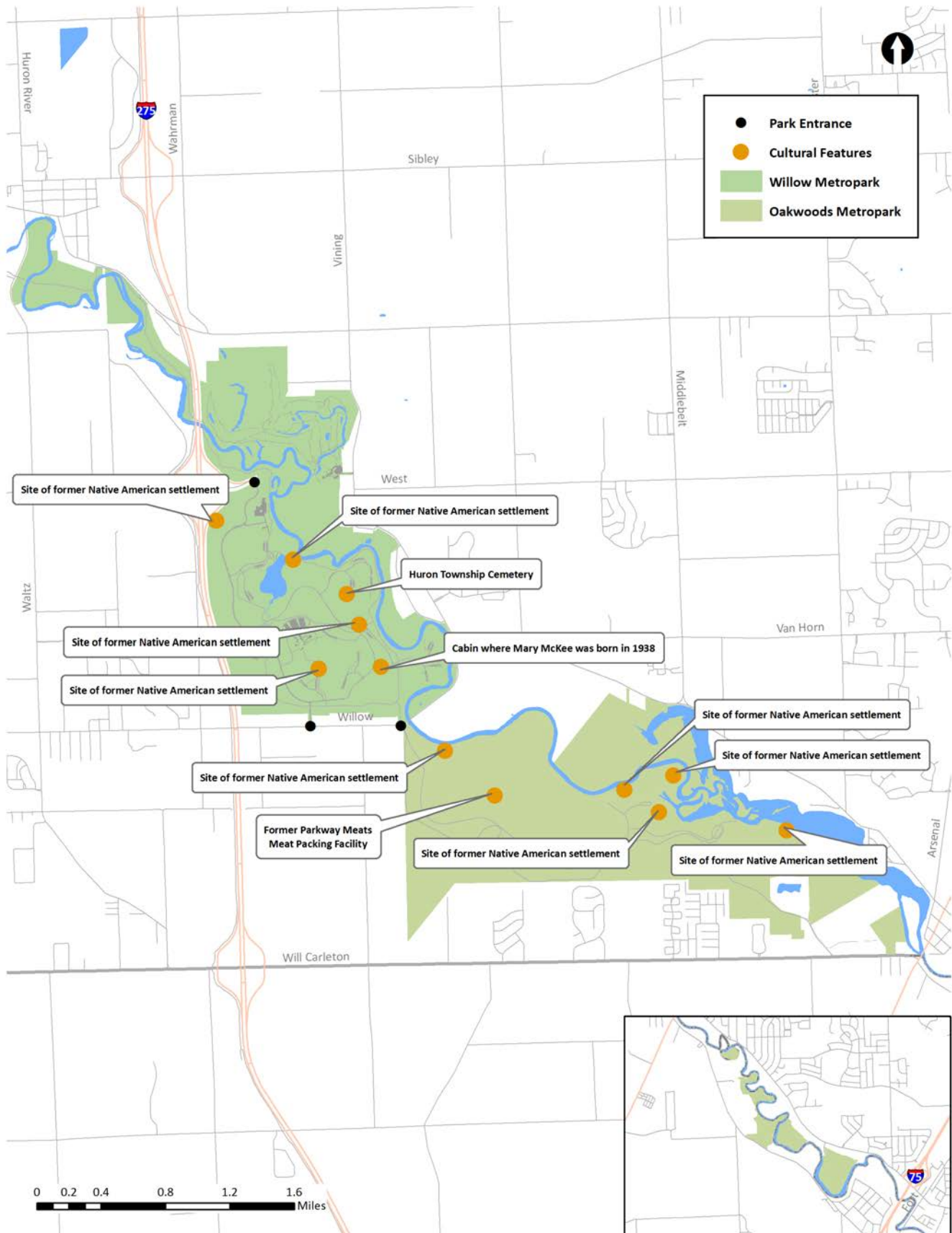
## Oakwoods

The vast majority of Oakwoods was also part of the Wyandot Reservation under the Treaty of St. Mary's. Numerous archaeological digs have been performed within the park by staff and other experts. These digs have revealed both historic and prehistoric artifacts, showing that the Native American have been utilizing this site for thousands of years. The center of the park is the former site of a meat packing plant. This area contains a wealth of historical artifacts, many dating back 50-100 years, when there were houses located along the Old South Huron Rd.



House where Mary McKee was born, built in 1811 by her grandfather Chief Quo-qua.







# Infrastructure

In order to serve the varied needs of park visitors, Willow and Oakwoods contain 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 Willow and Oakwoods includes roads, parking lots, bridges, trails, utilities, and much more. Since maintaining infrastructure is costly, it is important going forward to avoid overbuilding. Collocating facilities will help to minimize paving, utilities, and reduce maintenance. Although Willow and Oakwoods Metroparks are relatively isolated from other large recreation areas, a goal in the planning process is to ensure that the facilities in the park complement others nearby rather than create duplication.



## NEEDS

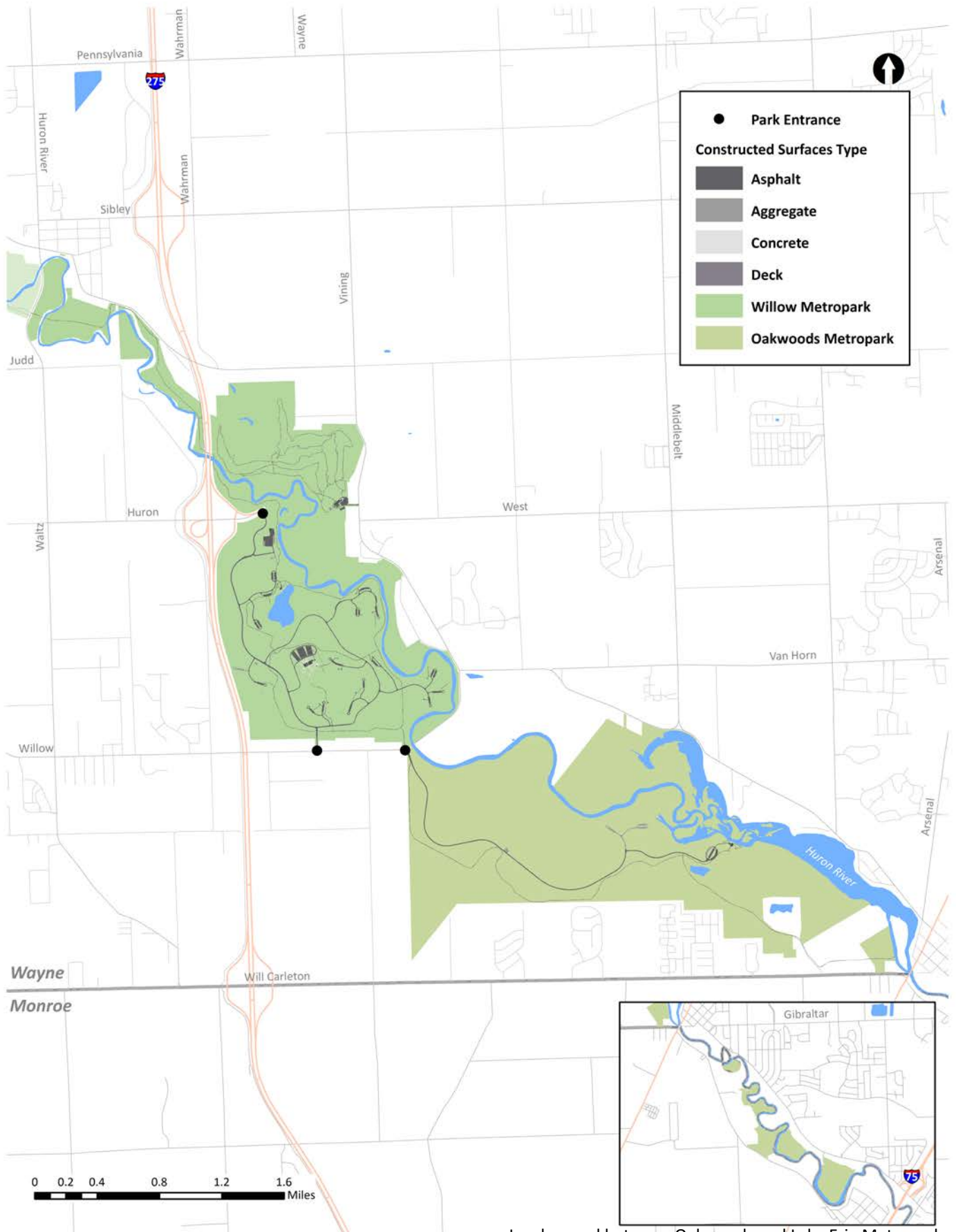
Address aging and overbuilt infrastructure

Redevelop park areas to better serve visitors and the environment

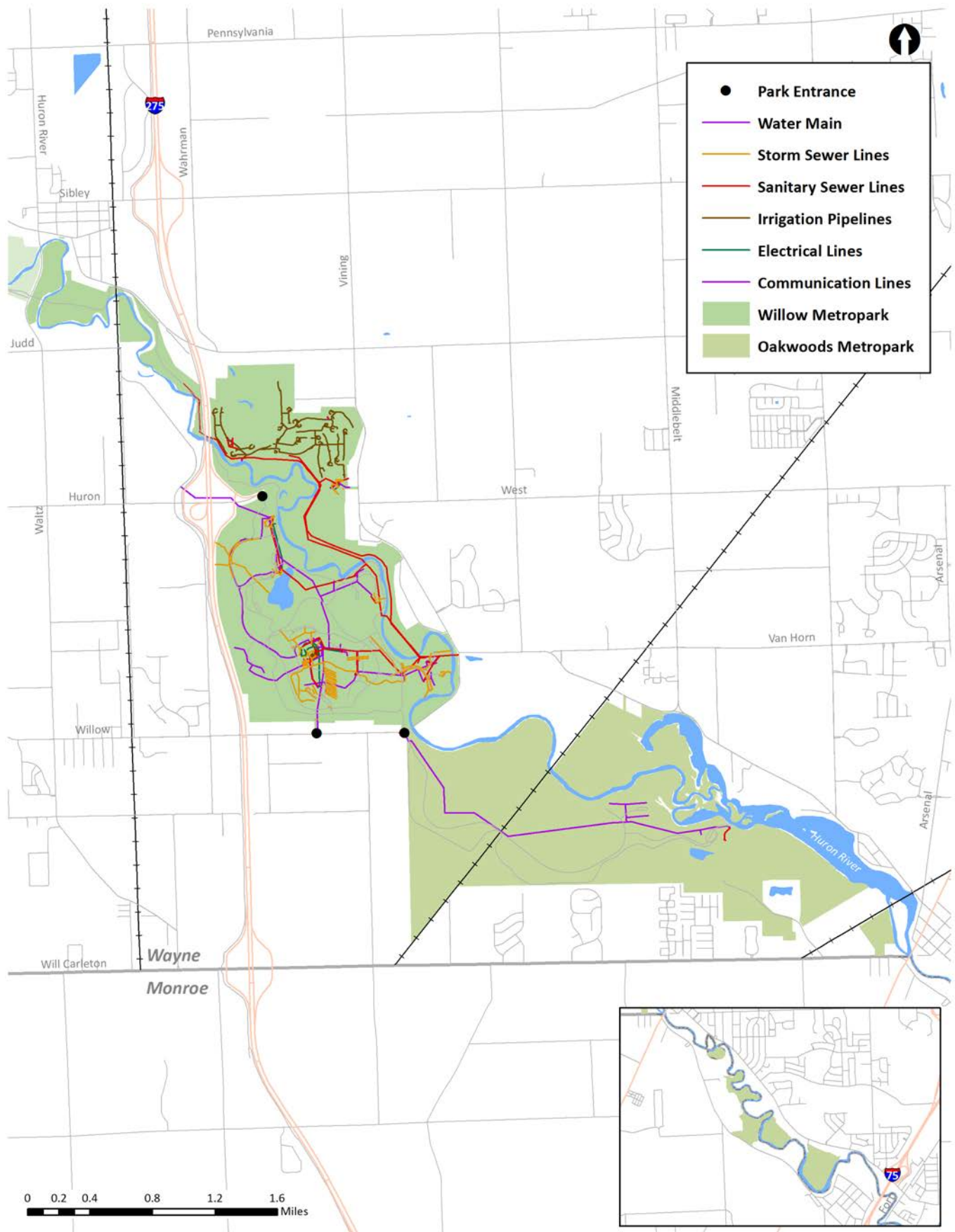
## OPPORTUNITIES

Infrastructure		
	Willow	Oakwoods
Public bldgs / avg age	6 / 37	1 / 43
Service bldgs / avg age	8 / 34	1
Comfort stations / avg age	7 / 34	0
Road miles	6.08	3.04
Parking lot acreage	16.91	4.05
Playgrounds	10	0
Percent of park mowed	21	3.5
Picnic shelters	8	0
Sand volleyball courts	2	0
Baseball fields	1	0
Fishing platforms	1	0
Tennis courts	0	0
Ice skating rinks	0	0
Basketball courts	2	0
Public canoe/kayak launches	1	2





Land owned between Oakwoods and Lake Erie Metroparks





## Facilities & Centers

Willow and Oakwoods feature a number of facilities that define their 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.

### Willow Pool

The Willow Pool facility offers a family waterslide, water basketball, spray features, and a zero depth pool. A large food bar is located adjacent to the water facility.

### Willow Golf Course

The 6,394 yard, par 71 golf course is characterized as having long, narrow tree-lined fairways, with water features on nine holes. Willow Metropark golf course includes a starter building, driving range, practice green, and cart paths.

### Willow Disc Golf Course

The 24-hole Willow Disc Golf Course is characterized as mostly flat terrain with the longest hole over 700 feet. The course begins near the Acorn Knoll picnic area.

### Washago Pond (Willow)

Washago Pond includes a rental center for single and tandem bikes along the hike-bike trail and paddleboats, character boats, rowboats, and kayaks available for the pond. The facility also includes restrooms, boat rental slips, and a shoreline fishing boardwalk.



### Oakwoods Nature Center

The Nature Center is the centerpiece and an important component to the cultural and natural resources at Oakwoods, one of the least-developed parks in the Metroparks system. The facility provides interpretive programs, surrounding trails, and Voyageur canoe access to the Huron River for visitors.



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 Willow and Oakwoods. Relatively few of these facilities and programs available in the five-mile radius can be built upon the park's unique and significant features. This may present opportunities for these two parks to meet the recreational needs of the area in new ways distinct from other recreational opportunities moving forward.

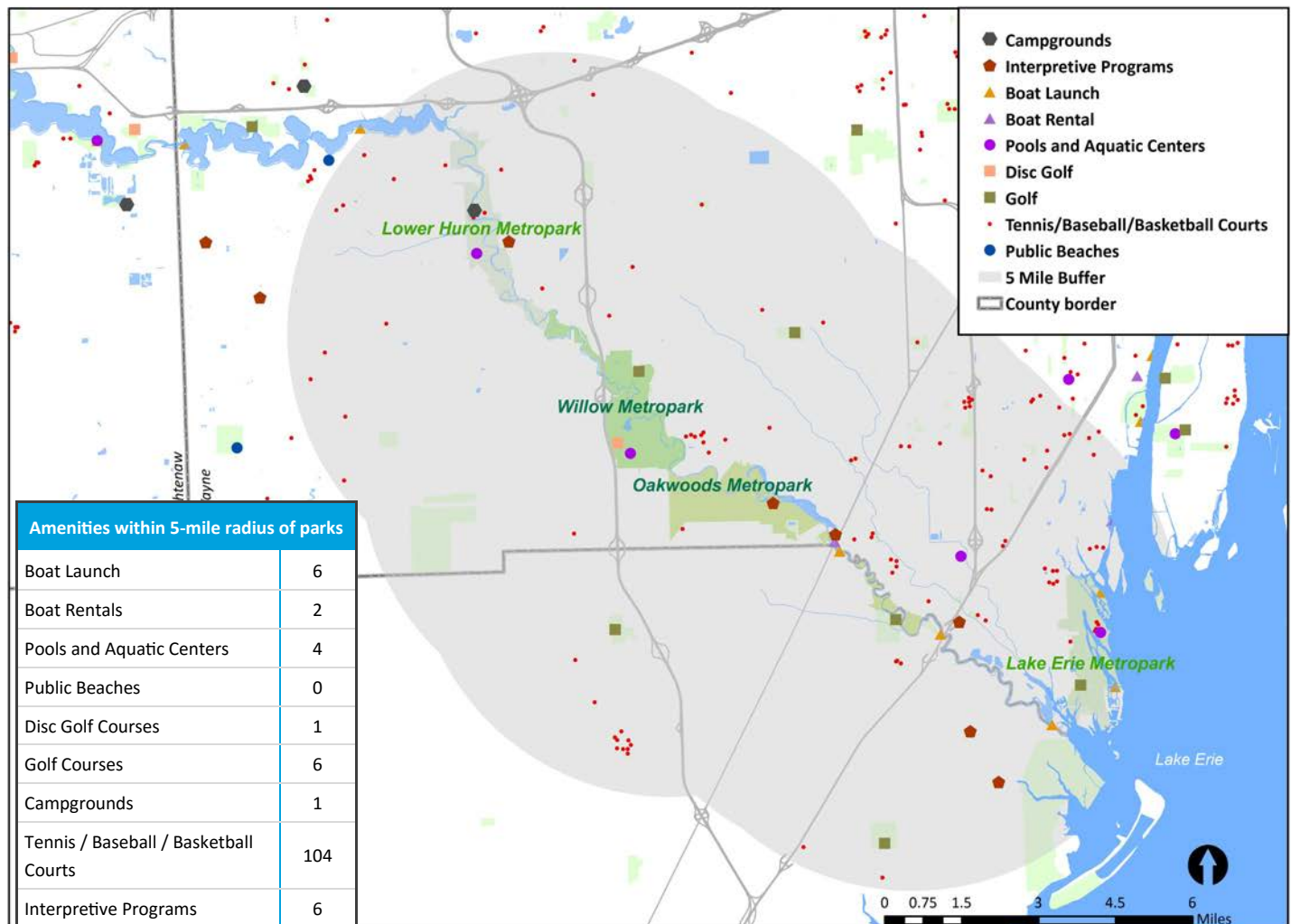
## NEEDS

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 relationship with neighbors and partner organizations

## OPPORTUNITIES

### Grants

Over its history, Willow has received two grants from the DNR (Department of Natural Resources) for the renovations and repurposing of buildings and general maintenance. 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. The entire park (100%) of Willow is encumbered, as shown on the following page.

Oakwoods Metropark is one of the least-developed parks in the system. Subsequently, no land is encumbered in this park.



### Encroachments

The Planning Department has worked with Willow-Oakwoods 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 Oakwoods 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 parks 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

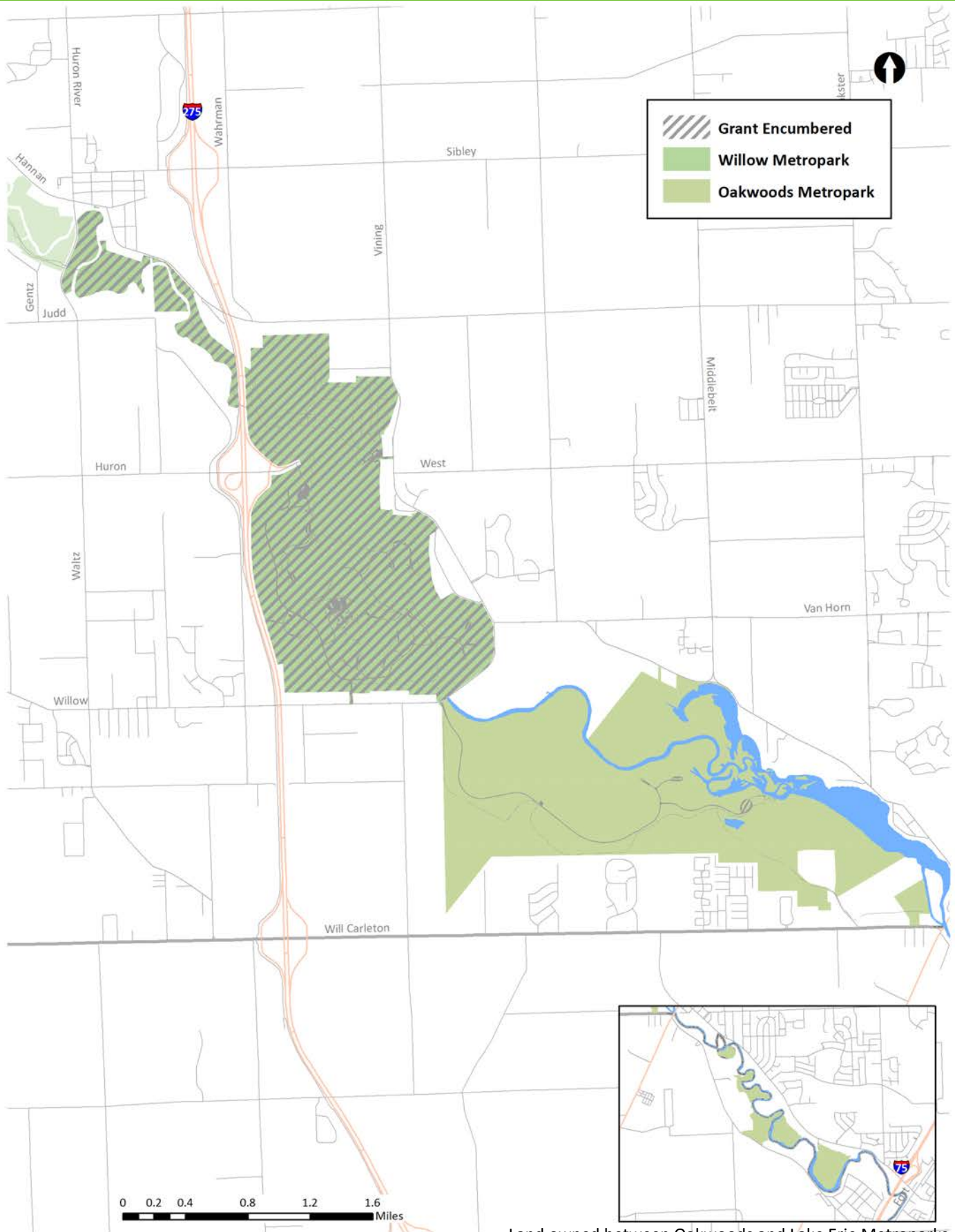
Willow and Oakwoods contain various utility easements, meaning that utility providers are allowed to use certain sections of land to run power lines or other equipment, in order to provide service to the surrounding area. In the future, the Metroparks will collaborate with surrounding municipalities 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 parks is predominantly single family residential. The western boundary of Willow is the 275 interstate highway corridor. Other land use include agricultural, and small portions of industrial and commercial properties.







Land owned between Oakwoods and Lake Erie Metroparks



## Wayfinding

### Vehicular Wayfinding

#### Standardization

Recently Metroparks updated signage installed at various times with various standards and designs. This did not reinforce the parks working together as a system and could be confusing for visitors. As older signs reached the end of their lives, they were replaced with new, standardized signs.

#### Simplicity

In many parks, including Willow and Oakwoods, 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 at Willow and Oakwoods include shared use (hike-bike), ski, nature and rustic hiking, 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, new trail wayfinding signs were completed at Oakwoods Nature Center which include a map marked with a “you are here” symbols and the location of important park features and amenities.

#### NEEDS

Replace outdated, confusing, inconsistent signs

Create consistent, convenient wayfinding system to give visitors confidence

#### OPPORTUNITIES





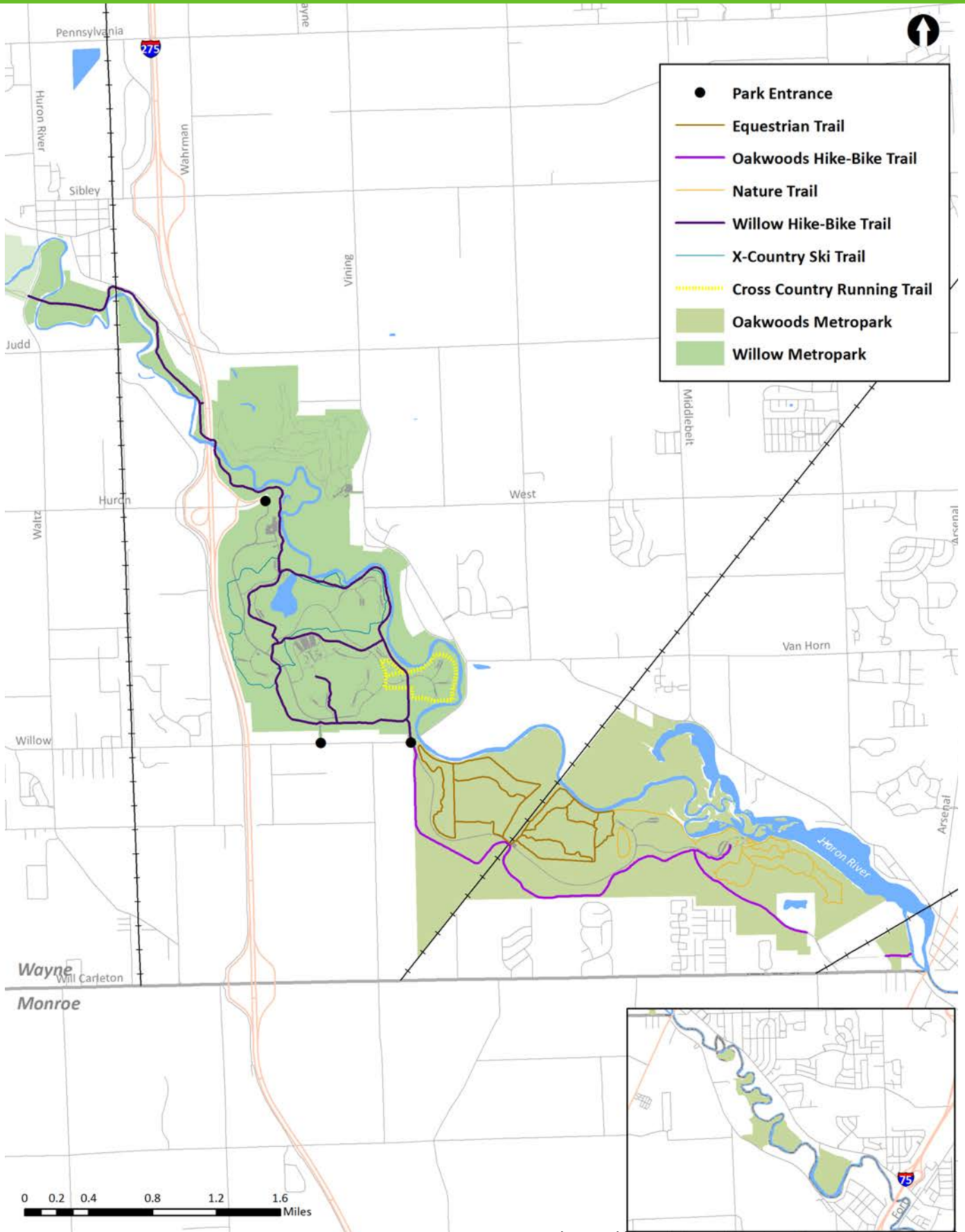
## Trails

As part of the master planning process, staff have categorized and defined the various types of trails in Willow and Oakwoods, 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 other trail types within the parks. It will also lead to more standardized maintenance and rule enforcement processes.



Park	Trail Type	Miles	Allowed Uses	Prohibited Uses	Surface
Both	<b>Shared-Use Trail (Hike-Bike Trail)</b>	11.58	Non-motorized traffic and pets.	Horses and motorized vehicles such as golf carts, scooters, and hover-boards.	10' wide, typically asphalt, some small sections may be concrete or boardwalk.
Oak	<b>Nature Trail</b>	4.69	Pedestrian use only; hiking and walking. Snowshoeing is permitted on all Nature Trails except those designated for cross-country skiing. Cross-country skiing is permitted on designated trails only.	Motorized vehicles, running, jogging, pets, bikes, and horses.	Trail surfaces vary and include asphalt, aggregate, mulch and compacted earth. Portions of these trails are accessible, but most are not ADA-compliant.
Both	<b>Cross-Country Ski Trail</b>	6.74	Cross-country skiing only. Many are used for other activities during the summer.	Motorized vehicles, snowshoes, hiking, bikes, horses, and pets.	Snow covered.
Oak	<b>Equestrian Trail</b>	6.82	Horses and Pedestrians; cross-country skiing is permitted in the winter on designated trails only.	Motorized vehicles, bikes, snowshoes and pets.	Typically dirt single track, trail widths vary.
Both	<b>Huron River Water Trail</b>	11	Canoeing and kayaking	Other uses are present in river but are not considered part of water trail.	Water

Willow and Oakwoods include approximately 30 miles of trails. The shared use hike-bike trail connects to the Iron Belle Trail, the longest state trail in the nation with two paths to hike or bike between Belle Isle Park in Detroit and Ironwood in the Upper Peninsula. Both parks also abut the Huron River and include a segment of the Huron River Water Trail, which is approximately 11 river miles in length.



Land owned between Oakwoods and Lake Erie Metroparks

## Accessibility-Willow

To remain compliant with the Americans with Disabilities Act (ADA), 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 identifying areas where improved access is needed so that all guests can enjoy the park. A survey of several areas has resulted in a list of accessibility issues present at Willow Metropark. These areas are highlighted below and shown on the map on the following page.

### NEEDS

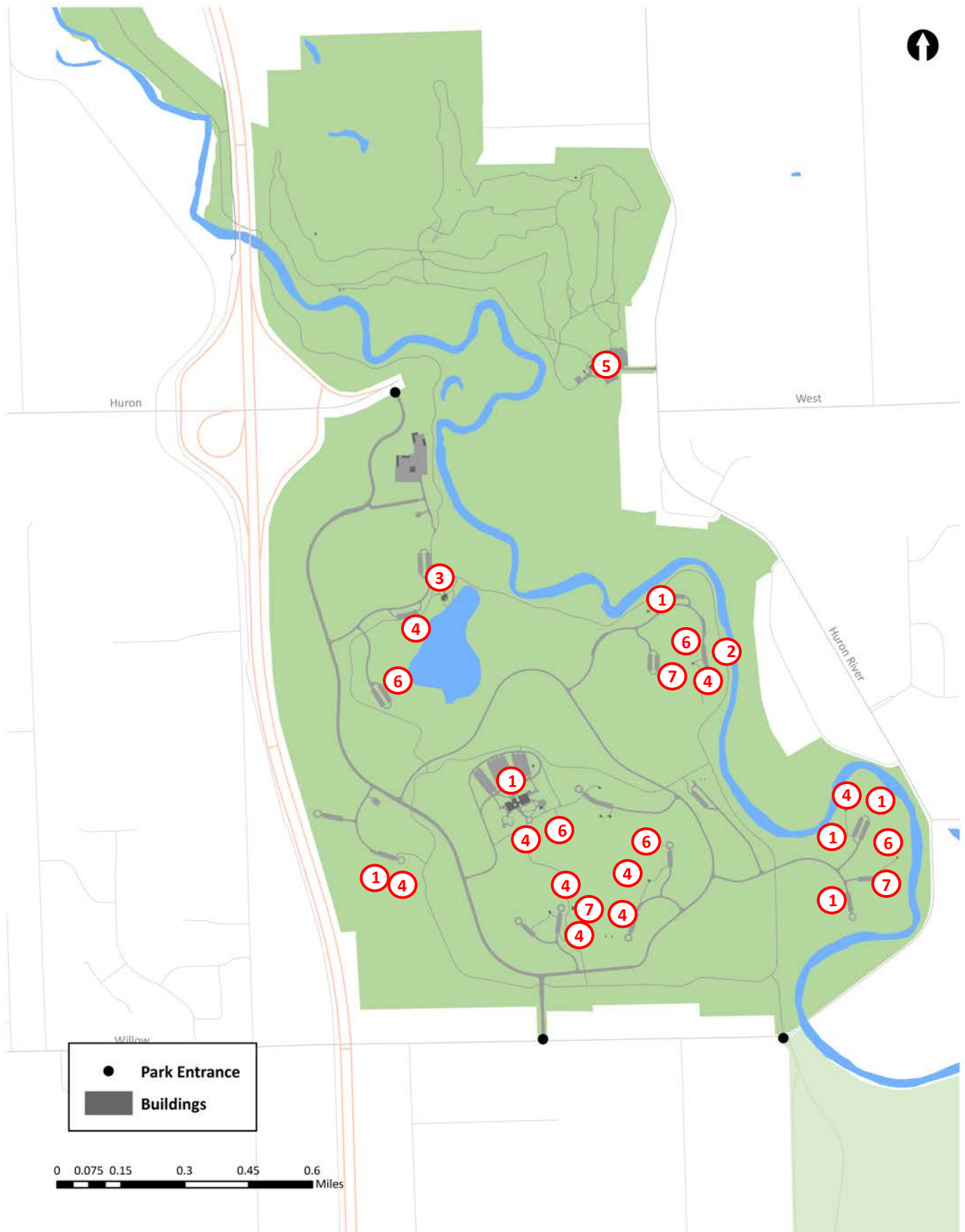
Pursue improvements to park accessibility

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

### OPPORTUNITIES

Area	ID #	Description
Restrooms	1	Restrooms need to be updated for accessibility at Golf Course, Big Bend Picnic Area, Willow Activity Center, Chestnut Picnic Area
Canoe/Kayak Launch	2	Accessible kayak launch system and accessible route from parking lot
Washago Pond	3	Parking lot signs and accessible route to building entrance and fishing area
Playgrounds	4	Accessible route to playgrounds at Elder Creek, Big Bend, Washago Pond, Activity Center, Fox Meadows, and Chestnut
Golf Course	5	Accessible route from parking lot to entrance and connections to bag drop area
Court Games	6	Accessible route to Court Games and fields at Washago Pond, Activity Center, Big Bend, and Chestnut picnic area
Picnic Areas	7	Parking lot improvement at Chestnut, Elder Creek, Fox Meadows, and Flint Woods picnic areas

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 facility 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.



## Accessibility-Oakwoods

Area	ID #	Description
Restrooms	1	Accessible restrooms at Cedar Knoll and accessible route to them
Canoe/Kayak Launch	2	Accessible kayak launch system and accessible route from parking lot
Nature Center	3	Parking lot sign
Cedar Knoll Launch	4	Accessible kayak launch system and accessible route from parking lot





## Revenue Sources

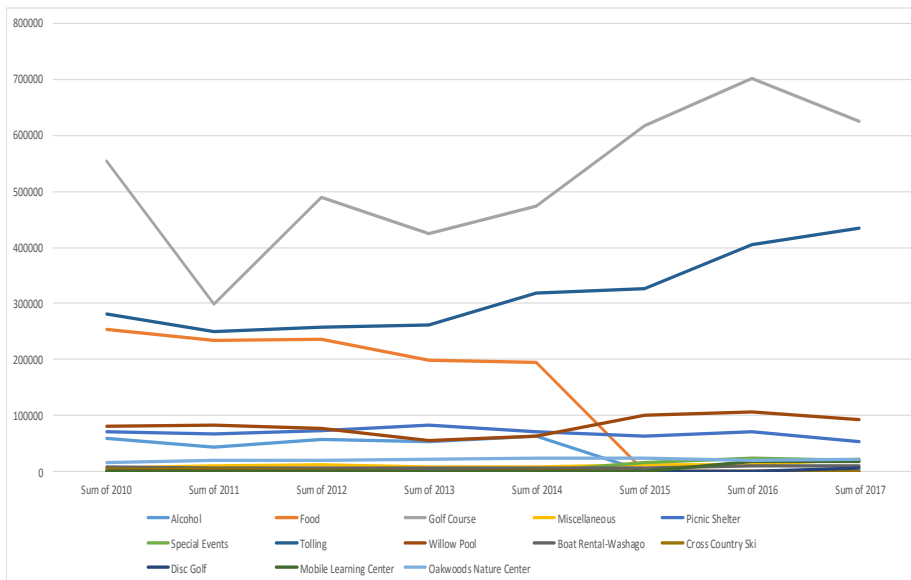
### NEEDS

Diversify sources of revenue

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

### OPPORTUNITIES

#### 2010-2017 Revenue Trends



The Metroparks 2017 General Fund revenue equaled \$51,974,301. Willow and Oakwoods 2017 operations revenue was approximately \$1,228,132, comprising 2.4% of all Metroparks revenue.

Lower Huron, Willow, and Oakwoods combined budgeted 2018 operations revenues are \$2,905,455, while estimated 2018 operations expenses are \$6,277,199. Property tax and other revenue is estimated to subsidize 54% (\$3,371,744) of the Lower Huron/Willow/Oakwoods operating budget.

As the chart illustrates, the majority of revenue for Willow and Oakwoods (approximately 51%) comes from the golf course.

#### 2017 Operations Revenue

Revenue Source	2017 Total	% of Revenue
Golf Course (Willow)	625,771	51
Tolling (Willow-Oak)	434,740	35
Pool (Willow)	92,622	8
Nature Center(Oak)	22,319	2
Boat Rental-Washago (Willow)	10,068	1
Picnic Shelter (Willow)	18,700	1
Disc Golf (Willow)	6,848	1
Mobile Learning Center (Oak)	17,064	1

**TOTAL: 1,228,132**



## Visitors

Willow and Oakwoods Metropark are regional parks and can draw from the approximately 3,008,000 Michigan residents that live within a 30 mile radius (approximately a 45-minute drive) of them. Certain events and activities may draw visitors from greater distances.

Vehicle entries are combined for Lower Huron, Willow, and Oakwoods Metroparks, and have hovered between 506,650 and 608,921 since 2010, slightly declining over the years but overall moderately stable. Weather often plays a role in attendance to the park; activity areas greatly affected by weather are the trails, Nature Center, golf course, and the Willow Pool. This may explain the peak in attendance visible in 2010.

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.



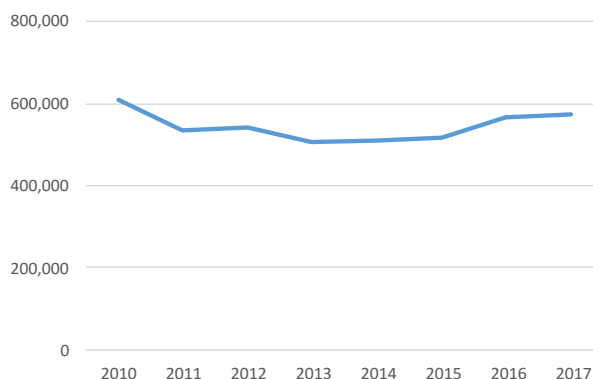
### NEEDS

Target market strategy

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

### OPPORTUNITIES

Vehicle Entries Year  
2010-2017



Willow and Oakwoods Metroparks 30-Mile radius



## Programs & Events



### NEEDS

Increase revenue and visitation

Build on enthusiasm of Willow and Oakwoods visitors with exciting, engaging programs and events

### OPPORTUNITIES

Willow and Oakwoods 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. The significance of the Huron River with Michigan's first residents-both Native and European is an important component in the parks for providing context to many of the interpretive programs for visitors.

Recent events include:

- Connecting Children with Nature Camp for Adults
- Senior Scramble Willow Golf Course
- Oakwoods Nature Camp
- Woodland Fairy Adventure Days
- Time with Toddlers Week
- Vernal Pools are Cool
- Nature Art Camp
- Pokemon Go Camp
- Critter Camp
- Tadpoles
- Explorers Club
- Junior Championship Willow Golf Course
- Outdoor Survival Camp for Kids
- Dream Catcher Workshop
- Animal I.D.– American Mink
- Night Hike and Bonfire
- Early Bird Hike and Breakfast
- Maple Sugaring Through the Ages
- Fireworks
- Muck Fest



## Population

The percentage of households without access to an automobile is gradually rising in the region and in Wayne County. However, the municipalities directly surrounding Willow and Oakwoods show a modest trend downward in households without access to an automobile. 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 parks for all.

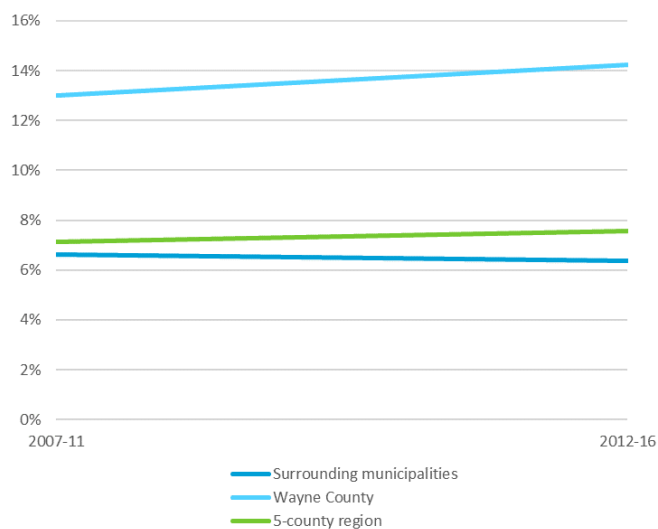
The percentage of individuals over 65 years of age is rising quickly in the region, in Wayne County, and most dramatically in communities surrounding the parks. Older adults have distinct needs, often requiring accommodations for mobility and accessibility of park features such as trails and buildings.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

## NEEDS

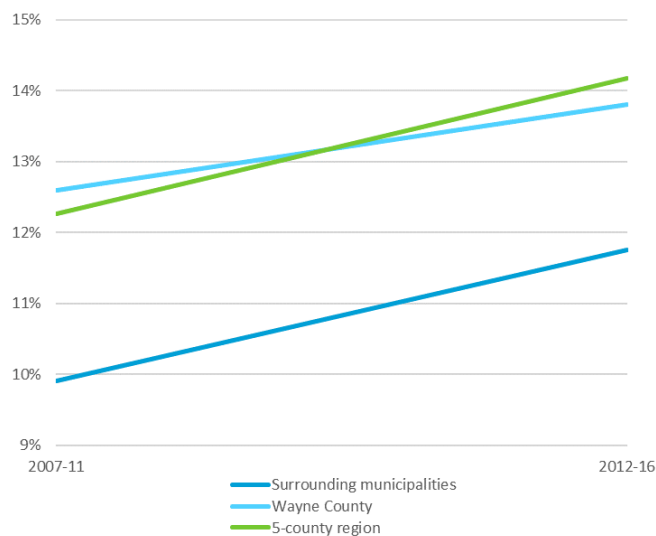
Address changing needs of new population demographics

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

## OPPORTUNITIES



CHANGE IN PERCENT OF HOUSEHOLDS WITH NO CARS AVAILABLE, 2007-11 through 2011-15 (Source: US Census American Community Survey)

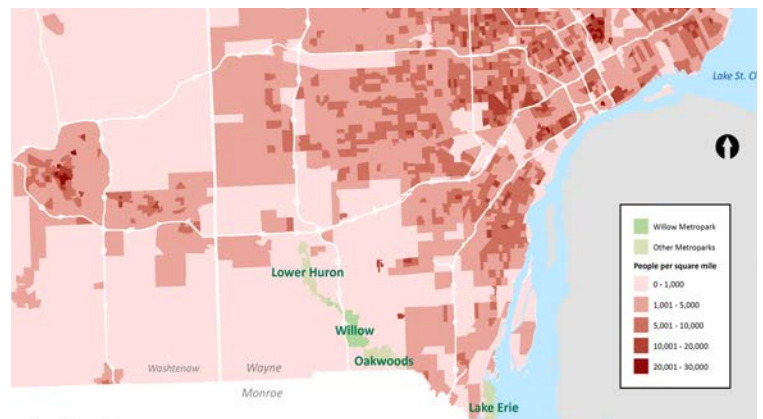


CHANGE IN PERCENT OF POPULATION OVER 65 YEARS, FROM 2007-11 through 2012-16 (Source: US Census American Community Survey)

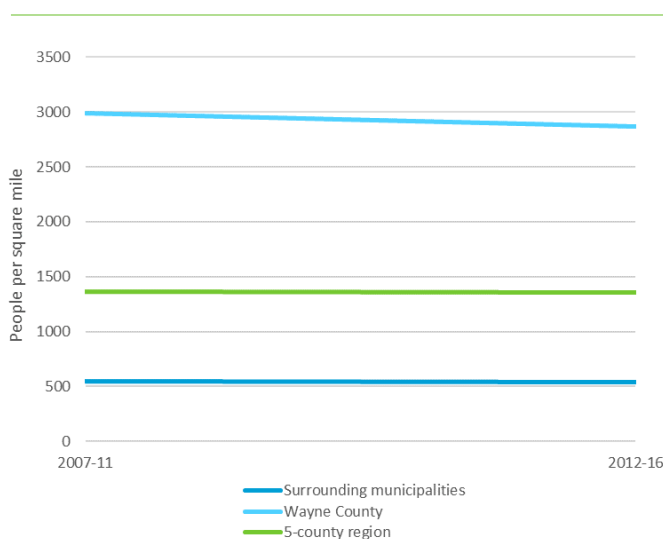
As shown below, Willow and Oakwoods are located in a lower residential density area than many other Metroparks, with the majority of land use characterized as residential. The areas directly bordering the park have an average population between 0 and 1,000 people per square mile. Associated with the 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.

The population density of the 5-county region, Wayne County, and surrounding municipalities is slightly decreasing overall. Staying aware of development changes in the area will be important to gauge recreation needs.

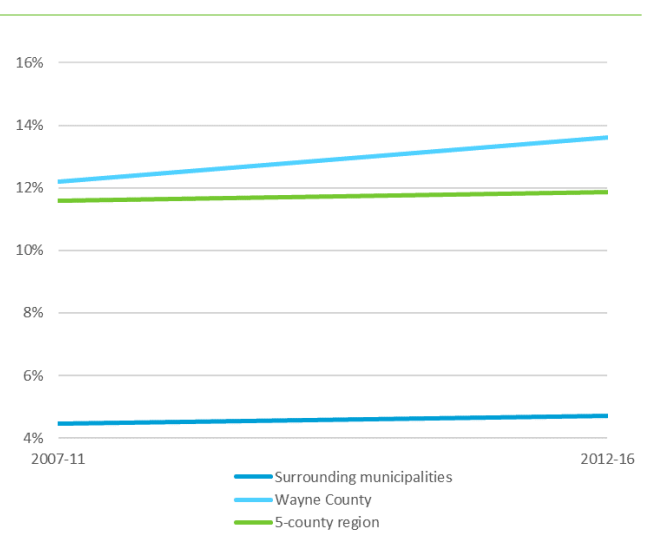
Although most households in the area still speak English as their first language, the communities around Willow and Oakwoods along with Wayne County and the region at large are seeing a slight increase in households speaking languages other than English at home. Because of this growing linguistic diversity the Metroparks are working towards more universal signage design, with a focus on easily understandable symbols.



POPULATION DENSITY BY CENSUS TRACT, 2010-14



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



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

## 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 and other organizations bordering and/or containing Willow and Oakwoods is essential for a collaborative, comprehensive planning process. Planning staff researched previous park plans along with the published master plans and recreation plans of surrounding municipalities, counties, other agencies. These provided a basic idea of the direction planned for each, especially regarding land use, development, and recreation.

### Wyandot of Anderdon Nation, Six Points Master Plan

- The Six Points Village in nearby Gibraltar, Michigan project brings forward awareness of ecology, archeology, history, Indigenous issues, biodiversity and cultural anthropology.

### Parks and Recreation Master Plan 2014-2018 Huron Charter Township

- Continued partnership with the various area public and private recreation providers. This includes collaborating and coordinating with the metroparks to provide for the efficient administration of parks and recreation services.

### Detroit Heritage River Water Trail Vision Plan

- The Detroit Heritage River Water Trail goes through the Detroit, Huron, Rouge and Raisin Rivers and offers many opportunities for canoeing and kayaking in the region. The water trail follows the Huron River through Willow and Oakwoods with river access and a canoe/kayak launch.

### New Boston Overall Improvements, 2015

The on-road non-motorized facility improvements in

## Projects/Initiatives

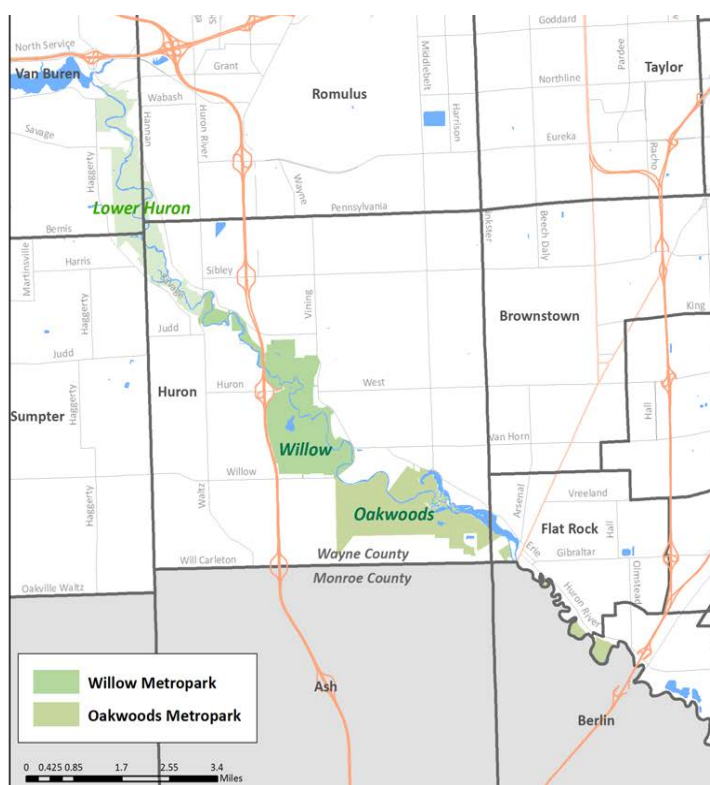
surrounding communities will fill in the gaps to achieve regional connectivity for non-motorized users. The metroparks will need to plan in collaboration for these improvements with potential water trail facilities and hike-bike trail connectors.

### Downriver Linked Greenways Initiative (DLGI) Master Plan, 2009 Update

- Twenty-one (21) communities, along with many partners including Huron-Clinton Metroparks, stepped forward and began to map how various trail connections could be made, completed a master plan, and currently being implemented community wide.

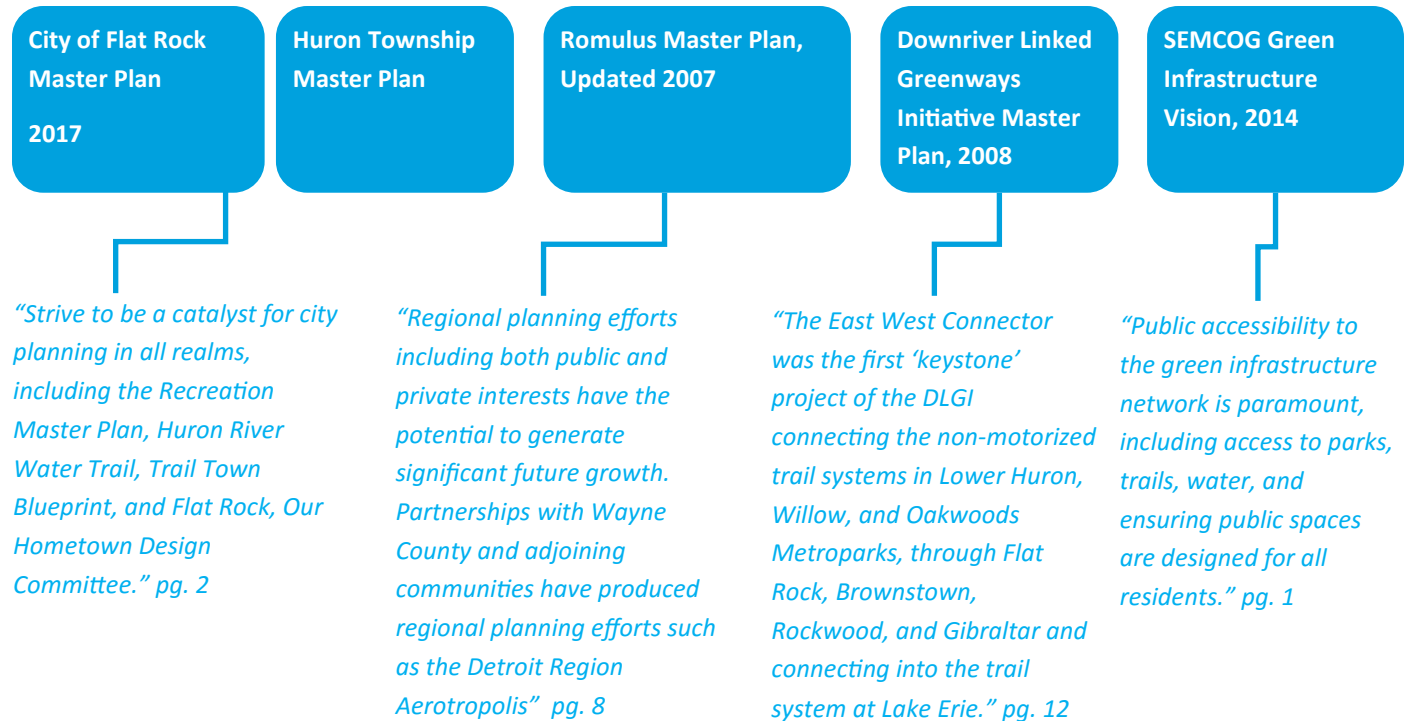
### Interpretive Plan for the Huron River National Water Trail, December 2017

- The purpose of this plan is to help communities and stakeholders incorporate heritage on the lower reach of the nationally designated Huron River Water Trail, from Flat Rock to Lake Erie, which will create a more meaningful trail experience and a greater sense of place.



MUNICIPALITY MAP

## Relevant Planning Documents

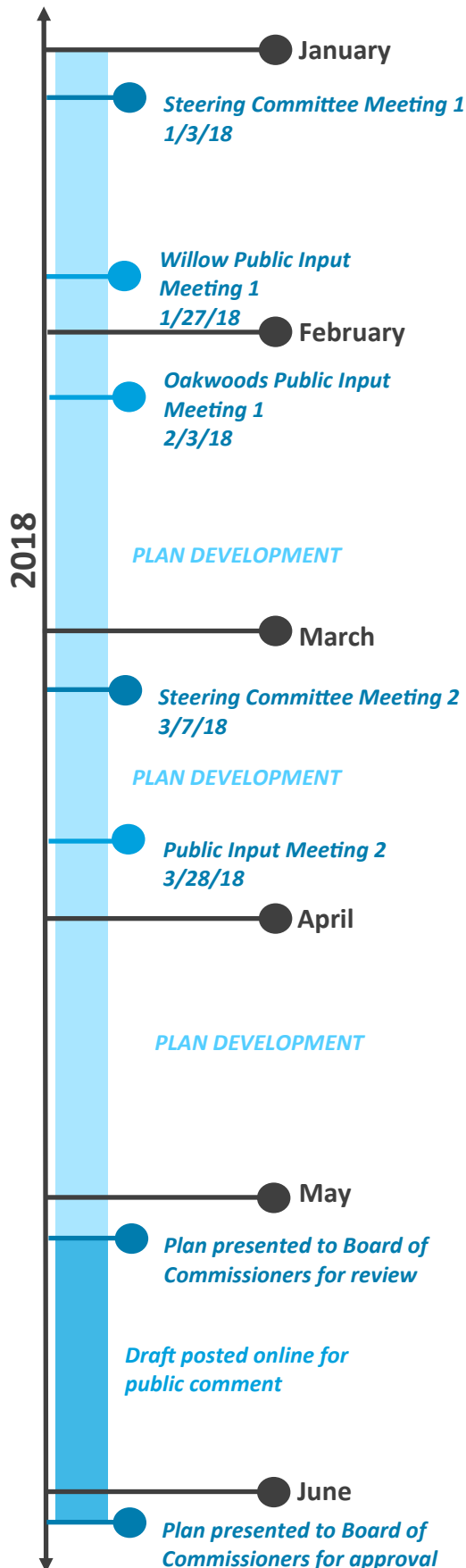


Since the development and land use decisions of bordering communities and other governmental agencies directly impact the park, these neighbor master plans were reviewed and taken into account when creating this document. The opinions and ideas expressed by residents and leaders in these municipalities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

Willow and Oakwoods Metroparks are 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 Willow-Oakwoods 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 these parks belong 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 parks 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 for each park with community members to gather initial ideas about the direction of the park. A general park feedback survey for both parks 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 held for both parks, and feedback was collected, analyzed, and incorporated into a draft Master Plan document.

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

### Public Meeting 1 - 1/27/18 (Willow) & 2/3/18 (Oakwoods)

- 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 - 3/28/18

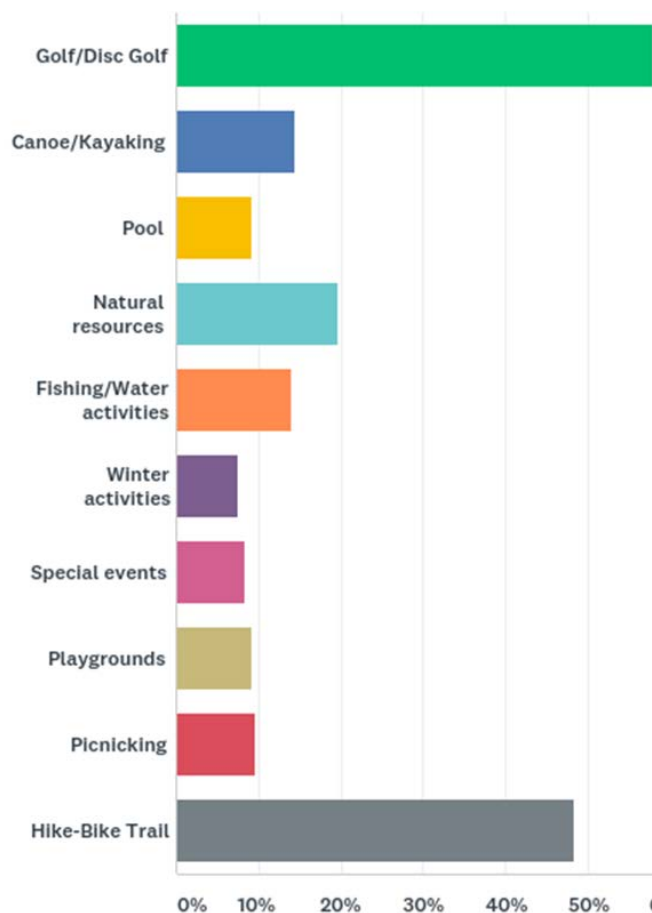
- Short presentation on survey results, community influences, and intended projects
- Opportunity for participants to write down feedback on intended projects

## Results

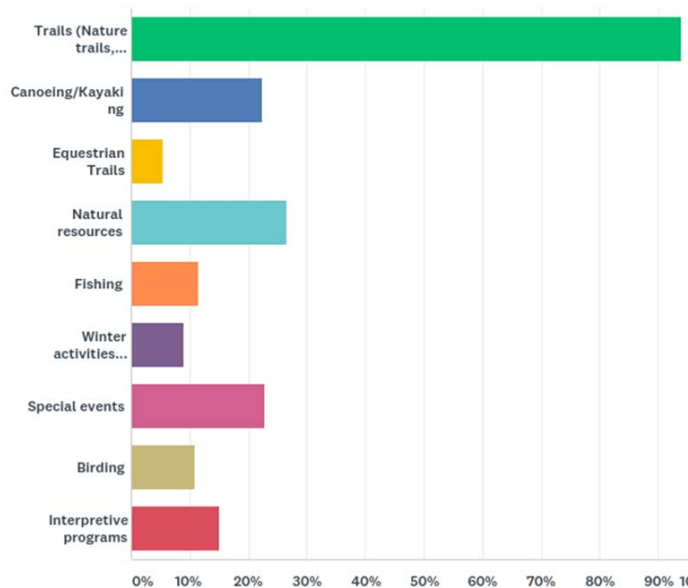
Participants in the survey and in public meetings included a large number of disc golf enthusiasts. They expressed appreciation for the Willow disc golf course, but felt the drainage issues needed to be addressed for greater use and access. They also desired upgrades and amenities to the disc golf facility. Popular feedback on Willow also suggested improvements in maintaining the hike-bike trail, and natural areas within the park. Other themes included access and amenities which included consideration for lower fees, water trail access, and suggesting a wide range of improvements including fitness equipment, kayak launch improvements, resting benches and mile markers along the hike-bike trail. Input gathered specific to Oakwoods had the great majority of the responses favoring greater access to the park from adjoining neighborhoods with connections to the hike-bike trail. This was followed by facilities and infrastructure which included upgrades to the Nature Center and modernizing restroom facilities. Other popular feedback included amenities along the trails and more safety and signage investments. In addition, many respondents commented on not wanting anything done with regards to improvements in the park and respecting its natural setting.



**Favorite part or activity at Willow?**



**Favorite part or activity at Oakwoods?**





An online questionnaire for both Willow and Oakwoods was 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 public meetings, park office and at the Oakwoods Nature Center for distribution.

## Willow Questionnaire Response

### Trails

- Mile markers(3)
- More unpaved trails(4)
- More hike-bike trails(2)
- Snowmobile trails
- Resurfacing
- Mountain bike
- Equestrian
- Exercise equipment
- Groomed ski trails(8)
- Hike-bike maintenance(14)

### Environment

- Log jams
- Increase natural habitat(6)
- Re-establish oak openings
- Wildlife viewing area(2)
- More tree plantings
- Less mowing
- More bird houses

### Maintenance

- Disc Golf drainage issue(63)
- Cemetery road plowing
- Regular grass mowing
- Activity center
- Trash cans/recycling(2)
- Bathrooms(3)

### Amenities

- Concessions at Washago Pond
- Ski rentals(4)
- Sand volleyball courts
- Bathrooms(6)
- Picnic tables
- Gazebo at Washago
- Playground updates/new areas
- Disc golf updates web/social media
- Water fountains year round
- Canoe/kayak rentals(4)
- Snow shoe rentals
- Paved shoulders to roads
- Native American displays
- Dog friendly places
- Steps on sledding hill
- More pool features
- DIA
- Tennis courts
- Skate skiing
- Gaga ball pit

### Special Events/Programs

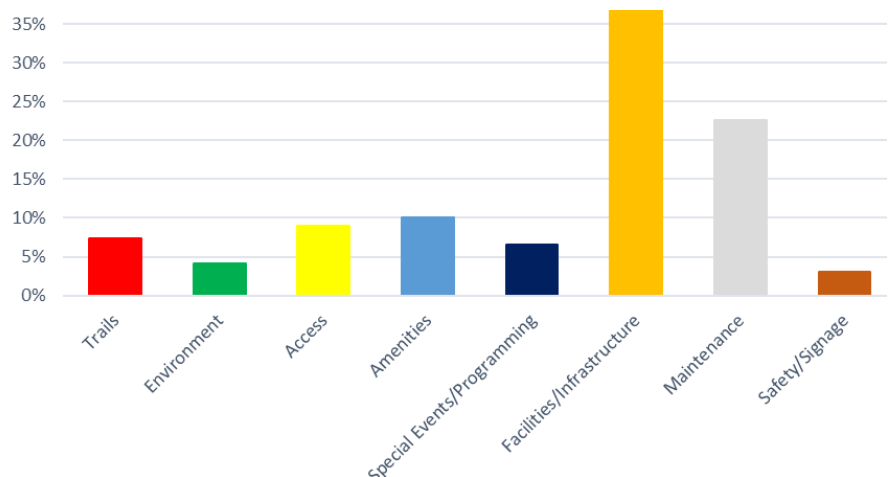
- Music in band shell(2)
- River based recreation programming
- Ski lessons
- More programs for adults
- Sand volleyball league

- Volunteer outreach program
- More family activities(ie. movies)(2)
- More tween, teenager activities
- Swim exercise programs for adults
- More special events
- Eliminate track and field events



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.



## Willow Questionnaire Response (continued)

### Safety/Signage

- Trail wayfinding signs(2)
- Remove basketball from pool
- No swimming signs
- Control the geese
- Security patrolling trails(2)
- Dog rule signs/enforcement
- Improve pedestrian crossing at Willow Road
- Improve signage at entrance

### Access

- Cut grass in Chestnut area and keep open in winter months
- Relax geocaching policies(2)
- Free/lower cost disc golf(9)
- Direct disc golf fees for disc golf improvements(2)
- Stop closing Big Bend area
- Better access and use for school groups

- Better bathroom access (open hours park is open)(2)
- Maintain river access
- Improve kayak access
- Lower/freeze fees(8)
- Shared pass amongst vehicles
- Accessible playground areas
- Offer night time skiing
- Consistent hours
- Appreciate Washago bathroom facilities open year round

### Facilities

- Dog park(2)
- Add and/or relocate disc golf course(48)
- Enjoy water activities
- Disc golf improvements (pin locations, basket updates, restrooms)(76)
- Better kayak/canoe/boat

- launches(6)
- Rebuild skate park

### Other

- Beautiful as it is(3)
- Willow golf course is always in great condition





## Oakwoods Questionnaire Response

### Trails

- More equestrian trails
- Mountain bike trails(6)
- Fat tire trails
- Groomed ski trails(2)
- Advertise trails
- Connect to other parks(3)
- More hiking trails
- Smart phone apps
- Trail maintenance(9)

### Environment

- Plant trees/wildflowers(3)
- Upgrade butterfly garden(2)
- Improvements for hawk/owl(3)
- Keep park natural(3)
- Information on flora/fauna
- Less mowing
- More trash cans/recycling
- Enjoy open areas and wildlife

### Maintenance

- River shoreline clearing
- Trails(12)
- Nature Center
- Parks always look clean

### Amenities

- Bathrooms(3)
- Ski rentals(5)
- Boat launches(2)
- Shoreline fishing
- Canoe/kayak rentals(4)

- Zip line/high ropes course
- Stable for horses
- Outdoor playground(5)
- Picnic shelter
- Interactive buildings
- Snowmobiles/ATVs(2)
- Water fountains/refill(4)
- More winter activities
- Trail related amenities
- Geocaching(3)
- Concessions
- Warming station

### Special Events/Programs

- Senior activities
- River based programs
- Flyers for events
- Hands on activities at NC
- Children, pre-teen, teens
- Smaller individual programs
- Increase volunteer outreach

### Safety/Signage

- Interpretive signage
- More exhibits
- Increase security
- Rule signs

### Access

- Connections to local neighborhoods(128)
- Kayak access(6)

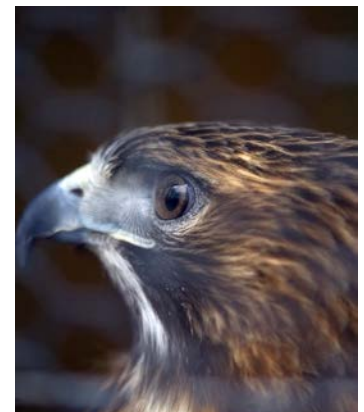
- Extend Nature Center hours
- Bridge on equestrian trail
- Military discount/lower fees(2)
- Open restrooms
- No charge for drop offs

### Facilities

- Canoe/kayak launch(11)
- Dog park
- Nature Center updates(19)
- Camping
- Longhouse (historical significance)

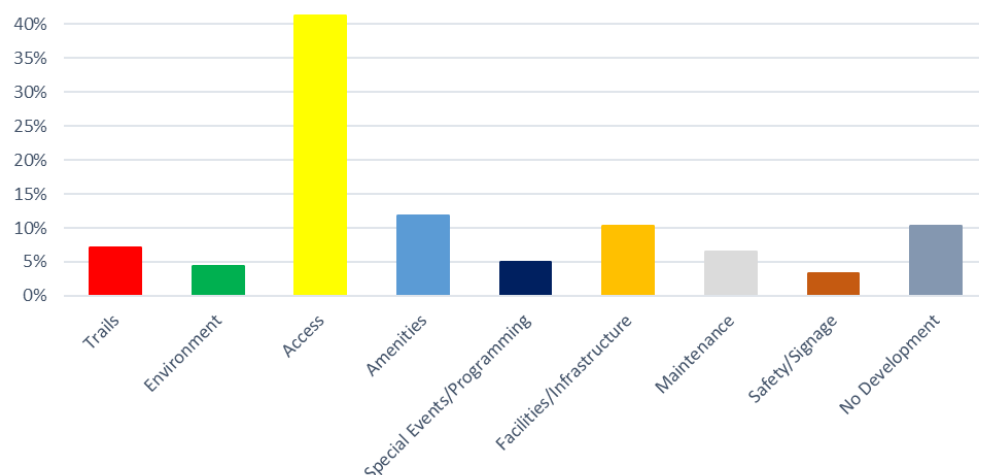
### Other

- No development(17)
- Bigger budget(2)
- Staff makes the park(9)
- Park underutilized(2)
- Buy land for deer population
- Great park and treasure for community



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.

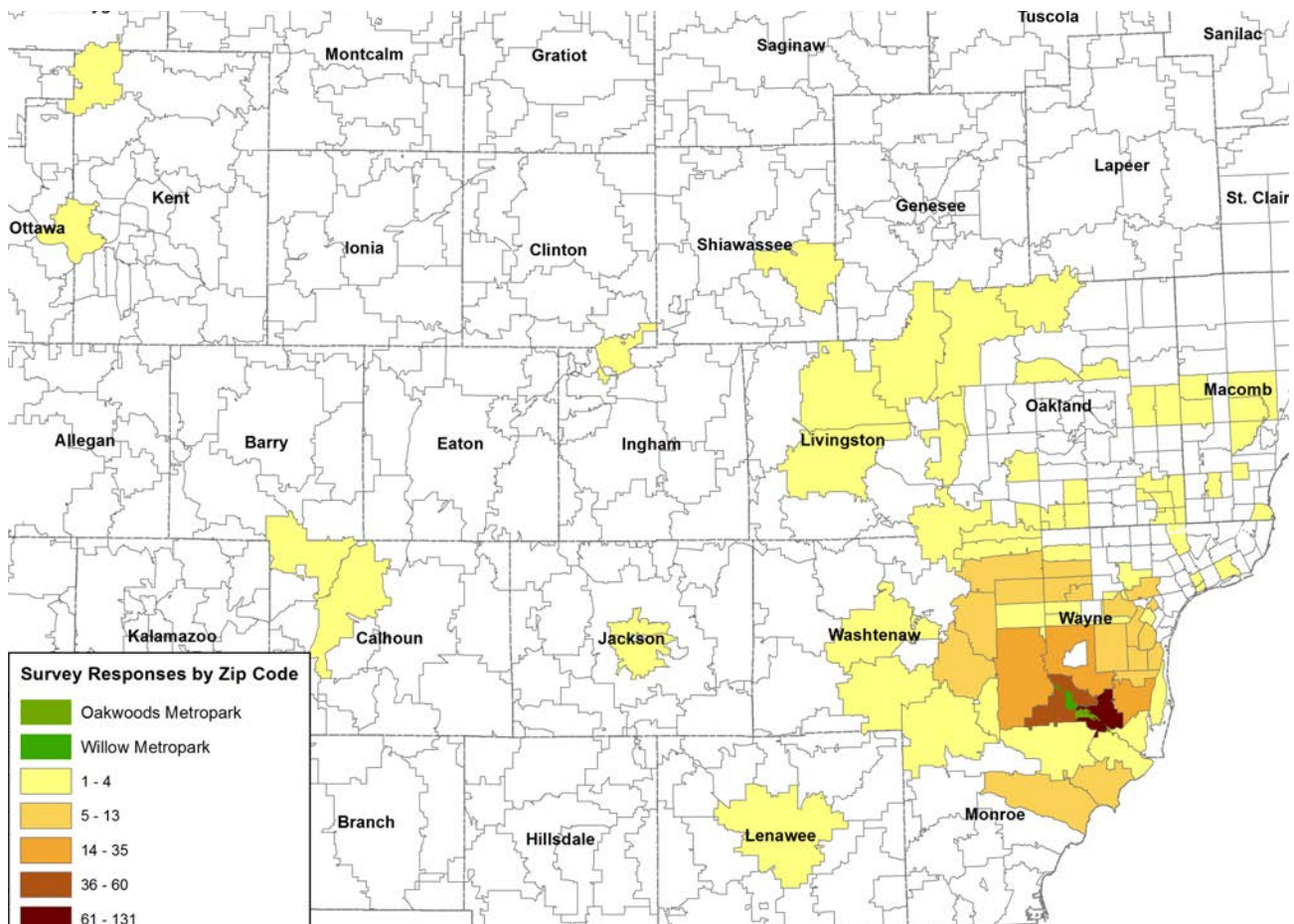


## Participation



The Willow and Oakwoods Master Plan online and hard copy questionnaires received a total of 277 and 219 responses, respectively. In addition, 80 individuals attended the three public meetings. 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



## NEEDS

Incorporate variety of opinions and user groups into master plan

Create vibrant park through robust, transparent public outreach

## OPPORTUNITIES



## 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 parks
- 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 boundary issues for both parks
- Replace outdated, confusing, inconsistent signs
- Pursue improvements to park accessibility
- Diversify sources of revenue
- Target market strategies for facilities (Nature Center, pool facility)
- Increase revenue and visitation
- Address changing needs of new population demographics
- Improve connectivity within the parks and with the community
- Incorporate variety of opinions and user groups into master plan
- Maintenance of facilities for successful operations



### Opportunities

- Build on both parks 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 parks 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 Willow-Oakwoods 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
- Maintenance plans and scheduling for facilities (hike-bike trails)



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 parks over the next ten years.



## Large Facilities

Park	Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Wil	Relocate and develop new park office (from Lower Huron to Willow)	Eng	Plan, Ops, Maint	Foundation, Contractors, Consultants	\$ 2,000,000	x		
Wil	Implement Willow Pool selective redevelopment strategy	Eng	Plan, Ops, Maint	Foundation, Contractors	TBD		x	x
Wil	Implement Washago Pond selective redevelopment strategy	Eng	Plan, Ops, Maint	Foundation, Contractors	TBD	x	x	
Wil	Golf Course: replace irrigation lines, underground fuel storage (UST) with above-ground (AST)	Eng	Ops, Maint	Contractors	\$ 2,000,000	x		
Oak	Develop playground at the Nature Center	Plan	Ops, Maint	Foundation, Contractors	\$80,000		x	
Oak	Implement Nature Center interpretive exhibit plan	Int	Maint, Ops, Eng	Foundation, Contractors	\$ 350,000	x		



## Infrastructure / Small Facilities

Park	Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Both	Accessibility improvements, including interiors, walkways,	Eng	Plan, Ops	Contractors	TBD	x	x	x
Oak	Replace tollbooth	Eng	Ops, Maint	Contractors	\$ 140,000	x		
Both	Paving projects: main park roads, parking lot overlays as	Eng	Ops, Maint	Contractors	TBD	x		
Both	Implement infrastructure reduction strategy throughout parks	Eng	Ops, Plan, Maint	Contractors	TBD	x		
Wil	Replace Willow Pool playground	Plan	Eng, Ops, Maint	Contractors	TBD		x	
Wil	Hike-bike trail connectivity improvements throughout park	Eng	Plan, Ops, Maint	Contractors	TBD		x	x
Wil	Create rustic hiking trail system utilizing cross-country ski trail routes	Ops, Maint	Plan, NR	staff time	TBD	x		
Wil	Partially relocate disc golf course to Acorn Knoll picnic area	Ops, Maint	Plan, NR	staff time	TBD		x	

## Natural Resources

Park	Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Both	Fisheries Assessment and creel survey	NR		MDNR	\$25,000	X		
Both	Vegetation Management (annual)	NR	Plan, Ops		\$30,000	X	X	X
Both	Hazardous Waste Removal (annual)	NR			\$1,000	X	X	X
Both	Early detection, rapid response. Invasive species surveys and control in high quality natural areas (annual)	NR	Int	NGOs	\$10,000	X	X	X
Both	Herpetological assessment of the park	NR		Consultant	\$9,000	X		X
Both	Utility Corridor Greenspace Improvements	NR	Int, Ops, Plan	TNC, Utilities	\$25,000	X	X	X
Both	Conduct Prescribed fire in adapted native communities	NR			\$15,000	X	X	X
Both	Oak wilt monitoring and prevention (annual)	NR	Ops	MDNR	varies	X	X	X
Both	Deer cull to maintain deer at roughly 15/square mile.	NR	Law		varies	X	X	X
Both	Shoreline Erosion Survey and Planning	NR			\$10,000	X		
Both	Shoreline Stabilization and Improvements	NR		Contractor	\$50,000	X		
Both	Comprehensive wildlife surveys and mapping (Birds, insects, freshwater mussels)	NR	Int	MNFI, Consultant, HRWC	\$35,000	X		X

## Natural Resources

Park	Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Wil	Green Infrastructure Improvements	NR	Plan, Eng		\$100,000	X	X	X
Wil	Indian Ridge Prairie Restoration	NR	Plan, Int	TNC	\$50,000	X	X	X
Wil	Washago Pond management (annual)	NR	Ops	Contractor	\$3,000	X	X	X
Wil	Willow Floodplain Restoration	NR	Plan, Eng		\$55,000	X	X	
Oak	Cedar Knoll Prairie Extension	NR	Plan, Int	TNC	\$100,000		X	X
Oak	Oxbow/Railroad Floodplain Forest Restoration	NR	Plan	TNC	\$55,000	X	X	
Oak	Grasslands Restoration	NR	Plan, Int	TNC	\$500,000	X	X	X
Oak	Butterfly Trail Grassland Improvements	NR	Int, Plan	TNC	\$50,000	X	X	X





## Signage

Park	Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Oak	Develop and install interpretive signage	Int	Ops, Maint, Plan		\$ 5,000	x		
Both	Construct and install trailhead structures on hike-bike trail	Maint	Graphics, Plan, Ops		\$ 4,500	x		





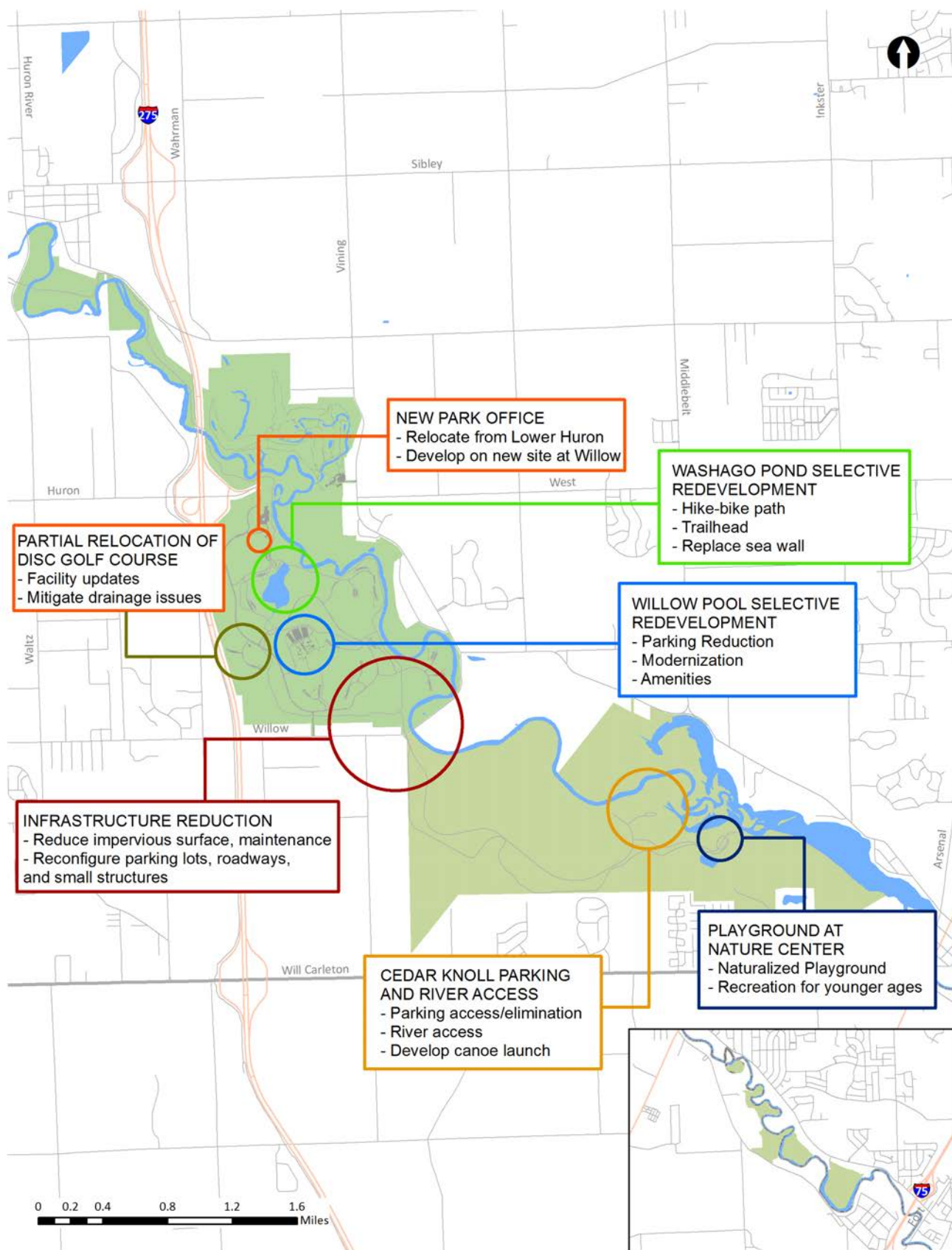
## Area Plans/Studies/Initiatives

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:

Park	Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Wil	Willow Pool selective redevelopment strategy: reduce building and parking size, add small shelters and seating around pool, evaluate egress, incorporate employee meeting space, food truck space	Plan	Eng, Ops, Maint		staff time	x		
Both	Infrastructure reduction strategy: Reduce, eliminate, and/or reconfigure certain parking areas, roadways, small structures throughout parks	Plan	Eng, Ops, Maint, NR		staff time	x		
Wil	Washago Pond selective redevelopment strategy: develop aggregate loop trail with naturalized buffer (inc. pedestrian bridge), install trailhead structure, reconfigure trail crossing at service drive, congregate soccer from Big Bend, replace seawall/dockage	Plan	Eng, Ops, Maint		staff time	x		
Oak	Cedar Knoll parking and river access strategy: realign west parking lot closer to the river, develop formal canoe/kayak launch, replace pit toilets, eliminate east parking lot	Plan	Eng, Ops, Maint, NR		staff time	x		

## Area Plans/Studies/Initiatives (cont'd)

Park	Description	Dept. Lead	Other Depts.	Other Partners	Cost Estimate	Short-Term (2018-2022)	Mid-Term (2023-2027)	Long-Term (10+ years)
Oak	Nature Center playground concept plan, possibly include small rental shelter	Plan	Eng, Ops, Maint, Int		staff time	x		
Both	Explore opportunities for aligned entrances for both parks	Plan	Eng, Ops		staff time		x	
Oak	Nature Center interpretive exhibit plan	Int	Maint, Eng	Consultants	\$ 160,000	x		
Oak	Clear north side service drive access from Huron River Drive	NR	Ops, Maint		staff time	x		
Both	Sustainability initiatives	NR	Ops, Plan, Eng		\$18,000	x	x	x
Both	Establish Invasive Species Control Tracking Website	NR	IT	MNFI, MISIN	\$15,000	X		
Both	Stormwater monitoring	NR			\$5,000	x	x	x
Both	Review all proposed earthwork activities for potential impact on historic/cultural resources	NR	Int, Plan, Eng	SHPO, EMU	staff time	x	x	x
Both	Work with partners to record, protect and preserve artifacts and document sites when deemed necessary following investigation based on review	Int	Plan, Ops	EMU	staff time	x	x	x



# Key Projects

## New Park Office at Willow

2018-2022

The new park office will be relocated from Lower Huron to Willow and serve as the Lower Huron-Willow-Oakwoods park office. Building improvements and site improvements will comply with ADA. The design consultant has been selected. Design should be completed by the end of 2018, and construction is anticipated in 2019.

### Needs:

- Standardization
- Modernization
- Accessibility

### Solutions:

- Suitable site relocation at Willow
- Building modernization
- Landscaping/beautification



## Willow Pool Selective Redevelopment

2023-2028+

The pool facility needs to develop strategies for building, site, and programming. Building improvements and site improvements will need to consider ADA compliance

### Needs:

- Reduce building and parking size
- Amenities near pool
- Modernize meeting spaces and food services

### Solutions:

- Partial removal of parking spaces
- Add picnic tables near pool
- Food trucks





## Washago Pond Selective Redevelopment at Willow

2018-2027

At Washago Pond, site improvements include repairs to the water control structure. Also the hike-bike trail will be reconfigured to separate trail users from the service drive.

### Needs:

- Access (water and trails)
- Trailhead improvements
- Replace seawall/dockage

### Solutions:

- New hike-bike path
- Realign trail and service drive
- Modernization



## Infrastructure Reduction at both Metroparks

2018-2022

The reduction of parking areas and roadways will be prioritized for both parks.

### Needs:

- Reduce impervious surfaces
- Less maintenance
- Under utilized infrastructure

### Solutions:

- Remove surface lots
- Reconfigure certain parking areas,
- Roadways, and small structures



## Cedar Knoll Parking and River Access Strategy

2018-2022

At Oakwoods, improvements at Cedar Knoll promoting river access with additional amenities. The parking and river access strategy includes realignment of the west parking lot closer to the river, develop a formal canoe/kayak launch, replace pit toilets, and eliminate the east parking lot.

### Needs:

- Parking access
- River access
- Water trail amenities

### Solutions:

- Eliminate surface parking
- Add paths to river
- Develop canoe launch



## Playground near Oakwoods Nature Center

2018-2022

Look to activate the dormant parking area west of the lot.

### Needs:

- Amenities at Nature Center
- Playground concept plan
- Recreation for younger age groups

### Solutions:

- Consider concept of naturalized playground
- Activate more of the parking area



## Partial Relocation of Disc Golf Course at Willow

**2023-2027**

The public input provided strong support for partial relocation of the disc golf course to the Acorn Knoll parking area. Disc golfers would benefit from improved surface lot, restrooms, and forested upland area.

**Needs:**

- Facility updates
- Drainage issues
- Maintenance

**Solutions:**

- Improved surface lot
- Restroom
- Relocation to mitigate drainage issues



## Other Projects

- Hike-bike trail connectivity improvements at Willow
- Install trailhead structures on hike-bike trails for both Metroparks
- Implement Oakwoods Nature Center interpretive exhibit plan
- Grasslands restoration at Oakwoods
- Willow Golf Course: replace irrigation lines, UST with AST





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**HURON-CLINTON METROPOLITAN AUTHORITY**

To: Board of Commissioners  
From: Ryan Colliton, Manager of Natural Resources and Environmental Compliance  
Subject: Report – 2018 Forest Service Great Lakes Restoration Initiative Grant  
Project Title: Lake St. Clair Metropark Coastal Wetland Filtration Enhancement  
Location: Lake St. Clair Metropark  
Date: May 3, 2018

**Action Requested: Motion to Approve**

That the Board of Commissioners' approve staff applying for the 2018 Forest Service Great Lakes Restoration Initiative Grant as recommended by Manager of Natural Resources and Environmental Compliance Ryan Colliton and staff.

**Fiscal Impact:** Metroparks staff plans to seek up to \$160,000 through the Forest Service Great Lakes Restoration Initiative grant program. A match of at least 20 percent (\$32,000) is required. In-kind matching funds will come from the annual major maintenance account for vegetation management and staff hours spent on project design and implementation. Thus, the project would not have a negative fiscal impact on the Metroparks.

**Background:** This project would be the beginning of phase III of a larger restoration project. Phase I included the restoration of threatened and endangered species (snake hibernacula), the control of invasive Phragmites, the replacement of nature trails and the construction of a dipping platform for nature programs.

Phase II was the creation of shallow pools and channels for fish spawning habitat and water based recreation.

Phase III will begin the process of naturalizing shoreline where appropriate to help filter run-off before it reaches the Black Creek Marsh and Lake St. Clair. This will also improve fish and wildlife habitats along the shore as well as recreational fishing along the shoreline at Lake St. Clair Metropark.

**Attachment: Conceptual Design and Location**

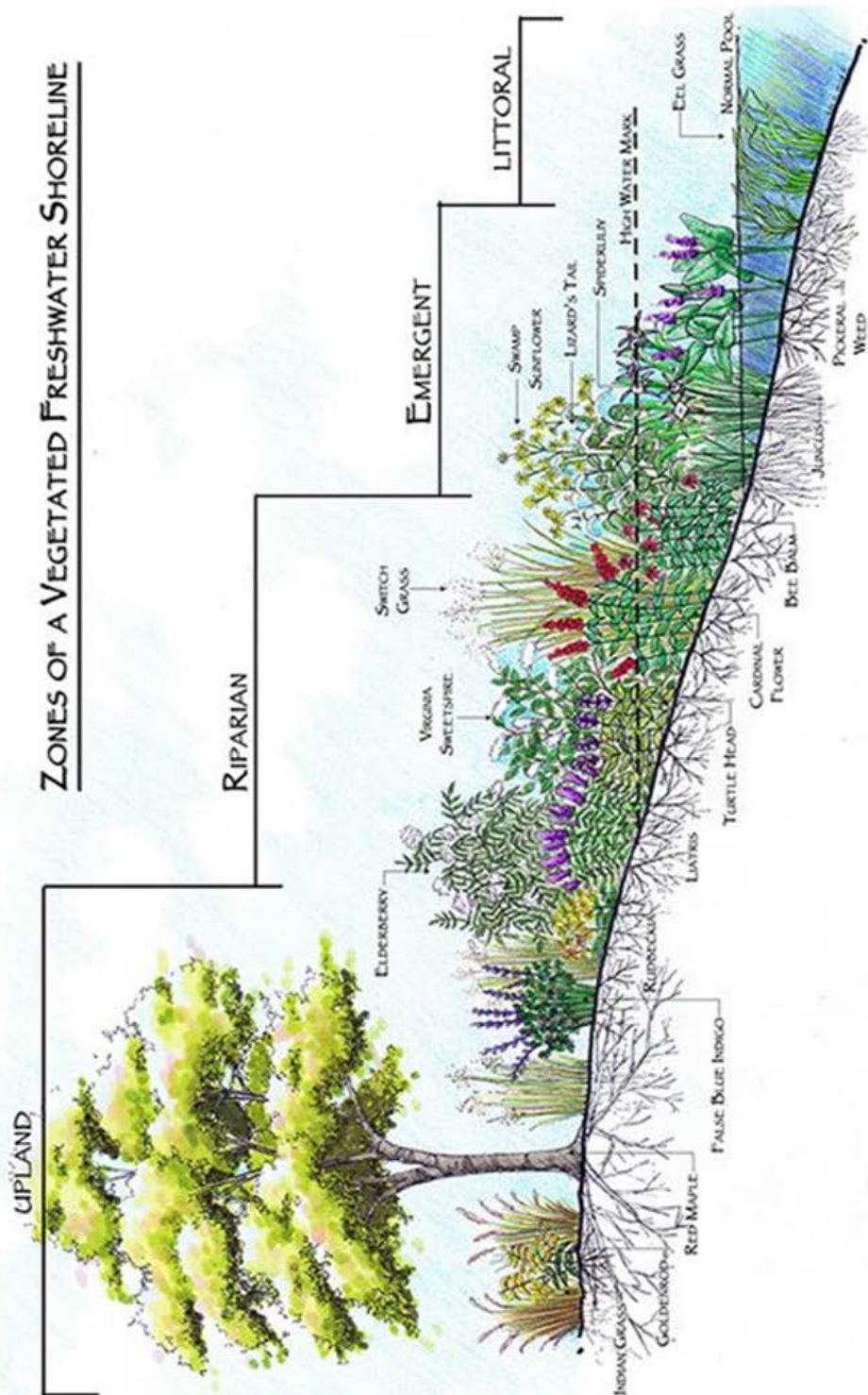


# Shoreline Naturalization - Huron Point





# ZONES OF A VEGETATED FRESHWATER SHORELINE







# HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Ryan Colliton, Manager of Natural Resources and Environmental Compliance  
 Project No: 502-17-677  
 Project Title: Bids – Black Creek Shore Fishing Accessible Dock  
 Project Type: Capital Improvement  
 Location: Lake St. Clair Metropark  
 Date: May 3, 2018

Bids Opened: March 27, 2018 at 2:00 p.m.

## Action Requested: Motion to Approve

That the Board of Commissioners' approve contract number 502-17-677 to the low responsive, responsible bidder, JSS – Macomb LLC in the amount of \$63,749 as recommended by Manager of Natural Resources and Environmental Compliance Ryan Colliton and staff.

**Fiscal Impact:** This is a budgeted project; funding is provided in the 2018 the Lake St. Clair Capital budget. \$58,500 of the total expenses will be covered by grant funds provided by the Great Lakes Fisheries Trust. An additional \$11,300 is available as match funding in the Natural Resources Outside Services account.

**Scope of Work:** work includes purchasing and installing a complete floating dock system. The project will provide a concrete trail from the parking lot near the boat launch to a large universally accessible fishing/observation platform. Handicap parking spaces will be added near the trail in the existing parking lot.

**Background:** On Aug. 23, 2016, the Metroparks applied to the Great Lakes Fisheries Trust (GLFT) Access to the Great Lakes Fishery program with a project titled *Black Creek Shore Fishing Access, Lake St. Clair Metropark*. On Dec. 2, 2016, staff received word from the GLFT that our application was recommended for funding; the Board approved the project at its Jan. 12, 2017 regular meeting.

<u>Vendor</u>	<u>Location</u>	<u>Price</u>
JSS – Macomb LLC	Shelby Twp.	\$ 63,749.00
WCI Contractors, Inc.	Detroit	\$ 72,174.00
Daves Contracting, Inc.	Dearborn	\$ 72,910.00
Anglin Civil	Livonia	\$ 73,995.72
Eastern Michigan Contracting LLC	Ubly	\$ 89,013.00
Warren Contractors & Development	Shelby Twp.	\$ 89,640.00
Macomb Pipeline & Utilities Co.	Sterling Heights	\$ 97,870.00
MarineOne Ltd.	Chesterfield	\$100,723.00
Meridian Contracting Group LLC	Washington	\$147,280.00

Attachments: Project Drawings





# LAKE ST CLAIR METROPARK

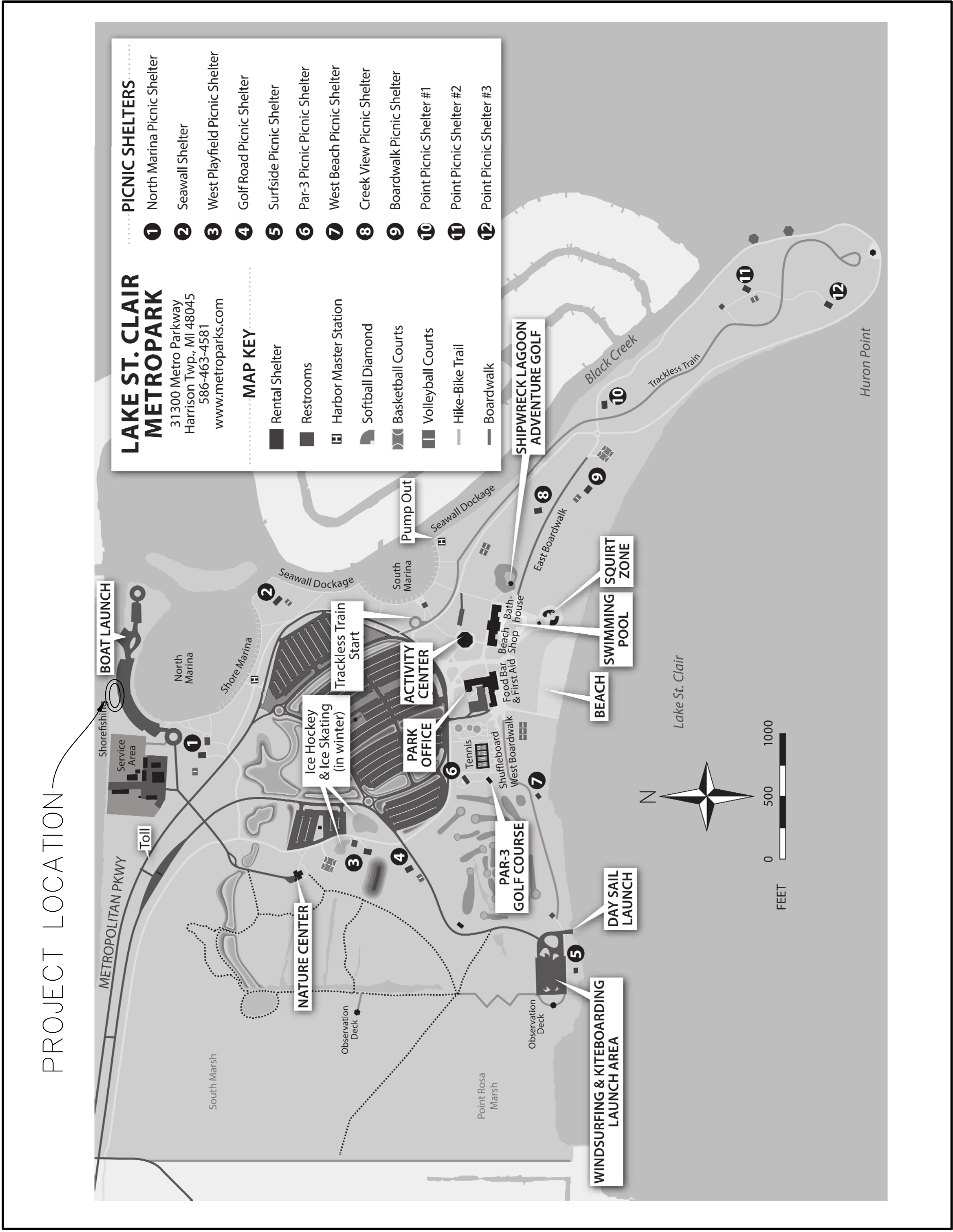
## BLACK CREEK SHORE FISHING ACCESS

MACOMB COUNTY, MICHIGAN

### HURON—CLINTON METROPOLITAN AUTHORITY

PROJECT No. 502-17-677  
MARCH 2018

#### PROJECT SITE / LAKE ST CLAIR METROPARK MAP

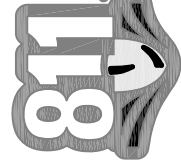


ESTIMATED QUANTITIES THIS SHEET:

ITEM OF WORK	QUANTITY	UNIT
1 TRAFFIC CONTROL FOR CONSTRUCTION ZONE OPERATIONS	1	LS
2 EXCAVATION, EARTH	26	CYD
3 CONC PAVT, REINF. 6 INCH	79	SYD
4 AGGREGATE BASE	30	TON
5 PAVT MRG, WATERBORNE, PARKING LOT	1	LS
6 EROSION CONTROL, SILT FENCE	120	LFT
7 SINGS PERMANENT, COMPLETE	1	LS
8 TOPSOIL SURFACE, FURN, LM	20	CYD
9 TOPSOIL SURFACE, PLACE	250	SYD
10 SEEDING, MIXTURE TYPE 4	250	SYD
11 MULCH	250	SYD
12 FLOATING DOCK SYSTEM, COMPLETE	1	LS

#### SHEET INDEX

- 1
- TITLE SHEET
- 2
- GENERAL NOTES & LEGEND
- 3
- SOIL EROSION & SEDIMENTATION CONTROL DETAILS
- 4
- CIVIL PLANS & DETAILS



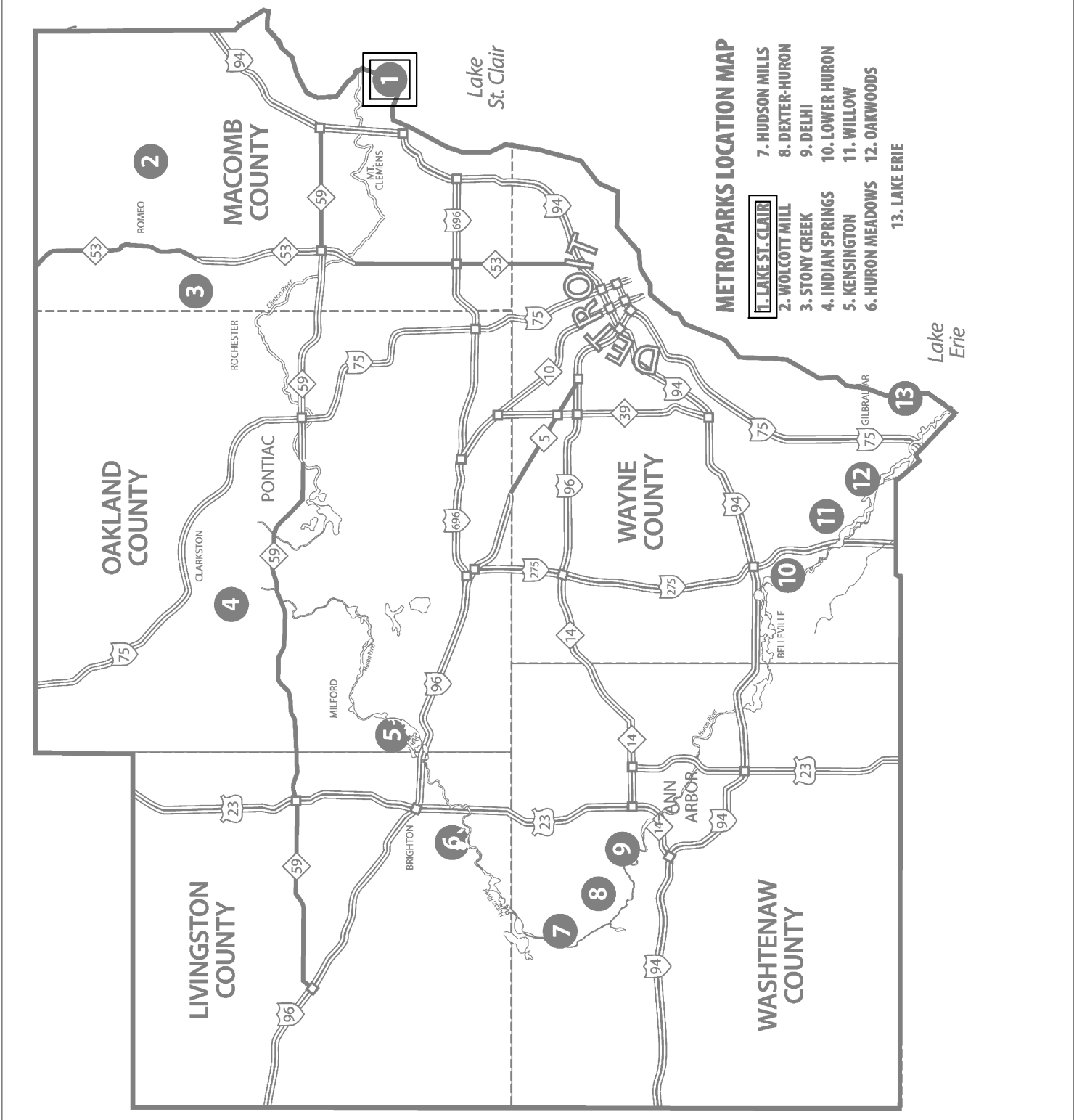
UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE CORRECTNESS OF THE INFORMATION HEREON.

BEFORE TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE DETERMINED BY THE CONTRACTOR. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE IDENTIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE CARE TO PROTECT ALL UTILITIES. THE CONTRACTOR SHALL OVERHEAD AND / OR BURIED UTILITIES.

CALL MISS.DIG

#### HURON-CLINTON METROPARKS REGIONAL MAP



## 502-17-677

### BLACK CREEK SHORE FISHING ACCESS

LAKE ST CLAIR METROPARK  
MACOMB COUNTY

#### HURON-CLINTON METROPOLITAN AUTHORITY



BOARD OF COMMISSIONERS  
TIMOTHY J. MCCARTHY . . . . . CHAIRMAN  
ROBERT W. MARANS . . . . . VICE-CHAIRMAN  
JAYE GUARDASZ . . . . . TREASURER  
BENJAMIN W. REESE . . . . . CLERK  
KURT L. HERSE  
JOHN PAUL REA  
STEVEN E. WILLIAMS

13000 HIGH RIDGE DRIVE  
BRIGHTON . MICHIGAN 48114 - 9058  
PH: 810.227.2757    FX: 810.227.8610    WEB: www.metroparks.com

DRAWINGS RECOMMENDED BY

LAURA MARTIN, P.E., SUPERVISING DESIGN ENGINEER

DATE

MIKE BRAHAM-HEWEL, MANAGER OF ENGINEERING

DATE

DRAWINGS APPROVED BY

MICHAEL REESE, DIRECTOR

DATE

SEALED

DRAWN BY	AMS	DATE	3/7/18
REV'D BY	-	DATE	-
DATE	ISSUED FOR	HCMA PROJECT NO.	
DATE	ISSUED FOR	502-17-677	

FILE NO.  
3-1-502

SHEET  
1

NO. OF SHEETS  
4

8-D-2-a





## HURON-CLINTON METROPOLITAN AUTHORITY

To: Board of Commissioners  
 From: Mike Henkel, Manager of Engineering  
 Project No: 509-16-532 / 509-16-535  
 Project Title: Approval – Change Order, Stony Landing Paving/Boat Launch Replacement  
 Project Type: Capital Improvement  
 Location: Stony Creek Metropark  
 Date: May 3, 2018

### **Action Requested: Motion to Approve**

That the Board of Commissioners' (1) approve a change order awarding a contract in the amount of \$66,690 to Anglin; and (2) approve a fund transfer in the amount of \$66,690 from contract 509-16-532 (Stony Creek Landing) to contract 509-16-535 (Boat Launch Ramp Replacement) for work as recommended by Manager of Engineering Mike Henkel and staff.

**Fiscal Impact:** Funds originally approved for paving work under the Stony Creek Landing project would be allocated to the Boat Launch Ramp construction project to fund the additional paving work required to complete the Boat Launch Replacement. The \$66,690 would be transferred from the Stony Landing project to the Boat Launch replacement project. The Stony Landing Project has \$524,230 in the bid for parking lot and bike trail paving. To date only \$66,367.00 has been spent for paving on the project.

**Scope of Work:** The work includes paving the wearing course on the hike/bike trail, wedging asphalt in specific areas to facilitate public access to the wedding tent area and restrooms, and paving of sections to the boat ramp area.

**Background:** This is an emergency repair under the approval of the Chairman of the Board and director as outlined in the Financial Policy for emergency procurements up to \$100,000. The emergency procurement policy covers contingency funding for disruption of essential operations and construction. As outlined in the policy a follow up confirmation approval by the full Board is required.

The existing contract for the Stony Creek Landing project is currently being rebid by the Surety. In response to the rebidding process, the Surety inquired if the Metroparks could complete the paving portion of the project in house since their replacement contractors indicated that they would not be able to complete the work within the required time frame.

The Engineering Department had been working on a contingency plan to complete the necessary work in order to make the area usable to the public, boaters and the weddings that access the tent area from the parking lot. The concurrent project to replace the boat ramps is almost finished up and there is paving work associated with that project and the paving contractor is able to complete the additional work while on site.

By using an onsite contractor, additional mobilization cost will not be incurred. Mobilization cost are usually 3 percent to 5 percent of the project. This paving will not complete the parking lot; however, it will finish paving the new bike trail alignment and provide improved access to the boat launch ramps and banquet tent area. The remaining portion of the parking lot reconstruction will have to be completed at the end of the season due to the amount of disruption that will be necessary in this highly used area.





# HURON-CLINTON METROPARKS MONTHLY STATISTICS

April 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	22,772	27,541	24,235	-6%	\$ 108,288	\$ 132,919	\$ 109,035	-1%
Wolcott Mill	6,656	7,821	5,754	16%	\$ 12,010	\$ 9,035	\$ 3,469	246%
Stony Creek	30,952	42,855	40,709	-24%	\$ 185,315	\$ 294,387	\$ 241,084	-23%
Indian Springs	5,343	7,779	7,152	-25%	\$ 31,001	\$ 48,589	\$ 37,255	-17%
Kensington	57,584	65,369	62,073	-7%	\$ 225,863	\$ 325,543	\$ 262,610	-14%
Huron Meadows	6,542	8,329	7,330	-11%	\$ 4,817	\$ 7,031	\$ 5,548	-13%
Hudson Mills	16,100	19,439	17,779	-9%	\$ 41,421	\$ 71,462	\$ 55,909	-26%
Lower Huron/Willow/Oakwoods	41,995	47,464	42,662	-2%	\$ 62,028	\$ 109,263	\$ 85,074	-27%
Lake Erie	17,327	19,126	17,456	-1%	\$ 71,861	\$ 88,834	\$ 78,486	-8%
Monthly TOTALS	205,271	245,723	225,149	-9%	\$ 742,604	\$ 1,087,063	\$ 878,471	-15%

PARK	Y-T-D VEHICLE ENTRIES				Y-T-D TOLL REVENUE			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Lake St Clair	75,647	72,831	70,945	7%	\$ 302,230	\$ 285,956	\$ 252,795	20%
Wolcott Mill	15,017	16,784	14,512	3%	\$ 17,396	\$ 12,143	\$ 4,928	253%
Stony Creek	106,971	103,972	97,615	10%	\$ 462,316	\$ 616,308	\$ 528,791	-13%
Indian Springs	13,903	16,107	15,845	-12%	\$ 71,776	\$ 95,284	\$ 82,358	-13%
Kensington	171,400	168,852	169,091	1%	\$ 630,281	\$ 745,634	\$ 623,405	1%
Huron Meadows	19,433	18,522	19,730	-2%	\$ 27,844	\$ 17,143	\$ 25,621	9%
Hudson Mills	43,576	46,114	43,224	1%	\$ 121,643	\$ 163,003	\$ 142,732	-15%
Lower Huron/Willow/Oakwoods	130,157	138,090	125,909	3%	\$ 175,506	\$ 228,084	\$ 190,700	-8%
Lake Erie	38,210	41,888	38,952	-2%	\$ 169,804	\$ 191,248	\$ 172,003	-1%
Monthly TOTALS	614,314	623,160	595,823	3%	\$ 1,978,796	\$ 2,354,803	\$ 2,023,332	-2%

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	\$ 157,597	\$ 181,384	\$ 172,287	-9%	\$ 537,780	\$ 521,151	\$ 409,993	31%
Wolcott Mill	\$ 46,252	\$ 46,641	\$ 47,844	-3%	\$ 86,252	\$ 82,784	\$ 82,642	4%
Stony Creek	\$ 303,345	\$ 440,525	\$ 370,106	-18%	\$ 667,147	\$ 840,213	\$ 726,883	-8%
Indian Springs	\$ 71,116	\$ 108,838	\$ 92,501	-23%	\$ 138,274	\$ 191,376	\$ 168,285	-18%
Kensington	\$ 323,016	\$ 430,270	\$ 371,707	-13%	\$ 849,020	\$ 917,216	\$ 833,913	2%
Huron Meadows	\$ 51,658	\$ 69,221	\$ 60,329	-14%	\$ 102,430	\$ 89,873	\$ 101,885	1%
Hudson Mills	\$ 74,946	\$ 111,356	\$ 91,425	-18%	\$ 183,385	\$ 228,607	\$ 206,181	-11%
Lower Huron/Willow/Oakwoods	\$ 106,288	\$ 147,141	\$ 133,086	-20%	\$ 249,826	\$ 289,041	\$ 260,187	-4%
Lake Erie	\$ 121,799	\$ 153,336	\$ 135,896	-10%	\$ 235,690	\$ 275,229	\$ 252,649	-7%
Y-T-D TOTALS	\$ 1,256,017	\$ 1,688,712	\$ 1,475,181	-15%	\$ 3,049,803	\$ 3,435,490	\$ 3,042,617	0%

District	Y-T-D Vehicle Entries by Management Unit				Y-T-D Total Revenue by Management Unit			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Eastern	197,635	193,587	183,071	8%	1,291,178	1,444,148	1,219,517	6%
Western	248,312	249,595	247,890	0%	1,273,109	1,427,072	1,310,264	-3%
Southern	168,367	179,978	164,861	2%	485,516	564,270	512,836	-5%

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	1,305	2,187	2,065	-37%	\$ 38,258	\$ 62,666	\$ 57,471	-33%
Indian Springs	1,194	1,760	1,652	-28%	\$ 31,859	\$ 46,738	\$ 39,618	-20%
Kensington	1,932	2,427	2,251	-14%	\$ 51,254	\$ 66,431	\$ 50,360	2%
Huron Meadows	1,715	2,218	1,993	-14%	\$ 46,641	\$ 61,790	\$ 51,887	-10%
Hudson Mills	1,277	1,056	1,014	26%	\$ 23,560	\$ 24,335	\$ 20,714	14%
Willow	1,221	806	1,357	-10%	\$ 31,115	\$ 23,564	\$ 35,621	-13%
Lake Erie	1,217	1,804	1,673	-27%	\$ 32,723	\$ 50,563	\$ 40,925	-20%
<b>Total Regulation</b>	<b>9,861</b>	<b>12,258</b>	<b>12,005</b>	<b>-18%</b>	<b>\$ 255,410</b>	<b>\$ 336,088</b>	<b>\$ 296,595</b>	<b>-14%</b>
LSC Par 3	251	281	310	-19%	\$ 1,552	\$ 1,746	\$ 1,974	-21%
LSC Foot Golf	11	28	25	-55%	\$ 51	\$ 202	\$ 177	-71%
<b>Total Golf</b>	<b>10,123</b>	<b>12,567</b>	<b>12,541</b>	<b>-19%</b>	<b>\$ 257,013</b>	<b>\$ 338,036</b>	<b>\$ 300,122</b>	<b>-14%</b>

GOLF Y-T-D	GOLF ROUNDS Y-T-D				GOLF REVENUE Y-T-D			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Stony Creek	1,331	2,187	2,120	-37%	\$ 38,903	\$ 62,666	\$ 58,888	-34%
Indian Springs	1,208	1,760	1,721	-30%	\$ 32,435	\$ 46,738	\$ 41,165	-21%
Kensington	2,022	2,427	2,352	-14%	\$ 53,499	\$ 66,431	\$ 52,545	2%
Huron Meadows	1,732	2,218	2,105	-18%	\$ 47,043	\$ 61,790	\$ 54,781	-14%
Hudson Mills	1,288	1,056	1,056	22%	\$ 23,771	\$ 24,335	\$ 21,600	10%
Willow	1,249	806	1,358	-8%	\$ 31,780	\$ 23,564	\$ 36,487	-13%
Lake Erie	1,225	1,804	1,727	-29%	\$ 33,001	\$ 50,563	\$ 42,233	-22%
<b>Total Regulation</b>	<b>10,055</b>	<b>12,258</b>	<b>12,438</b>	<b>-19%</b>	<b>\$ 260,432</b>	<b>\$ 336,088</b>	<b>\$ 307,700</b>	<b>-15%</b>
LSC Par 3	251	281	316	-21%	\$ 1,552	\$ 1,746	\$ 1,997	-22%
LSC Foot Golf	11	28	26	-58%	\$ 51	\$ 202	\$ 186	-73%
<b>Total Golf</b>	<b>10,317</b>	<b>12,567</b>	<b>12,983</b>	<b>-21%</b>	<b>\$ 262,035</b>	<b>\$ 338,036</b>	<b>\$ 311,259</b>	<b>-16%</b>

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	0	0	0	-	\$ -	\$ -	\$ -	-
Stony Creek Rip Slide	0	0	0	-	\$ -	\$ -	\$ -	-
KMP Splash	0	0	0	-	\$ 1,600	\$ 1,200	\$ 933	71%
Lower Huron	0	0	0	-	\$ -	\$ -	\$ -	-
Willow	0	0	0	-	\$ -	\$ -	\$ -	-
Lake Erie	0	0	0	-	\$ -	\$ -	\$ -	-
<b>TOTAL Aquatics</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>\$ 1,600</b>	<b>\$ 1,200</b>	<b>\$ 933</b>	<b>71%</b>

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	0	0	0	-	\$ -	\$ -	\$ -	-
Stony Creek Rip Slide	0	0	0	-	\$ -	\$ -	\$ -	-
KMP Splash	0	0	0	-	\$ 2,200	\$ 2,400	\$ 2,247	-2%
Lower Huron	0	0	0	-	\$ -	\$ -	\$ -	-
Willow	0	0	0	-	\$ -	\$ -	\$ -	-
Lake Erie	0	0	0	-	\$ -	\$ -	\$ -	-
<b>TOTAL Aquatics YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>\$ 2,200</b>	<b>\$ 2,400</b>	<b>\$ 2,247</b>	<b>-2%</b>

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
<b>Lake St. Clair</b>								
Welsh Center	5	2	2	200%	\$ 2,750	\$ 2,400	\$ 3,542	-22%
Shelters	37	24	22	71%	\$ 7,925	\$ 6,800	\$ 7,975	-1%
Boat Launches	147	91	111	32%	\$ -	\$ -	\$ -	-
Marina	0	1	2	-	\$ -	\$ 14	\$ 14	-
Mini-Golf	0	0	0	-	\$ -	\$ -	\$ -	-
<b>Wolcott</b>								
Activity Center	6	8	8	-25%	\$ 2,000	\$ 650	\$ 1,250	60%
<b>Stony Creek</b>								
Disc Golf Daily	1,337	2,127	2,101	-36%	\$ 4,461	\$ 6,381	\$ 6,302	-29%
Disc Golf Annual	31	43	44	-29%	\$ 1,705	\$ 2,325	\$ 2,212	-23%
Total Disc Golf	1,368	2,170	2,144	-36%	\$ 6,166	\$ 8,706	\$ 8,514	-28%
Shelters	37	54	61	-40%	\$ 8,325	\$ 12,150	\$ 13,195	-37%
Boat Rental	0	0	0	-	\$ -	\$ -	\$ 2	-
Boat Launches	0	14	62	-	\$ -	\$ -	\$ -	-
<b>Indian Springs</b>								
Shelters	4	5	5	-14%	\$ 700	\$ 1,000	\$ 867	-19%
Event Room	3	4	3	0%	\$ 5,200	\$ 7,800	\$ 6,723	-23%
<b>Kensington</b>								
Disc Golf Daily	1,951	3,389	3,578	-45%	\$ 5,853	\$ 10,167	\$ 9,090	-36%
Disc Golf Annual	43	35	55	-21%	\$ 2,365	\$ 1,885	\$ 2,756	-14%
Total Disc Golf	1,994	3,424	3,633	-45%	\$ 8,218	\$ 12,052	\$ 11,847	-31%
Shelters	59	41	51	16%	\$ 13,275	\$ 10,700	\$ 12,550	6%
Boat Rental	0	0	0	-	\$ -	\$ -	\$ -	-
<b>Huron Meadows</b>								
Shelters	1	2	4	-77%	\$ 200	\$ 400	\$ 933	-79%
<b>Hudson Mills</b>								
Disc Golf Daily	947	1,570	1,296	-27%	\$ 2,841	\$ 4,710	\$ 3,888	-27%
Disc Golf Annual	43	42	41	5%	\$ 2,345	\$ 2,250	\$ 2,103	11%
Total Disc Golf	990	1,612	1,337	-26%	\$ 5,186	\$ 6,960	\$ 5,991	-13%
Shelters	15	17	17	-13%	\$ 3,000	\$ 3,400	\$ 3,467	-13%
Canoe Rental	0	0	0	-	\$ -	\$ -	\$ -	-
<b>Lower Huron / Willow / Oakwoods</b>								
Disc Golf Daily	162	213	71	128%	\$ 486	\$ 639	\$ 213	128%
Disc Golf Annual	4	3	1	300%	\$ 220	\$ 165	\$ 55	300%
Total Disc Golf	166	216	72	131%	\$ 706	\$ 804	\$ 268	163%
Shelters	35	42	40	-13%	\$ 7,550	\$ 9,250	\$ 8,850	-15%
<b>Lake Erie</b>								
Shelters	11	5	7	65%	\$ 2,700	\$ 1,100	\$ 1,333	103%
Boat Launches	2,935	2,719	2,568	14%	\$ -	\$ -	\$ -	-
Marina	114	0	0	-	\$ 14,028	\$ 10,922	\$ 10,735	31%

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
<b>Lake St. Clair</b>								
Welsh Center	30	23	15	100%	\$ 21,150	\$ 18,400	\$ 13,908	52%
Shelters	98	84	58	68%	\$ 23,675	\$ 24,050	\$ 23,767	0%
Boat Launches	163	113	124	31%	\$ -	\$ -	\$ -	-
Marina	0	1	2	-	\$ -	\$ 14	\$ 14	-
Mini-Golf	0	0	0	-	\$ -	\$ -	\$ -	-
<b>Wolcott</b>								
Activity Center	25	28	28	-11%	\$ 9,150	\$ 5,500	\$ 6,400	43%
<b>Stony Creek</b>								
Disc Golf Daily	1,555	2,881	2,642	-41%	\$ 5,115	\$ 8,721	\$ 9,286	-45%
Disc Annual	67	100	87	-23%	\$ 3,665	\$ 5,380	\$ 5,140	-29%
Total Disc Golf	1,622	2,981	2,729	-41%	\$ 8,780	\$ 14,101	\$ 14,426	-39%
Shelters	100	126	146	-31%	\$ 22,500	\$ 28,250	\$ 30,120	-25%
Boat Rental	0	0	0	-	\$ -	\$ -	\$ 2	-
Boat Launches	0	23	66	-	\$ -	\$ -	\$ -	-
<b>Indian Springs</b>								
Shelters	8	13	15	-47%	\$ 1,500	\$ 2,600	\$ 2,767	-46%
Event Room	16	21	16	-2%	\$ 25,800	\$ 37,500	\$ 29,003	-11%
<b>Kensington</b>								
Disc Golf Daily	2,604	4,675	4,687	-44%	\$ 7,812	\$ 14,025	\$ 12,223	-36%
Disc Annual	110	89	110	0%	\$ 5,950	\$ 4,795	\$ 5,715	4%
Total Disc Golf	2,714	4,764	4,797	-43%	\$ 13,762	\$ 18,820	\$ 17,938	-23%
Shelters	168	129	165	2%	\$ 37,800	\$ 36,575	\$ 41,437	-9%
Boat Rental	0	0	0	-	\$ -	\$ -	\$ -	-
<b>Huron Meadows</b>								
Shelters	10	7	10	0%	\$ 2,000	\$ 1,400	\$ 2,067	-3%
<b>Hudson Mills</b>								
Disc Golf Daily	1,482	2,553	2,152	-31%	\$ 4,446	\$ 7,659	\$ 6,457	-31%
Disc Annual	125	114	104	21%	\$ 6,715	\$ 6,110	\$ 5,355	25%
Total Disc Golf	1,607	2,667	2,256	-29%	\$ 11,161	\$ 13,769	\$ 11,812	-6%
Shelters	40	43	45	-11%	\$ 9,400	\$ 8,600	\$ 9,000	4%
Canoe Rental	0	0	0	-	\$ -	\$ 4,716	\$ 1,572	-
<b>Lower Huron / Willow / Oakwoods</b>								
Disc Golf Daily	383	244	81	371%	\$ 1,149	\$ 732	\$ 244	371%
Disc Annual	10	4	1	650%	\$ 530	\$ 220	\$ 73	623%
Total Disc Golf	393	248	83	375%	\$ 1,679	\$ 952	\$ 317	429%
LH Shelters	121	104	111	9%	\$ 26,700	\$ 22,950	\$ 24,458	9%
<b>Lake Erie</b>								
Shelters	20	18	24	-15%	\$ 4,500	\$ 4,100	\$ 5,233	-14%
Boat Launches	3,829	3,767	3,451	11%	\$ -	\$ -	\$ -	-
Marina	114	0	0	-	\$ 24,196	\$ 21,283	\$ 23,134	5%



# HURON-CLINTON METROPARKS MONTHLY STATISTICS

April 2018

PARK	Cross Country Ski Rental this Month				Cross Country Ski Rental Y-T-D			
	Current	Previous	Prev 3 Yr Avg	Change from Average	Current	Previous	Prev 3 Yr Avg	Change from Average
Stony Creek	\$ -	\$ -	\$ -	-	\$ 7,226	\$ 574	\$ 4,052	-
Kensington	\$ -	\$ -	\$ -	-	\$ 14,430	\$ 1,323	\$ 7,550	91%
Huron Meadows	\$ -	\$ -	\$ -	-	\$ 24,092	\$ 8,227	\$ 15,749	53%
Hudson Mills	\$ -	\$ -	\$ -	-	\$ 5,128	\$ -	\$ 2,137	140%

## 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	15,967	22,786	17,655	-10%	34,894	41,191	34,487	1%
Wolcott Mill	5,275	3,318	3,943	34%	11,975	10,180	10,927	10%
Wolcott Farm	30,553	10,611	16,769	82%	37,260	13,264	22,114	68%
Stony Creek	14,346	18,329	16,713	-14%	46,086	60,840	54,497	-15%
Eastern Mobile Center	7,370	4,784	4,765	55%	10,037	7,732	6,662	51%
Indian Springs	5,749	8,148	6,819	-16%	16,970	18,350	18,155	-7%
Kens NC	25,751	29,171	26,091	-1%	73,534	78,006	75,892	-3%
Kens Farm	30,122	36,217	37,051	-19%	70,219	69,613	73,322	-4%
Western Mobile Center	911	1,632	1,607	-43%	3,514	4,489	5,107	-31%
Hudson Mills	2,707	3,608	3,017	-10%	11,597	11,958	12,166	-5%
Oakwoods	11,352	13,058	12,836	-12%	35,341	44,987	43,094	-18%
Lake Erie	12,221	12,716	11,612	5%	42,847	43,186	37,467	14%
Southern Mobile Center	1,699	287	906	88%	4,923	2,000	2,551	93%
Totals	164,023	164,665	159,784	3%	399,197	405,796	396,441	1%

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	\$ 1,984	\$ 2,213	\$ 2,053	-3%	\$ 4,976	\$ 8,386	\$ 7,508	-34%
Wolcott Mill	\$ 3,259	\$ 2,233	\$ 1,505	117%	\$ 8,010	\$ 5,410	\$ 4,689	71%
Wolcott Farm	\$ 22,212	\$ 25,865	\$ 20,822	7%	\$ 28,032	\$ 30,206	\$ 27,301	3%
Wagon Rides	\$ 2,572	\$ 5,337	\$ 2,514	2%	\$ 3,495	\$ 5,444	\$ 2,754	27%
Livestock/Produce	\$ 1,521	\$ 594	\$ 2,059	-26%	\$ 8,462	\$ 10,709	\$ 9,785	-14%
FARM TOTAL	\$ 26,305	\$ 31,796	\$ 25,395	4%	\$ 39,989	\$ 46,359	\$ 39,839	0%
Stony Creek	\$ 3,154	\$ 3,741	\$ 2,127	48%	\$ 7,843	\$ 8,860	\$ 7,819	0%
Eastern Mobile Center	\$ 1,625	\$ 525	\$ 175	829%	\$ 8,275	\$ 2,200	\$ 733	1028%
Indian Springs	\$ 2,110	\$ 4,516	\$ 3,687	-43%	\$ 6,281	\$ 8,738	\$ 7,751	-19%
Kens NC	\$ 879	\$ 1,495	\$ 1,633	-46%	\$ 5,305	\$ 7,229	\$ 7,525	-30%
Kens Farm	\$ 16,869	\$ 3,357	\$ 5,221	223%	\$ 53,370	\$ 13,503	\$ 20,636	159%
Wagon Rides	\$ 2,828	\$ 6,412	\$ 4,915	-42%	\$ 6,325	\$ 12,995	\$ 10,702	-41%
Livestock/Produce	\$ 480	\$ 620	\$ 1,148	-58%	\$ 1,604	\$ 3,271	\$ 4,940	-68%
FARM TOTAL	\$ 20,177	\$ 10,389	\$ 11,284	79%	\$ 61,298	\$ 29,769	\$ 36,278	69%
Western Mobile Center	\$ 1,750	\$ 2,460	\$ 1,692	3%	\$ 9,725	\$ 9,035	\$ 6,676	46%
Hudson Mills	\$ 517	\$ 1,918	\$ 1,169	-56%	\$ 5,241	\$ 4,667	\$ 5,780	-9%
Oakwoods	\$ 945	\$ 1,809	\$ 1,080	-12%	\$ 2,997	\$ 4,546	\$ 3,867	-22%
Lake Erie	\$ 488	\$ 1,567	\$ 1,342	-64%	\$ 2,995	\$ 7,343	\$ 5,196	-42%
Southern Mobile Center	\$ 1,850	\$ -	\$ 58	3071%	\$ 6,924	\$ 3,380	\$ 1,185	484%
Totals	\$ 65,043	\$ 64,662	\$ 53,199	22%	\$ 169,859	\$ 145,922	\$ 134,848	26%

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	76	2,119	80	2,977	-	-	7	878
Wolcott Mill	13	605	10	572	1	350	-	-
Wolcott Farm	117	6,716	54	8,574	1	36	1	15
Stony Creek	35	1,096	66	2,083	-	-	5	209
Eastern Mobile Center					38	7,370	18	4,784
Indian Springs	32	1,440	58	2,531	6	358	8	304
Kens NC	15	352	17	524	20	406	-	-
Kens Farm	145	10,235	236	8,122	-	-	-	-
Western Mobile Center					42	911	37	1,632
Hudson Mills	10	207	3	1,108	-	-	-	-
Oakwoods	17	290	18	772	2	71	6	514
Lake Erie	10	241	19	972	3	140	-	-
Southern Mobile Center					44	1,699	10	287
Totals	470	23,301	561	28,235	157	11,341	92	8,623

BREAKDOWN OF ATTENDANCE	OTHER VISITORS (Non-programs)	
	Current	Previous
Lake St Clair	13,848	18,931
Wolcott Mill	4,320	2,746
Wolcott Farm	23,801	2,022
Stony Creek	13,250	16,037
Indian Springs	3,951	5,313
Kens NC	24,993	28,647
Kens Farm	19,887	28,095
Hudson Mills	2,500	2,500
Oakwoods	10,991	11,772
Lake Erie	11,840	11,744
Totals	129,381	127,807

"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.