

#### Angara wetlands

16 messages

saralruss <saralruss@gmail.com>

To: "planning@rochesterhills.org" <planning@rochesterhills.org>

To Whom It May Concern,

I would like to voice my concerns regarding the large development planned for this location. I would like to say that I have no objection to the type of development proposed, just the location. My concern is the destruction and removal of almost 300 trees, countless vegetation, small reptiles, and countless wildlife that new construction will destroy. The building on and around high quality wetlands and the impact on the wildlife and surrounding homes and communities will never be made whole again. The filling in of wetland A and wetland B, plus drilling through the current pond is inexcusable. **Profit before nature should never be part of the Rochester Hills community. Greed is an ugly thing** 

I own property south of this proposed development and already see issues with flooding has had on surrounding property. The IDD community deserves the proper foundation on which to build their homes. They are investing a significant amount of money to provide for their loved ones.

As for the easement that has been obtained south of the construction site to drill through to connect the development, who is going to replace the damage that will be done? Will tiny saplings replace 100 plus old trees? I am attaching a report that I obtained on the Egle website so planning and the IDD community can make a more informed decision. It looks like the one planning hasn't included the full report and pictures taken.

#### Sara Russ

Auburn Angara Wetland Report 7.24.2024\_v1 (2).pdf 10709K

Planning Dept Email <planning@rochesterhills.org> To: saralruss <saralruss@gmail.com> Cc: Chris McLeod <mcleodc@rochesterhills.org>

Hello Sara -

Thank you for your comments, they will be provided to City Council for the Preliminary site condominium and Wetland Use permit requests, the Tree Removal Permit and the Natural Features Setback modification were approved last night by the Planning Commission.

The expected date for City Council is November 11th.

Jennifer MacDonald Planning Specialist



innovative by nature

Planning & Economic

Development

248-656-4660 rochesterhills.org

[Quoted text hidden]

saralruss <saralruss@gmail.com> To: Planning Dept Email <planning@rochesterhills.org> Wed, Oct 16, 2024 at 3:46 PM

Wed, Oct 16, 2024 at 3:05 PM

Thank you for returning my email. If I understand what this means it will, minimize impacts from development on the natural feature and help ensure the long-term health of the natural feature

Does this mean you will be putting in a retention pond to cover the damages? Or does it mean something else? I would appreciate it if you could clarify for me. thank you

#### Sara Russ

[Quoted text hidden]

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# Planning Dept Email cplanning@rochesterhills.org> Τα saralruss saradruss saradruss <td

#### Hi Sara-

The City did thorough reviews of the wetlands and their associated natural features setbacks as a part of the many site plan reviews this development underwent. Our wetland consultant, who has been with the City for a significant amount of time and fully understands the City's stance on the environment, guided us through what impacts may be allowable and which would not be. Our consultants ultimately determined that the proposed impacts would be acceptable based on the latest set of plans. As a part of their review, they were also coordinating with the City's staff, including Engineering, to ensure that stormwater is captured from the proposed development. There is a proposed stormwater pond towards the rear (south end) of the site that will collect stormwater generated from the development and then it will be discharged into the wetland at the south end of the site at a rate that is deemed acceptable and after the stormwater has been cleaned. Again, this overall system has been reviewed in tandem with our environmental consultants and city engineering staff and has been found to be acceptable in its configuration.

Jennifer MacDonald Planning Specialist



## **Planning & Economic**

Development

248-656-4660 rochesterhills.org Thank you for getting back to me so soon. One more question is how wide is the easement going to be going through the south end to connect the sewer line? We are the house north of this and it looks very close to our property line with mature trees.

Sara Russ



Forwarded message ----- From: Jason Boughton <br/>
boughtonj@rochesterhills.org>
 Date: Tue, Oct 22, 2024 at 7:29 AM
 Subject: Sanitary Sewer Question for Angara Oaks
 To: <saralruss@gmail.com>
 Cc: Chris McLeod <mcleodc@rochesterhills.org>

#### Good Morning Sara

The Planning Department asked me to respond to your question with regards to the sanitary sewer installation. For the proposed sewer extension, there will be a 20 foot wide easement that exits the southern end of the Auburn Angara Oaks project, extends through the vacant property (15-32-201-007) to the south, then will head east, along the northern property line of 3270 Devondale to Devondale Road, but wholly on the 3270 Devondale property. This is currently the proposed route for the sewer extension and it is our understanding easements have already been secured from these 2 landowners. Full engineering review and permitting will be necessary to ensure that the proposed sewer line route is viable and can ultimately be approved. The sewer extension is proposed to be directionally drilled through these properties which should limit disturbances to these properties. With directional drilling, the need for trenching or excessive digging should be limited. An area where the sewer line switches from running north and south, to east and west will need to be excavated to install a manhole (and associated manhole structure). The sewer will generally be approximately 10 feet in depth. All the permitting processes will take a better part of a year. As the time comes for constructing the condominium, this would be the best time to do a quick video of your shared property line just in case it is needed if a dispute occurs. If you have any more questions with regards to the utilities please feel free to respond to me. Thank you and have a great day.



innovativetoinature

# Jason Boughton Enginaening Utilit.Lei Spechalist

DC!parlment m Public Serne-os

248-841-2490 rochesterhil1s.org

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July 24, 2024

Bruce Michael Three Oaks Communities P.O. Box 8307 Ann Arbor, MI 48107

### Re: Wetland Delineation Report – Angara Drive (Parcels 15-32-201-001; -002; -003; -004; -006) City of Rochester Hills, Oakland County, Michigan

Dear Mr. Michael:

At your request, Barr Engineering Co. (Barr), conducted a wetland delineation of the approximately 7.36acre above-referenced property. The purpose of this report is to summarize the results of the wetland delineations conducted on May 30 and re-evaluated on July 9, 2024, and to provide a professional opinion as to potential Michigan Department of Environment, Great Lakes, and Energy (EGLE) and City of Rochester Hills jurisdiction over the identified wetland areas. Prior to the July 9 site visit, the City of Rochester Hills consultant, Kyle Hottinger of ASTI, Inc., was on site to address an action taken by a neighbor regarding the hydrology between the site and the neighboring property. A culvert drained this area of the site to the property to the northeast and that culvert had been blocked over the last winter season resulting in water ponding onto the site.

# 1.0 Area of Investigation Description

The Area of Investigation (AOI) is located west of Crooks Road and south of Auburn Road. The land cover within the AOI consists of mowed lawn, two houses and two garages, and a woodlot. The surrounding land use is comprised of residential development and vacant land.

# 1.1 Desktop Review

Barr conducted a desktop review to evaluate digital imagery for topography, soil types, and mapped wetlands within the AOI prior to the wetland delineation. As part of the desktop review, Barr staff reviewed resources such as the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS; Figure 1), Michigan Final Wetlands Inventory (MFWI; Figure 2), and aerial photography (Attachment 1).

A review of aerial photography shows evidence of past disturbance on parcel 15-32-201-006, the eastern most parcel of the site. It appears that from approximately 2014 to approximately 2019 the northern portion of this parcel was used as a landscaping storage and staging yard, and the previous owner brought in large cobble to establish a parking and storage area.

According to the WSS (Figure 1), the AOI includes well drained Fox sandy loam, till plain, 2 to 6 percent slopes (18B); somewhat poorly drained Thetford loamy fine sand, 0 to 3 percent slopes (35A); very poorly drained Granby loamy sand, 0 to 2 percent slopes (39); and well drained Urban land-Spinks complex, 0 to 8 percent slopes (62B). The Granby soil is the hydric (wetland) soil mapped within the AOI. Hydric soils are

soils that developed under prolonged periods of saturation or inundation and typically support wetland habitats in an undrained condition.

The MFWI (Figure 2) shows the AOI to contain wetland in the southeastern corner of the property as identified by the National Wetland Inventory (NWI) and Michigan Resource Inventory System (MIRIS) maps. It also shows the central and southwestern portions of the AOI to contain soil areas which include wetland soils.





#### Figure 1. NRCS Web Soil Survey

Figure 2. Michigan Final Wetlands Inventory

# 1.2 Methodology

The wetland delineation was conducted in a manner consistent with the *Corps of Engineers Wetlands Delineation Manual (USACE 1987)* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0, USACE 2010)*. The wetland delineation procedures outlined in these manuals require the evaluation of on-site vegetation, soils, and hydrologic characteristics.

The wetland boundaries were flagged in the field with alpha numerically labeled pink flagging tape and pin flags. The wetland boundaries were subsequently surveyed by Monument Engineering Group Associates, Inc. Site observations are described in the sections below.

# 1.3 Results

The AOI includes palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) habitats. The on-site investigation identified two wetlands. These wetlands were labeled as Wetland A and Wetland B. The wetland and upland areas within the AOI are described below.

### Vegetation, Soil, and Hydrology

#### Wetland A

Wetland A is a PEM/PSS wetland located within the central portion of the AOI. Wetland A continues offsite, both east and west of the AOI. The on-site portion of Wetland A is approximately **1.8** acres in size. The vegetation identified within the wetland included species such as lake sedge (*Carex lacustris*), skunk cabbage (*Symplocarpus foetidus*), common buckthorn (*Rhamnus cathartica*), and American elm (*Ulmus americana*). During the July 9<sup>th</sup> reevaluation of the wetlands, five (5) soil pits and data forms were completed at five (5) sampling points on the north edge of Wetland A, attached are data forms SP1 through SP5, along with a photolog showing the location of the sampling points. The eastern end of Wetland A exists on previously disturbed land and soil pits could not be dug due to the presence of large cobble at the surface. Hydric soil and primary and secondary wetland hydrology indicators were observed in other areas of Wetland A. The boundaries of this wetland were identified using flags A1 through A57.

#### Wetland B

Wetland B is a PFO wetland located in the southern portion of the AOI. Wetland B continues off-site south of the AOI. The on-site portion of Wetland B is approximately **0.2** acres in size. The vegetation identified within the wetland included species such as silver maple (*Acer saccharinum*). Hydric soil was assumed to be present within Wetland B. A soil pit was not dug because the soil surface was inundated by 6 inches of water. Primary and secondary wetland hydrology indicators were observed in Wetland B. The boundaries of this wetland were identified using flags B1 through B12.

#### <u>Upland</u>

The upland areas of the site were characterized by mowed lawn and scrub-shrub areas and woods. The upland areas of the site contained species such as white clover (*Trifolium repens*), dandelion (*Taraxacum officinale*), multiflora rose (*Rosa multiflora*), Japanese barberry (*Berberis thunbergia*), prickly ash (*Zanthoxylum americanum*), common buckthorn, Morrow's honeysuckle (*Lonicera morrowii*), black locust (*Robinia pseudoacacia*), and black cherry (*Prunus serotina*). Hydric soils and wetland hydrology indicators were not observed in the upland areas of the site.

The attached Site Survey depicts the location of the wetland areas encountered on the site. Wetland Determination Data Forms are attached for further detailed information on the wetland and upland areas within the AOI.

# **1.4 Conclusions**

Based on observations of topography, vegetation, soil, and indicators of hydrology, Barr has determined that wetland habitat is present within the AOI. These wetland areas were identified as a PEM, PSS, and PFO wetland habitat types. According to Part 303, Wetlands Protection, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, wetlands regulated by the State of Michigan include wetlands that are:

- 1. Located within 500 feet of, or having a direct surface water connection to, an inland lake, pond, river, or stream; or
- 2. Greater than 5 acres in size; or
- 3. Located within 1,000 feet of, or having a direct surface water connection to, the Great Lakes or Lake St. Clair; or
- 4. A water of the United States as that term is used in section 502(7) of the Federal Water Pollution Control Act, 33 USC 1362; or

- Known to have a documented presence of an endangered or threatened species under Part 365 of State of Michigan 1994 PA 451, as amended or the Federal Endangered Species Act of 1973, Public Law 93-205; or
- 6. Rare or imperiled.

Wetland A may be regulated under Part 303 because it continues off-site, beyond the limits of the AOI. The total size of Wetland A was not determined. If Wetland A is greater than 5 acres in size it would be regulated.

Wetland B may be regulated under Part 303 because it is part of a larger wetland complex that extends offsite and may be greater than 5 acres in total size. If Wetland B is greater than 5 acres in size it would be regulated.

The City of Rochester Hills regulates all wetlands regulated by EGLE and, in addition, regulates noncontiguous wetlands two acres in size or greater. The City of Rochester Hills also regulates noncontiguous wetlands less than two acres in size if the wetlands are deemed essential to the preservation of the natural resources of the city. Wetland A and Wetland B are likely to be regulated by the City of Rochester Hills because they appear to be greater than 2 acres in size.

Please be advised that EGLE, and the City of Rochester Hills, has regulatory authority regarding the wetland boundary location(s) and jurisdictional status of wetlands on this site. Barr's wetland determination was performed in general accordance with accepted procedures for conducting wetland determinations. Barr provides no warranty, guarantee, or other agreement in respect to the period of time for which this wetland determination will remain valid. Barr's conclusions reflect our professional opinion based on the site conditions within the AOI observed during the site visit. Discrepancies may arise between current and future wetland determinations and delineations due to changes in vegetation and/or hydrology as the result of land use practices or other environmental factors, whether on-site or on adjacent or nearby properties. We recommend our wetland boundary determination and jurisdictional opinion be reviewed by EGLE prior to undertaking any activity within any identified wetlands.

Thank you for the opportunity to provide this wetland delineation. If you have any questions, please contact me at your convenience at 810-247-1229 or Fthompson@barr.com.

Sincerely,

BARR ENGINEERING CO.

Fran Thompson Ecologist

# References

- U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual.* Washington, DC.
- USACE. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)

**Figure:** Site Survey

### Attachments:

Attachment 1 – Historic Aerial Photography Attachment 2 – USACE Wetland Determination Data Sheets

UTILITY CROSSINGS								
WETLAND	SANITARY	WATERMAIN	STORM SEWER					
WETLAND A	248 LF – 8" SEWER	245 LF – 8" WATER MAIN	247 LF – 36" STORM SEWER 125 LF – 12" STORM SEWER					
WETLAND B	112 LF – 8" SEWER (DIRECTIONAL DRILL)	NA	12 INCH OUTLET W/ RIPRAP					

	25' NATURAL FEATURES	SETBACK DISTURBANCES	
WETLAND	LENGTH OF 25' SETBACK	LENGTH OF DISRUPTION OF 25' SETBACK	REDUCTION
WETLAND A – DISTURBANCE 1	1,201 LF	632 LF	20,396 SF (PERMANENT)
WETLAND A – DISTURBANCE 2	1,201 LF	123 LF	2,704 SF (TEMP RESTORED)
WETLAND B	344 LF	344 LF	2,122 SF (PERMANENT) 3,318 SF (TEMP RESTORED)

	WETLAND DISTURBANCES									
WETLAND	AREA OF WETLAND (ONSITE)	AREA OF DISRUPTION OF WETLAND	WETLAND VOLUME							
WETLAND A - DISTURBANCE 1	78,062 SF	29,356 SF	5,522 CY (FILL)							
WETLAND A – DISTURBANCE 2	78,062 SF	25 SF	<1 CY (FILL)							
WETLAND B - DISTURBANCE 1	9,367 SF	361 SF	79 CY (FILL)							
WETLAND B – DISTURBANCE 2	9,367 SF	69 SF	1 CY (CUT)							





Attachments 1





















Attachment 2



Barr Footer: ArcGISPro 3.3, 2024-07-11 15:14 File: I: Projects/22/63/1119/Maps/Report/ThreeOaks\_AuburnAngara\_PhotoLog\_20240709.aprx Layout: ThreeOaks\_AuburnAngara\_PhotoLog\_20240709 User: MAC2







<image>

SP2 facing north



Date: 7/9/2024

SP2

Flag No: A27 Page 2 of 6 THREE OAKS AUBURN ANGARA Photo Locations Three Oaks Communities, LLC Rochester Hills, Michigan

**BARR**.

Note: Photo locations are approximate

Barr Footer: ArcGISPro 3.3, 2024-07-11 15:14 File: 1: Projects 2216311191Maps\Report\ThreeOaks\_AuburnAngara\_PhotoLog\_20240709.aprx Layout: ThreeOaks\_AuburnAngara\_PhotoLog\_20240709 User: MAC2











### Date: 7/9/2024

SP3

Note: Photo locations are approximate

Flag No: A29 Page 3 of 6 THREE OAKS AUBURN ANGARA Photo Locations Three Oaks Communities, LLC Rochester Hills, Michigan

**BARR**.

Barr Footer: ArcGISPro 3.3, 2024-07-11 15:14 File: I:\Projects\22\63\1119\Maps\Report\ThreeOaks\_AuburnAngara\_PhotoLog\_20240709.aprx Layout: ThreeOaks\_AuburnAngara\_PhotoLog\_20240709 User: MAC2





Note: Photo locations are approximate

Barr Footer: ArcGISPro 3.3, 2024-07-11 15:14 File: I:\Projects\22\63\1119\Maps\Report\ThreeOaks\_AuburnAngara\_PhotoLog\_20240709.aprx Layout: ThreeOaks\_AuburnAngara\_PhotoLog\_20240709.









WETLAND A facing north



Date: 7/9/2024

Sample Point ID: Overview

Note: Photo locations are approximate

Flag No: A Page 6 of 6 THREE OAKS AUBURN ANGARA Photo Locations Three Oaks Communities, LLC Rochester Hills, Michigan

#### U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Ang	ara Oaks	City/Co	ounty: Rochester Hi	lls/Oakland	l Co.	Sampling Date:	5/30/2024	
Applicant/Owner: Three	ee Oaks Communities			State:	MI	Sampling Point:	A56 UPL	
Investigator(s): Fran Thor	npson, Barr Engineering Co.	Section	Township, Range:	S32, T3N	, R11E			
Landform (hillside, terrace	e, etc.): hillslope		Local relief (conca	ve, convex	, none): <u>c</u>	convex		
Slope (%): 0-2 Lat	:: 42.63213	Long:	-83.18170		[	Datum: NAD 83		
Soil Map Unit Name: Granby loamy sand NWI classification: Upland								
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)								
Are Vegetation No , Sc	il <u>No</u> , or Hydrology <u>No</u> si	ignificantly disturbed?	Are "Normal Circun	nstances" p	present?	Yes <u>X</u> No		
Are Vegetation No , Sc	oil <u>No</u> , or Hydrology <u>No</u> n	aturally problematic?	(If needed, explain	any answe	rs in Ren	narks.)		
SUMMARY OF FINI	DINGS – Attach site ma	p showing sampl	ing point locati	ons, trar	nsects,	important feat	tures, etc.	
Hydrophytic Vegetation Hydric Soil Present?	Present? Yes <u>No</u> Yes <u>No</u>	X Is the second	ne Sampled Area nin a Wetland?	Ye	s	No_X		
Wetland Hydrology Pres	ent? Yes No	X						

Remark	s.

All three wetland criteria are not met. Sampling point is upland. This sampling point represents the upland areas adjacent to Wetlands A and B.

#### VEGETATION - Use scientific names of plants.

	Absolute	Dominant	Indicator		
Tree Stratum (Plot size: 30 ft )	% Cover	Species?	Status	Dominance Test worksheet:	
1. Prunus serotina	35	Yes	FACU	Number of Dominant Species That	
2. Robinia pseudoacacia	30	Yes	FACU	Are OBL, FACW, or FAC: 2	(A)
3				Total Number of Dominant Species	
4				Across All Strata: 6	(B)
5.				Percent of Dominant Species That	
	65	=Total Cover		Are OBL, FACW, or FAC: 33.39	6 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft	)				
1. Rhamnus cathartica	25	Yes	FAC	Prevalence Index worksheet:	
2. Lonicera morrowii	15	Yes	FACU	Total % Cover of: Multiply by	
3. Berberis thunbergii	5	No	FACU	OBL species 0 x 1 = 0	
4.				FACW species 0 x 2 = 0	
5.				FAC species 45 x 3 = 135	
	45	=Total Cover		FACU species 95 x 4 = 380	
Herb Stratum (Plot size: 5 ft )				UPL species $0 \times 5 = 0$	
1. Rhamnus cathartica	20	Yes	FAC	Column Totals: 140 (A) 515	(B)
2. Rosa multiflora	10	Yes	FACU	Prevalence Index = B/A = 3.68	
3.					
4.				Hydrophytic Vegetation Indicators:	
5.				1 - Rapid Test for Hydrophytic Vegetatio	'n
6.				2 - Dominance Test is >50%	
7.				3 - Prevalence Index is ≤3.0 <sup>1</sup>	
8.				4 - Morphological Adaptations <sup>1</sup> (Provide	supporting
9.				data in Remarks or on a separate she	et)
10.				Problematic Hydrophytic Vegetation <sup>1</sup> (E:	xplain)
	30	=Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrolo	av must
Woody Vine Stratum (Plot size:	)			be present, unless disturbed or problematic.	gymast
1.				Hydrophytic	
2.				Vegetation	
		=Total Cover		Present? Yes No X	
Remarks: (Include photo numbers here or on a sepa	rate sheet.)				

SOIL

Depth	Matrix		Redo	x Featur	es			,			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0-12	10YR 3/2	100					Loamy/Clayey				
12-18	10YR 5/4	100					Loamy/Clayey				
	·										
$\frac{1}{1}$ Turne: C=C		lation PM-	-Roduced Metrix		kod Sand			DI-Doro Liping M-Mo	triv		
Hydric Soil	Indicators:		-Reduced Matrix, N	10-11/185	Keu Sano	Giains		for Problematic Hydri	c Soils <sup>3</sup>		
Histosol	(A1)		Sandy Gle	ved Mat	rix (S4)		Coast	Prairie Redox (A16)	0 00110 .		
Histic E	pipedon (A2)		Sandy Red	lox (S5)			Iron-M	anganese Masses (F12	)		
Black H	istic (A3)		Stripped M	latrix (Se	6)		Red Pa	arent Material (F21)	/		
Hydroge	en Sulfide (A4)		Dark Surfa	ce (S7)	,		Very S	hallow Dark Surface (F2	22)		
Stratifie	d Layers (A5)		Loamy Mu	cky Min	eral (F1)		Other	(Explain in Remarks)			
2 cm Mi	uck (A10)		Loamy Gle	yed Ma	trix (F2)						
Deplete	d Below Dark Surface	e (A11)	Depleted N	/latrix (F	3)						
Thick D	ark Surface (A12)		Redox Dar	k Surfac	ce (F6)		<sup>3</sup> Indicators	of hydrophytic vegetation	on and		
Sandy Mucky Mineral (S1)			Depleted [	Dark Sur	face (F7)	)	wetlan	wetland hydrology must be present,			
5 cm Mi	ucky Peat or Peat (S3	3)	Redox Dep	pression	s (F8)		unless	disturbed or problemati	С.		
Restrictive	Layer (if observed):										
Туре:											
Depth (I	nches):						Hydric Soil Present?	Yes	NoX		
HYDROLO	DGY										
Wetland Hy	drology Indicators:										
Primary Indi	cators (minimum of c	one is requi	red; check all that	apply)			Secondary	Indicators (minimum of	two required)		
Surface	Water (A1)		Water-Stai	ned Lea	aves (B9)		Surfac	e Soil Cracks (B6)			
High Wa	ater Table (A2)		Aquatic Fa	una (B1	3)		Draina	ge Patterns (B10)			
Saturati	on (A3)		True Aqua	tic Plant	s (B14)		Dry-Se	ason Water Table (C2)			
Water M	larks (B1)		Hydrogen	Sulfide (	Odor (C1	)	Crayfis	sh Burrows (C8)			
Seaime	nt Deposits (B2)			nizospr	ieres on l		.00ts (C3) Satura	tion visible on Aerial Im	agery (C9)		
	posits (b3) at or Crust (B4)		Presence (	n Reduc	tion in Ti	(C4) lled Soil		a of Stressed Plants (D	1)		
Iron Der	posits (B5)		Thin Muck	Surface	e (C7)		FAC-N	leutral Test (D5)			
Inundati	on Visible on Aerial I	magery (B7	) Gauge or \	Nell Dat	a (D9)						
Sparsel	y Vegetated Concave	Surface (E	38) Other (Exp	lain in F	Remarks)						
Field Obse	rvations:										
Surface Wa	ter Present? Ye	s	No X	Depth (i	nches):						
Water Table	Present? Ye	s	No X	Depth (i	nches):						
Saturation F	Present? Ye	s	No <u>X</u>	Depth (i	nches): _		Wetland Hydrology	Present? Yes	<u>No X</u>		
(includes ca	pillary fringe)										
Describe Re	ecorded Data (stream	gauge, mo	onitoring well, aeria	l photos	, previou	s inspec	ctions), if available:				
Domorko											
Rendiks.											

#### U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Ang	gara Oaks	City/County: Ro	ochester Hills/Oak	and Co.	Sampling Date:	5/30/2024		
Applicant/Owner: Th	ree Oaks Communities		State:	MI	Sampling Point:	A56 WET		
Investigator(s): Fran Tho	mpson, Barr Engineering Co.	Section, Townsh	p, Range: <u>S32,</u>	Г3N, R11E				
Landform (hillside, terra	ce, etc.): depression	Local re	elief (concave, con	vex, none):	concave			
Slope (%): 0-2 La	at: 42.63231	Long: -83.1818	30		Datum: NAD 83			
Soil Map Unit Name: Granby loamy sand NWI classification: PEM/PSS								
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)								
Are Vegetation No , S	oil <u>No</u> , or Hydrology <u>No</u> signi	ificantly disturbed? Are "No	mal Circumstance	es" present?	Yes <u>X</u> No			
Are Vegetation No , S	oil <u>No</u> , or Hydrology <u>No</u> natu	rally problematic? (If need	ed, explain any ans	swers in Re	marks.)			
SUMMARY OF FIN	DINGS – Attach site map	showing sampling poi	nt locations, t	ransects	, important fea	tures, etc.		
Hydrophytic Vegetation	Present? Yes X No	Is the Samp	ed Area					
Hydric Soil Present?	Yes X No	within a Wet	land?	Yes X	No			
Wetland Hydrology Pre	sent? Yes X No							

Remarks:

#### **VEGETATION** – Use scientific names of plants.

	Absolute	Dominant	Indicator					
Tree Stratum (Plot size: 30 ft )	% Cover	Species?	Status	Dominance Test	t workshe	eet:		
1. Ulmus americana	20	Yes	FACW	Number of Domir	nant Spec	ies That		
2				Are OBL, FACW,	, or FAC:	_	5	_(A)
3				Total Number of	Dominant	Species		
4				Across All Strata	:	_	5	(B)
5				Percent of Domir	nant Spec	ies That		
	20	=Total Cover		Are OBL, FACW	, or FAC:	_	100.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15	)							
1. Rhamnus cathartica	25	Yes	FAC	Prevalence Inde	x worksh	neet:		
2. Cornus amomum	10	Yes	FACW	Total % Cov	ver of:	Mu	tiply by:	_
3				OBL species	40	x1=	40	_
4				FACW species	30	x 2 =	60	_
5				FAC species	25	x 3 =	75	_
	35	=Total Cover		FACU species	0	x 4 =	0	
Herb Stratum (Plot size: 5 ft )				UPL species	0	x 5 =	0	
1. Carex lacustris	20	Yes	OBL	Column Totals:	95	(A)	175	(B)
2. Symplocarpus foetidus	15	Yes	OBL	Prevalence Inc	dex = B/A	\ =	1.84	
3. Glyceria striata	5	No	OBL					
4.				Hydrophytic Veg	getation I	ndicators	:	
5.				1 - Rapid Tes	st for Hyd	rophytic V	egetation	
6.				X 2 - Dominano	ce Test is	>50%		
7.				X 3 - Prevalence	ce Index is	s ≤3.0 <sup>1</sup>		
8.				4 - Morpholo	gical Ada	ptations <sup>1</sup> (F	Provide su	pporting
9.				data in Re	marks or	on a sepa	rate sheet)	)
10.				Problematic	Hydrophy	tic Vegeta	tion <sup>1</sup> (Expl	ain)
	40	=Total Cover		<sup>1</sup> Indicators of hyd	tric soil ar	nd wetland	hydrology	must
Woody Vine Stratum (Plot size: NA	)			be present, unles	s disturbe	ed or probl	ematic.	maor
1				Hydrophytic				
2				Vegetation				
		=Total Cover		Present?	Yes X	No		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)							

SOIL

(inches)         Color (mc           0-10         10YR 2/           10-16         10YR 4/	ist) <u>%</u> 2 <u>100</u> 1 <u>80</u>	Color (moist) 10YR 4/6	% 20	Type <sup>1</sup> C	Loc <sup>2</sup>	Texture Loamy/Clayey Loamy/Clayey	Remarks Prominent redox concentrations
0-10 10YR 2/ 10-16 10YR 4/	100       1       80	10YR 4/6	20	C	M	Loamy/Clayey Loamy/Clayey	Prominent redox concentrations
10-16 10YR 4/	1 <u>80</u> 	10YR 4/6	20	С	М	Loamy/Clayey	Prominent redox concentrations
	·						
<sup>1</sup> Type: C=Concentration, [	D=Depletion, RM	Reduced Matrix, I	MS=Masł	ked Sand	d Grains	²Location	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:						Indicator	s for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Gle	eyed Matı	rix (S4)		Coas	t Prairie Redox (A16)
Histic Epipedon (A2)		Sandy Re	dox (S5)			Iron-I	Manganese Masses (F12)
Black Histic (A3)		Stripped N	/latrix (S6	6)		Red I	Parent Material (F21)
Hydrogen Sulfide (A4)		Dark Surfa	ace (S7)			Very	Shallow Dark Surface (F22)
Stratified Layers (A5)		Loamy Mu	ucky Mine	eral (F1)		Othe	r (Explain in Remarks)
2 cm Muck (A10)		Loamy Gl	eyed Mat	rix (F2)			
X Depleted Below Dark S	Surface (A11)	X Depleted	Matrix (F3	3)		<u>^</u>	
Thick Dark Surface (A1	12)	Redox Da	rk Surfac	æ (F6)		<sup>3</sup> Indicator	s of hydrophytic vegetation and
Sandy Mucky Mineral (	S1)	Depleted	Dark Surf	face (F7)	)	wetla	nd hydrology must be present,
5 cm Mucky Peat or Pe	eat (S3)	Redox De	pressions	s (F8)		unles	s disturbed or problematic.
Restrictive Layer (if obse	rved):						
Туре:							
Depth (inches):						Hydric Soil Present	? Yes <u>X</u> No
HYDROLOGY							
Wetland Hydrology Indica	ators:					Casanda	
Y Surface Water (A1)	in oi one is requi	Water-Sta	ined Lea	Vec (80)	)	<u>Seconda</u>	y maicators (minimum or two require)
High Water Table (A2)		Aquatic Fa	auna (B1)	3)	)	Ouria	age Patterns (B10)
Saturation (A3)		True Aqua	atic Plants	s (B14)		Drv-S	Season Water Table (C2)
Water Marks (B1)		Hydrogen	Sulfide C	Odor (C1	)	Cravi	fish Burrows (C8)
Sediment Deposits (B2	2)	Oxidized F	Rhizosph	eres on I	, Living Ro	oots (C3) Satur	ration Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence	of Reduc	ed Iron	(C4)	Stunt	ed or Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent Irc	on Reduc	tion in Ti	illed Soil	s (C6) X Geor	norphic Position (D2)
Iron Deposits (B5)		Thin Muck	Surface	(C7)		X FAC-	Neutral Test (D5)
Inundation Visible on A	erial Imagery (B	7)Gauge or	Well Data	a (D9)			
Sparsely Vegetated Co	oncave Surface (I	38)Other (Ex	olain in R	emarks)	)		
Field Observations:	Yes X	No	Depth (ir	nches): -	1		
Field Observations: Surface Water Present?			Depth (ir	nches): _			
Field Observations: Surface Water Present? Water Table Present?	Yes	No	D	I		Wotland Hydrolog	
Field Observations: Surface Water Present? Water Table Present? Saturation Present?	Yes Yes	No No	Depth (ir	nches): _		wetiand Hydrolog	$y \text{ Present? } \text{ res} \underline{\land} \text{ NO} \underline{\_}$
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes Yes	No No	Depth (ir	nches): -			
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s	Yes Yes	No No onitoring well, aeria	Depth (in	nches): _ , previou	is inspec	tions), if available:	
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks:	Yes Yes	No No onitoring well, aeria	Depth (in	nches): _ , previou	is inspec	tions), if available:	

# U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT:

See ERD	C/EL TR-10-16; the propone	ent agency is (	CECW-C	CO-R	(Authority: AR	2 335-15, paragra	ph 5-2a)	
Project/Site: Auburn	ı Angara Oaks		City/Cour	nty: Roches	ter Hills/Oakland Co.	Sampling Date	: 5/30/2	2024
Applicant/Owner:	Three Oaks Communities				State: MI	Sampling Point	: B4	WET
Investigator(s): Fran	Thompson, Barr Engineering Co.	:	Section, T	ownship, Ra	inge: S32, T3N, R11E			
_andform (hillside, to	errace. etc.): depression		L	_ocal relief (o	concave. convex. none):	convcave		
Slope $(\%)$ : 0-2	Lat: 42 63187			33 18106	······, ·····, ·····, ·····, ·····,	Datum: NAD 83		
Soil Man Unit Name	- Granby Joamy sand			50.10100	NWI classi	ication: PEO		
	nie conditions on the site turical	fan thia tina a af ura		Vee V				
Are climatic / hydrolo						Main in Remarks.	)	
Are Vegetation No	_, Soil No , or Hydrology No	significantly distu	rbed? A	re "Normal (	Jircumstances" present?	Yes X	NO	-
Are Vegetation No	_, Soil <u>No</u> , or Hydrology <u>No</u>	naturally problem	iatic? (l	f needed, ex	plain any answers in Re	marks.)		
SUMMARY OF	FINDINGS – Attach site m	ap showing s	samplin	g point lo	ocations, transects	, important fe	atures	, etc.
Hydrophytic Vegeta Hydric Soil Present Wetland Hydrology	ation Present? Yes X N t? Yes X N v Present? Yes X N	lo lo	Is the within	Sampled A a Wetland	rea ?     Yes_X_	No		
Remarks: All three wetland cr	iteria are met. Sampling point is	wetland.	•					
VEGETATION -	- Use scientific names of pl	ants.			1			
Tree Stratum	(Plot size: 30 ft )	Absolute Do	ominant oecies?	Indicator Status	Dominance Test wor	ksheet:		
1. cer saccharini	um	80	Yes	FACW	Number of Dominant	Species That		
2.					Are OBL, FACW, or F	AC:	1	(A)
3.					Total Number of Dom	inant Species		-
4		·			Across All Strata:	·	1	(B)
5		·			Percent of Dominant S	Species That		
		=Tot	al Cover		Are OBL, FACW, or F	AC:	100.0%	(A/B)
Sapling/Shrub Stra	tum (Plot size: NA	.)						
1		·			Total % Cover of	· Multir	ly by	
3		·			OBL species	<u>x 1 =</u>	0	-
4.		·			FACW species 80	$x_{2} = \frac{x_{1}}{x_{2}}$	160	-
5.		·			FAC species 0	x 3 =	0	-
		=Tot	tal Cover		FACU species 0	x 4 =	0	-
Herb Stratum	(Plot size: NA )				UPL species 0	x 5 =	0	
1		·			Column Totals: 80	) (A)	160	(B)
2		·			Prevalence Index :	= B/A =	00	-
3		·			Hydrophytic Vegetat	ion Indicators:		
5.		·			1 - Rapid Test for	Hydrophytic Veg	etation	
6.		·			X 2 - Dominance Te	est is >50%		
7.					X 3 - Prevalence Ind	dex is $\leq 3.0^1$		
8.		·			4 - Morphological	Adaptations <sup>1</sup> (Pro	ovide sup	portin
9.					data in Remark	s or on a separat	e sheet)	
10					Problematic Hydro	ophytic Vegetatio	n <sup>1</sup> (Expla	ain)
		=Tot	al Cover		<sup>1</sup> Indicators of hydric se	oil and wetland hy	/drology i	must

2.

No

SOIL

Depth	Matrix	to the dept	Redo	x Featur	es			absence of In	iuicaloi 5.j	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Text	ure	Remarks	
, , , ,			, ,							
	<u></u>									
<sup>1</sup> Type: C=C	Concentration, D=Dep	etion, RM=	Reduced Matrix, N	/IS=Mas	ked Sand	d Grains	6.	<sup>2</sup> Location: PL	L=Pore Lining, M=Ma	trix.
Hydric Soil	Indicators:	,						Indicators fo	or Problematic Hydri	c Soils <sup>3</sup> :
Histoso	l (A1)		Sandy Gle	yed Mat	rix (S4)			Coast Pra	airie Redox (A16)	
Histic E	pipedon (A2)		Sandy Red	dox (S5)	( )			Iron-Man	ganese Masses (F12	)
Black H	listic (A3)		Stripped M	latrix (Se	6)			Red Pare	ent Material (F21)	
Hydroge	en Sulfide (A4)		Dark Surfa	ce (S7)	,			Very Sha	llow Dark Surface (F	22)
Stratifie	d Layers (A5)		Loamy Mu	cky Min	eral (F1)			X Other (E)	xplain in Remarks)	
2 cm M	uck (A10)		Loamy Gle	eyed Ma	trix (F2)				. ,	
Deplete	d Below Dark Surface	e (A11)	Depleted M	Aatrix (F	3)					
Thick D	ark Surface (A12)		Redox Dar	k Surfac	ce (F6)			<sup>3</sup> Indicators of	hydrophytic vegetation	on and
Sandy I	Mucky Mineral (S1)		Depleted [	Dark Sur	face (F7)	)		wetland h	nydrology must be pre	esent,
5 cm M	ucky Peat or Peat (S3	Redox Dep	Redox Depressions (F8)					unless disturbed or problematic.		
Restrictive	Layer (if observed):									
Type:										
Depth (	inches):						Hydric So	il Present?	Yes X	No
	1 31	,			,					
HYDROLO	OGY									
Wetland Hy	drology Indicators:									
Primary Ind	icators (minimum of o	ne is requir	ed; check all that	apply)				Secondary In	dicators (minimum of	two required)
X Surface	Water (A1)		Water-Sta	ined Lea	aves (B9)			Surface S	Soil Cracks (B6)	
High W	ater Table (A2)		Aquatic Fa	una (B1	3)			Drainage	Patterns (B10)	
Saturati	ion (A3)		True Aqua	tic Plant	ts (B14)			Dry-Seas	son Water Table (C2)	
X Water N	Aarks (B1)		Hydrogen	Sulfide (	Odor (C1	)		Crayfish	Burrows (C8)	(00)
Sedime	nt Deposits (B2)			(nizosph	ieres on l		coots (C3)		n Visible on Aerial Im	agery (C9)
	posits (B3)		Presence	of Reduc	ced Iron i	(C4) illed Sei			or Stressed Plants (D	1)
	at of Clust (D4)		Thin Muck	Surface		illeu Sol	iis (CO)		utral Tast (D5)	
	ion Visible on Aerial II	mageny (B7)			$\frac{1}{2} \left( \frac{1}{2} \right)$				illai Test (D5)	
X Sparsel	v Vegetated Concave	Surface (B)	8) Other (Exr	Main in F	a (D3) Remarks)					
					(emano)					
Surface W/c	i valions: itar Prasant? Va	e Y	No	Denth /i	ncheel	6				
Water Table	Present? Ve	<u>~</u>	No	Depth (i	nches).	0				
Saturation F	Present? Vo	s	No	Denth /i	nches).		Wetland	Hydrology P	resent? Yes Y	No
(includes ca	apillary fringe)	~ <u> </u>	<u> </u>	Dopui (i	-			yai ology r	1000iiti 100 <u>/</u>	
Describe Re	ecorded Data (stream	daude mo	nitoring well aeria	photos	previou	s insper	ctions) if ava	ailable <sup>.</sup>		
					, p. 51100					
Remarks:								-		

#### U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks	City/County: Roches	Sampling Date: 7	/9/2024							
Applicant/Owner: Three Oaks Communities		State: MI	Sampling Point:	SP1						
Investigator(s): Fran Thompson, Barr Engineering Co.	Section, Township, Ra	inge: S32, T3N, R11E								
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave										
Slope (%): 0-1 Lat: 42.6332694	Long: -83.1809722	-	Datum: WGS							
Soil Map Unit Name: Fox sandy loam, till plain, 2 to 6 percent slopes NWI classification: NONE										
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no. explain in Remarks.)										
Are Vegetation No , Soil No , or Hydrology No significantly dist	urbed? Are "Normal (	Circumstances" present?	Yes X No							
Are Vegetation No. Soil No. or Hydrology No. naturally problematic? (If needed explain any answers in Remarks.)										
Oliver and the second s										
SUMMART OF FINDINGS – Allach site map showing		cations, transects,	, important leatu	res, etc.						
Hydrophytic Vegetation Present?       Yes       X       No         Hydric Soil Present?       Yes       No       X         Wetland Hydrology Present?       Yes       X       No	rea ? Yes	No <u>X</u>								
Remarks:										
Hydrology on site has been altered.										
<b>VEGETATION</b> – Use scientific names of plants.										
Absolute D <u>Tree Stratum</u> (Plot size: 30 ft ) % Cover S	ominant Indicator Species? Status	Dominance Test wor	ksheet:							
1	Yes FACW	Number of Dominant S	Species That							
2		Are OBL, FACW, or F	AC: 2	(A)						
3		Total Number of Domi Across All Strata:	nant Species2	(B)						
5		Percent of Dominant S	Species That							
Sopling/Shrub Stratum (Plot size: 15 ft )	otal Cover	Are OBL, FACW, or F.	AC: <u>100.0</u>	<u>, 120 (A/B)</u>						
		<b></b>								

Sapling/Shrub Stratum (Plot size: 15 ft )		_				-		_` ´
1.				Prevalence Index worksheet:				
2.				Total % Cover of: Multiply by		ltiply by:		
3.				OBL species	0	x 1 =	0	
4.				FACW species	105	x 2 =	210	
5.				FAC species	5	x 3 =	15	
		=Total Cover		FACU species	0	x 4 =	0	
Herb Stratum (Plot size: 5 ft )				UPL species	0	x 5 =	0	
1. grostis stolonifera	95	Yes	FACW	Column Totals:	110	(A)	225	(B)
2. cer rubrum	5	No	FAC	Prevalence In	dex = B/A	A =	2.05	
3								
4				Hydrophytic Vegetation Indicators:				
5				1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%				
6.								
7.				3 - Prevalence Index is ≤3.0 <sup>1</sup>				
8.				4 - Morphological Adaptations <sup>1</sup> (Provide supporting				
9.				data in Remarks or on a separate sheet)				
10.				Problematic	Hydrophy	/tic Vegeta	ition <sup>1</sup> (Exp	lain)
	100	=Total Cover		<sup>1</sup> Indicators of hvo	dric soil ai	nd wetland	l hvdroloav	/ must
Woody Vine Stratum (Plot size: )				be present, unless disturbed or problematic.				
1				Hydrophytic				
2.				Vegetation				
		=Total Cover		Present?	Yes X	No		
Remarks: (Include photo numbers here or on a separ	ate sheet	)		1		_		

Remarks: (Include photo numbers here or on a separate sheet.)
SOIL

Depth	cription: (Descr Matri	x x	n needed to doc Redo	u <b>ment t</b> x Featur	ne indica <sup>.</sup> es	tor or (	confirm the absence	of indicators.)
(inches)	Color (moist	) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR 2/2	100					Sandy	unmasked sand grains/ Salt Pepper
-								
17			De dus e d Matrice N	10 14 1			21	DL Dana Linin n M Mateira
Hydric Soil	Indicators	Jepieuon, Rivi=	Reduced Matrix, r	vis=ivias	ked Sand	Grains		: PL=Pore Lining, M=Matrix.
Histoso			Sandy Gle	wed Mat	rix (S4)		Coas	t Prairie Redox (A16)
Histic F	nipedon (A2)		Sandy Re	dox (S5)	IIX (04)		Uron-	Manganese Masses (F12)
Black H	listic (A3)		Stripped M	latrix (Se	6)		Red	Parent Material (F21)
Hvdroae	en Sulfide (A4)		Dark Surfa	ace (S7)	-)		Verv	Shallow Dark Surface (F22)
Stratifie	d Layers (A5)		Loamy Mu	icky Min	eral (F1)		Othe	r (Explain in Remarks)
2 cm M	uck (A10)		Loamy Gle	eyed Ma	trix (F2)			
Deplete	d Below Dark Sur	face (A11)	Depleted I	Matrix (F	3)			
Thick D	ark Surface (A12)		Redox Da	rk Surfac	ce (F6)		<sup>3</sup> Indicator	s of hydrophytic vegetation and
Sandy M	Mucky Mineral (S1	)	Depleted [	Dark Sur	face (F7)		wetla	nd hydrology must be present,
5 cm M	ucky Peat or Peat	(S3)	Redox De	pression	s (F8)		unles	ss disturbed or problematic.
Restrictive	Layer (if observe	ed):						
Type:								
Depth (i	inches):						Hydric Soil Present	t? Yes <u>No X</u>
HYDROLO	OGY							
Wetland Hy	ydrology Indicato	rs:						
Primary Ind	icators (minimum	of one is require	ed; check all that	apply)			Seconda	ry Indicators (minimum of two required)
Surface	Water (A1)		Water-Sta	ined Lea	aves (B9)		Surfa	ace Soil Cracks (B6)
X High Wa	ater Table (A2)			auna (B1	3)			hage Patterns (B10)
X Saturati	ION (A3) Marks (B1)		True Aqua	sulfide (	S (B14) Odor (C1)		Dry-s	fish Burrows (C8)
Sedime	int Deposits (B2)			Rhizosnh	eres on l	' ivina R	oots (C3) Satu	ration Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Presence	of Redu	ced Iron (	C4)	Stuni	ted or Stressed Plants (D1)
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Til	led Soi	ls (C6) Geor	norphic Position (D2)
Iron Dep	posits (B5)		Thin Muck	Surface	e (C7)		X FAC	Neutral Test (D5)
Inundati	ion Visible on Aer	al Imagery (B7)	) Gauge or '	Well Dat	ta (D9)			
Sparsel	y Vegetated Conc	ave Surface (B	8)Other (Exp	olain in F	Remarks)			
Field Obse	rvations:							
Surface Wa	ater Present?	Yes	No <u>X</u>	Depth (i	nches):			
Water Table	e Present?	Yes X	No	Depth (i	nches):	12		
Saturation F	Present?	Yes X	No	Depth (i	nches): _	10	Wetland Hydrolog	gy Present? Yes <u>X</u> No
(includes ca	apillary fringe)			1			(1) (1) (1) (1) (1) (1)	
Describe Re	ecorded Data (stre	am gauge, moi	nitoring well, aeria	a photos	, previous	s inspec	ctions), if available:	
Remarks:								

#### U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

	sine agoiney	10 02011	0011				
Project/Site: Auburn Angara Oaks		City/Co	ounty: Roches	ster Hills/Oakland Co	Sampling	Date: <u>7/9/</u>	2024
Applicant/Owner: Three Oaks Communities				State: MI	Sampling	Point:	SP2
Investigator(s): Fran Thompson, Barr Engineering Co.		Section,	Township, Ra	ange: S32, T3N, R1	1E		
Landform (hillside, terrace, etc.): toe slope			Local relief (	concave, convex, no	ne): concave		
Slope (%): 0-2 Lat: 42.63213		Lona:	- `` -83.18170	, ,	Datum: WG	s	
Soil Map   Init Name: Fox sandy loam till plain 2 to 6	nercent slon	20.19.		NWI cl	assification: Unla	and	
Are elimetic / bydrelegic conditions on the site typical t		of year?	Voc V	No (lf po			
Are Vegetetien		diaturhad2			, explain in Reina	No	
	significantiy						
Are Vegetation, Soil, or Hydrology	naturally pro	blematic?	(If needed, ex	xplain any answers ir	n Remarks.)		
SUMMARY OF FINDINGS – Attach site m	ap showi	ng sampli	ing point lo	ocations, transe	cts, importai	nt feature	s, etc.
Hydrophytic Vegetation Present?    Yes    X    N      Hydric Soil Present?    Yes    X    N      Wetland Hydrology Present?    Yes    X    N      Remarks:    Semarks Deintstellen et flen A27, Underland her her her    N		Is the with	ne Sampled A hin a Wetland	rea ? Yes	XNo	_	
VEGETATION – Use scientific names of pla	ants.			•			
Tree Stratum (Plot size: 30 ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test	worksheet:		
1. cer saccharinum	15	Yes	FACW	Number of Domin	ant Species Tha	t	
2.				Are OBL, FACW,	or FAC:	3	(A)
3				Total Number of I	Dominant Specie	s	
4				Across All Strata:		3	_ <sup>(B)</sup>
5	15	-Total Cova		Percent of Domin	ant Species Tha	t 100.0%	(A/D)
Sapling/Shrub Stratum (Plot size: 15 ft	) 15		1	AIE OBL, LACW,	UTAC.	100.078	- <sup>(A) D)</sup>
1. Rhamnus cathartica	5	Yes	FAC	Prevalence Index	x worksheet:		
2.				Total % Cove	er of: N	/ultiply by:	
3.				OBL species	5 x 1 =	= 5	-
4.				FACW species	95 x 2 =	= 190	
5				FAC species	5 x 3 =	= 15	
	5	=Total Cove	r	FACU species	0 x 4 =	- 0	_
Herb Stratum (Plot size: 5 ft )				UPL species	0 x 5 =	=	_
1. grostis stolonifera	80	Yes	FACW	Column Totals:	105 (A)	210	_ <sup>(B)</sup>
2. uncus articulatus	5	No	OBL	Prevalence Ind	lex = B/A =	2.00	_
3							
4			·	Hydrophytic Veg	etation Indicato	ors:	
5			·	1 - Rapid Tes	t for Hydrophytic	Vegetation	
б			·	X 2 - Dominanc	$\approx 1 \text{ est is } >50\%$		
<i>(</i>				X 3 - Prevalenc	e index is ≤3.0'		Innertire
ö		· - <u></u>	·	data in Rer	ncal Adaptations marks or on a se	(Provide St	ipporting t)
ອ 10.				Problematic	Hydrophytic Veae	etation <sup>1</sup> (Exp	, lain)
 	85	=Total Cove		<sup>1</sup> Indicators of hydr	ric soil and wetla		/ must
Woody Vine Stratum (Plot size:	)			be present, unless	s disturbed or pro	blematic.	,

1.    2.	=Total Cover	Hydrophytic Vegetation Present?	Yes X	No
Dementos, (Include abete aunchens here en en e	ate aleast )			

Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc	ription: (Describe	to the dept	h needed to doc	ument ti	ne indica	ator or o	confirm the absence of	of indicators.)		
Depth	Matrix	-	Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-2	10YR 2/1	100					Mucky Loam/Clay			
2-6	10YR 5/2	80	10YR 6/8	20	С	M	Loamy/Clayey	Prominent redox concentrations		
6-15	10YR 2/2	100					Loamv/Clavev			
				·						
				·						
				·						
<u> </u>										
<sup>1</sup> Type: C=Co	ncentration, D=Dep	pletion, RM=I	Reduced Matrix, I	MS=Mas	ked Sand	d Grains	<sup>2</sup> Location	PL=Pore Lining, M=Matrix.		
Hydric Soil I	ndicators:						Indicator	s for Problematic Hydric Soils':		
	A1)		Sandy Gle	eyed Mat	rix (S4)		Coas	t Prairie Redox (A16)		
Histic Epi	pedon (A2)		Sandy Re	dox (S5)			Iron-N	Manganese Masses (F12)		
Black His	tic (A3)			Aatrix (Se	5)			Parent Material (F21)		
Hydroger	Sulfide (A4)		Dark Surfa	ace (S7)			Very	Shallow Dark Surface (F22)		
	Layers (A5)			ICKY WING	eral (F1)			(Explain in Remarks)		
	K (AIU) Bolow Dork Surfac	a (A11)	Loamy Gr	eyed Mat	111X (FZ)					
	Below Dark Surface	e (ATT)		rk Surfor	3) 20 (EG)		<sup>3</sup> Indiactor	a of hydrophytic vocatation and		
Sandy Mi	k Sullace (A12)			Dark Sur	е (го) face (Е7)		wetland hydrology must be present			
Sandy Mucky Mineral (S1)			X Reday Depressions (F8)				unless disturbed or problematic			
				pression	3 (1 0)		dilles			
Restrictive L	ayer (if observed)									
Dopth (in	choc):		_				Hydric Soil Procont			
			_				Hyunc Son Fresent			
Remarks:										
	<u>ov</u>									
HIDROLO	GY									
Wetland Hyd	rology Indicators	:								
Primary Indic	ators (minimum of	one is require	ed; check all that	apply)	(50)		<u>Secondar</u>	y Indicators (minimum of two required)		
	Vater (A1)		Water-Sta	ined Lea	ives (B9)		Surfa	ce Soll Cracks (B6)		
	er Table (A2)			auna (B1	3) 2 (D14)			age Patterns (B10)		
	(A3)			Sulfido (	S (D 14) Ddor (C1	<b>`</b>	Dry-c	ich Rurrows (CR)		
	Deposite (B2)			Suillue ( Shizosoh		) ivina R	oots (C3) Satur	ation Visible on Aerial Imagen/ (CQ)		
Drift Dep	nsite (B3)		Presence	of Reduc		(C4)	Stunt	ed or Stressed Plants (D1)		
X Algal Mat	or Crust (B4)		Recent Irr	Presence of Reduced Iron (C4)				norphic Position (D2)		
Iron Dep	sits (B5)		Thin Muck	Surface	(C7)		X FAC-	Neutral Test (D5)		
Inundatio	n Visible on Aerial	Imagery (B7)	Gauge or	Well Dat	a (D9)					
Sparsely	Vegetated Concav	e Surface (B	3) Other (Ex	plain in R	(emarks)					
Field Observ	vations:		· <u> </u>				Τ			
Surface Wate	er Present? Y	es	No X	Depth (i	nches):					
Water Table	Present? Y	es X	No	Depth (i	, – nches):	9				
Saturation Pr	esent? Y	es X	No	Depth (i	nches):	5	Wetland Hydrolog	y Present? Yes X No		
(includes cap	illary fringe)				· -					
Describe Rec	orded Data (strean	n gauge, mor	nitoring well, aeria	al photos	, previou	s inspec	tions), if available:			

Remarks:

#### U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks	_ City/County: <u>Rochester Hills/Oakland Co.</u> Sampling Date: <u>7/9/2024</u>
Applicant/Owner: Three Oaks Communities	State: MI Sampling Point: SP 3
Investigator(s): Fran Thompson, Barr Engineering Co.	Section, Township, Range: S32, T3N, R11E
Landform (hillside, terrace, etc.): shoulder	Local relief (concave, convex, none): convex
Slope (%): 1-2 Lat: 42.63325278	Long: -83.18079722 Datum: WGS
Soil Map Unit Name: Granby loamy sand	NWI classification: NONE
Are climatic / hydrologic conditions on the site typical for this time of	/ear? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly dis	turbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally proble	matic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site man showing	sampling point locations transacts important features atc
Hydrophytic Vegetation Present?    Yes    X    No      Hydric Soil Present?    Yes    No    X      Wetland Hydrology Present?    Yes    X    No	Is the Sampled Area within a Wetland? Yes <u>No X</u>
Remarks: Sample Point taken north of Flag 30.	
<b>VEGETATION</b> – Use scientific names of plants.	
Absolute Tree Stratum (Plot size: 30 ft ) % Cover	Dominant Indicator Species? Status <b>Dominance Test worksheet:</b>
1	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
1.	Number of Dominant Species That      Are OBL, FACW, or FAC:    2      Total Number of Dominant Species      Across All Strata:    2      (B)
1.	Number of Dominant Species That      Are OBL, FACW, or FAC:    2 (A)      Total Number of Dominant Species      Across All Strata:    2 (B)      Percent of Dominant Species That      Are OBL, FACW, or FAC:    100.0% (A/B)

5				Percent of Dominant Specie	s That	
		=Total Cover		Are OBL, FACW, or FAC:	100.	0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft )						
1.				Prevalence Index workshe	et:	
2.				Total % Cover of:	Multiply b	y:
3.				OBL species 25	x 1 = 25	5
4.				FACW species 40	x 2 = 80	)
5.				FAC species 0	x 3 = 0	
		=Total Cover		FACU species 0	x 4 = 0	
Herb Stratum (Plot size: 5 ft )				UPL species 0	x 5 = 0	
1. leocharis oli acea	25	Yes	OBL	Column Totals: 65	(A) <u>10</u>	5 (B)
2. C perus esculentus	20	Yes	FACW	Prevalence Index = B/A =	= 1.62	
3. grostis stolonifera	10	No	FACW			
4. S mph otrichum lateriflorum	5	No	FACW	Hydrophytic Vegetation Inc	dicators:	
5. Phalaris arundinacea	5	No	FACW	1 - Rapid Test for Hydro	phytic Vegetat	ion
6.				X 2 - Dominance Test is >	·50%	
7.				3 - Prevalence Index is :	≤3.0 <sup>1</sup>	
8.				4 - Morphological Adapt	ations <sup>1</sup> (Provid	e supporting
9.				data in Remarks or or	n a separate sł	neet)
10.				Problematic Hydrophytic	c Vegetation <sup>1</sup> (I	Explain)
	65	=Total Cover		<sup>1</sup> Indicators of hydric soil and	wetland hydro	logy must
<u>Woody Vine Stratum</u> (Plot size:)				be present, unless disturbed	l or problematio	ол Э.
1				Hydrophytic		
2.				Vegetation		
		=Total Cover		Present? Yes X	No	
Remarks: (Include photo numbers here or on a separa	ate sheet	.)		1		

Profile Desc	cription: (Describe	to the dept	h needed to doc	ument th	ne indica	tor or o	confirm the absence of	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)		Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks
0-2	10YR 2/1	100					Loamy/Clayey	
2-13	7.5YR 4/1	50	10YR 3/2	40			Loamy/Clayey	
			10YR 5/6	10	C	М		Prominent redox concentrations
$\frac{1}{1}$ Type: C=C	oncentration D=De		Reduced Matrix	/S=Masl		Grains		PI =Pore Lining M=Matrix
Hydric Soil	Indicators:			10-11/1031	Keu Gand			rs for Problematic Hydric Soils <sup>3</sup>
Histosol	(Δ1)		Sandy Gle	wed Mat	riv (S4)		Coas	t Prairie Redox (A16)
Histic Fr	vinedon (A2)		Sandy Re	dox (S5)	11X (04)		lron-N	Manganese Masses (F12)
Black Hi	stic (A3)		Stripped M	latrix (Sf	5)		Red F	Parent Material (F21)
Hydroge	n Sulfide (A4)		Dark Surfa	ace $(S7)$	,		Verv	Shallow Dark Surface (F22)
Stratified	Lavers (A5)		L oamy Mi	icky Mine	eral (F1)		Other	r (Explain in Remarks)
2 cm Mu	ick (A10)		L oamy Gle	eved Mat	rix (F2)			()
Depleted	d Below Dark Surfac	ce (A11)	Depleted I	Matrix (F:	3)			
Thick Da	ark Surface (A12)	( )	Redox Da	rk Surfac	æ (F6)		<sup>3</sup> Indicator	s of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		Depleted I	Dark Sur	face (F7)		wetla	nd hydrology must be present,
5 cm Mu	icky Peat or Peat (S	3)	Redox De	pression	s (F8)		unles	s disturbed or problematic.
Restrictive	Laver (if observed)	):						·
Type:		,						
Depth (ir	nches):		_				Hydric Soil Present	? Yes No X
Remarks			—				-	
Large gravel	angular rock at 13	inches below	the surface					
00	0							
HYDROLC	)GY							
Wetland Hy	drology Indicators	:						
Primary Indi	<u>cators (minimum of</u>	one is require	ed; check all that	apply)			Secondar	y Indicators (minimum of two required)
Surface	Water (A1)		Water-Sta	ined Lea	ves (B9)		Surfa	ice Soil Cracks (B6)
High Wa	iter Table (A2)		Aquatic Fa	auna (B1	3)		Drain	age Patterns (B10)
Saturatio	on (A3)		True Aqua	tic Plant	s (B14)		Dry-S	Season Water Table (C2)
Water M	larks (B1)		Hydrogen	Sulfide C	Ddor (C1	)	Crayf	fish Burrows (C8)
Sedimer	nt Deposits (B2)			Rhizosph	eres on l	_iving R	oots (C3) Satur	ration Visible on Aerial Imagery (C9)
Drift Dep	posits (B3)		Presence	of Reduc	ed Iron (	C4)	Stunt	ed or Stressed Plants (D1)
X Algal Ma	at or Crust (B4)		Recent Irc	n Reduc		lled Soil	Is (C6) Geon	norphic Position (D2)
Iron Dep	oosits (B5)	(DZ)		Surface	(C7)		X FAC-	Neutral Test (D5)
	on visible on Aerial	Imagery (B7)	Gauge or	vveli Dati	a (D9) Iomorko)			
Sparsely		e Sullace (Do			emarks)		Т	
Field Obser	vations:	~~~		Donth /				
Wotor Tokin	Brocont? Y	es			nones):			
Saturation D	resent? Y	es		Depth (II	nches):		Wotland Hydrolog	ny Prosont? Vos V No
(includes car	nesent: 1			Dehiii (ii				
Describe Ro	corded Data (stream	n daude mor	nitoring well serie	l photos	previou	s insner	tions) if available.	
	Served Data (Streat	94490, 1101		- P.10.03	, P. Stilla	- mopet	, i available.	

Remarks:

#### U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks		City/County:	Rochester Hil	ls/Oaklar	nd Co.	Sampling Date:	7/9/2024
Applicant/Owner: Three Oaks Co	ommunities			State:	MI	Sampling Point:	SP4
Investigator(s): Fran Thompson, Barr	r Engineering Co.	Section, Town	ship, Range:	S32, T3	N, R11E		
Landform (hillside, terrace, etc.): bac	ck slope	Loca	ll relief (conca	/e, conve	x, none):	concave	
Slope (%): 01 Lat: 42.63322	222	Long: -83.1	807778			Datum: WGS	
Soil Map Unit Name: Granby loamy			N	WI classi	fication: NONE		
Are climatic / hydrologic conditions o	on the site typical for this time of ye	ear? Yes	X No		(If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or	r Hydrologysignificantly dist	urbed? Are "I	Normal Circum	istances"	present?	Yes No	
Are Vegetation, Soil, or	r Hydrology naturally probler	matic? (If ne	eded, explain a	any answ	ers in Re	marks.)	
SUMMARY OF FINDINGS -	Attach site map showing	sampling p	oint locatio	ons, tra	insects	, important feat	tures, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes      X      No        Yes      No      X        Yes      X      No	Is the San within a V	npled Area Vetland?	Y	es	No_X	
Remarks:							

### **VEGETATION** – Use scientific names of plants.

	Absolute	Dominant	Indicator		
Tree Stratum (Plot size: 30 ft )	% Cover	Species?	Status	Dominance Test worksheet:	
1				Number of Dominant Species That	
2				Are OBL, FACW, or FAC: 1	(A)
3				Total Number of Dominant Species	
4				Across All Strata: 1	(B)
5				Percent of Dominant Species That	
		=Total Cover		Are OBL, FACW, or FAC: 100.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft )					
1				Prevalence Index worksheet:	
2.				Total % Cover of: Multiply by:	
3.				OBL species 0 x 1 = 0	
4.				FACW species 71 x 2 = 142	
5.				FAC species 1 x 3 = 3	_
		=Total Cover		FACU species 0 x 4 = 0	_
Herb Stratum (Plot size: 5 ft )				UPL species 0 x 5 = 0	
1. grostis stolonifera	60	Yes	FACW	Column Totals: 72 (A) 145	(B)
2. C perus esculentus	5	No	FACW	Prevalence Index = B/A = 2.01	
3. cer rubrum	1	No	FAC		_
4. Bidens frondosa	1	No	FACW	Hydrophytic Vegetation Indicators:	
5. grostis gigantea	5	No	FACW	1 - Rapid Test for Hydrophytic Vegetation	
6.				X 2 - Dominance Test is >50%	
7.				3 - Prevalence Index is ≤3.0 <sup>1</sup>	
8.				4 - Morphological Adaptations <sup>1</sup> (Provide su	pporting
9.				data in Remarks or on a separate sheet	)
10.				Problematic Hydrophytic Vegetation <sup>1</sup> (Expl	ain)
	72	=Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology	must
<u>Woody Vine Stratum</u> (Plot size:)				be present, unless disturbed or problematic.	maor
1				Hydrophytic	
2.				Vegetation	
		=Total Cover		Present? Yes X No	
Remarks: (Include photo numbers here or on a separa	ate sheet.)			•	

Profile Description: (Describe to the depth	needed to doc	ument th	ne indica	ator or o	confirm the absence of	of indicators.)	
Depth Matrix	Redo	x Featur	es				
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-3 10YR 2/1 10					Loamy/Clayey		
3-11 10YR 4/3 90	10YR 5/6	10	С	М	Loamy/Clayey	Distinct redox concentrations	
11-15 7.5YR 5/2 70	7.5YR 5/6	30	С	М		Prominent redox concentrations	
<u></u>					2		
'Type: C=Concentration, D=Depletion, RM=R	educed Matrix, N	/IS=Masl	ked Sand	d Grains	. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.	
Hydric Soll Indicators:	Carady Cla				Indicator	s for Problematic Hydric Solis":	
Histosol (A1)	Sandy Gie	yed Mau	ix (54)				
	Sandy Red	JOX (33) Intriv (86			IIOII-N	Parant Material (E21)	
Hudrogen Sulfide (A4)	Surpped iv	iauix (30	))			Shallow Dark Surface (E22)	
Stratified Layers (A5)		cky Mine	aral (E1)		Very ·	(Evolution in Remarks)	
2 cm Muck (A10)	Loamy Gle	eved Mat	rix (F2)				
Depleted Below Dark Surface (A11)	Depleted M	/atrix (F:	3)				
Thick Dark Surface (A12)	Redox Dar	k Surfac	e (F6)		<sup>3</sup> Indicators	s of hydrophytic vegetation and	
Sandy Mucky Mineral (S1)	Depleted [	Dark Sur	face (F7)		wetland hydrology must be present.		
5 cm Mucky Peat or Peat (S3)	Redox Dep	pression	s (F8)		unles	s disturbed or problematic.	
Restrictive Layer (if observed):							
Туре:							
Depth (inches):	_				Hydric Soil Present	? Yes No X	
Remarks:	_						
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of one is require	d; check all that	apply)			Secondar	y Indicators (minimum of two required)	
Surface Water (A1)	Water-Sta	ined Lea	ves (B9)		Surfa	ce Soil Cracks (B6)	
High Water Table (A2)	Aquatic Fa	iuna (B1	3)		Drain	age Patterns (B10)	
Saturation (A3)	True Aqua	tic Plant	s (B14)		Dry-S	eason Water Table (C2)	
Water Marks (B1)	Hydrogen	Sulfide C	Odor (C1	)	Crayf	ish Burrows (C8)	
Sediment Deposits (B2)	Oxidized F	Rhizosph	eres on l	_iving R	oots (C3) Satur	ation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)	Presence	of Reduc	ed Iron (	(C4)	Stunt	ed or Stressed Plants (D1)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils				s (C6) Geom	horphic Position (D2)	
Iron Deposits (B5)		Surface			X FAC-	iveutral Lest (U5)	
Sparsely Vegetated Copcave Surface (B2)	) Other (Evr	lain in P	a (D9) emerkel				
Shall Observe thereas			emarks				
Field Observations:	No Y	Donth (in	nchos).				
Water Table Present? Vos		Depth (II	nches).				
Saturation Present? Ves		Depth (ii	nches).		Wetland Hydrolog	v Present? Yes X No	
	<u></u>						
(includes capillary fringe)							

Remarks:

#### U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn	Angara Oaks			City/Cc	ounty:	Roches	ter Hil	ls/Oa	kland	Co.	Sampling Date:	7/9/2024
Applicant/Owner:	Three Oaks C	communities						State	e:	MI	Sampling Point:	SP5
Investigator(s): <u>Fran</u>	Thompson, Ba	ırr Engineeri	ng Co.	Section.	, Town	ship, Ra	ange:	S32,	T3N	R11E		
Landform (hillside, te	errace, etc.): <u>to</u>	e slope			Loca	ıl relief (c	conca	ve, co	nvex,	none):	concave	
Slope (%): 0-1	Lat: 42.6331	833		Long:	-83.18	808972					Datum: WGS	
Soil Map Unit Name	: Granby loamy	/ sand							NW	I classif	ication: PSS	
Are climatic / hydrolo	ogic conditions	on the site t	ypical for this time of	year?	Yes	X	No		_ (If	no, exp	lain in Remarks.)	
Are Vegetation	, Soil, o	or Hydrology	significantly die الم	sturbed?	Are "N	Normal C	Circum	nstanc	ces" p	resent?	Yes N	lo
Are Vegetation	, Soil, o	or Hydrology	naturally proble	ematic?	(If nee	eded, ex	ہ plain	any ai	nswei	rs in Rer	marks.)	
SUMMARY OF	FINDINGS -	- Attach s	ite map showinç	g sampli	ing p	oint lo	ocatio	ons,	tran	sects,	, important fe	atures, etc.
Hydrophytic Vegeta	ation Present?	Yes X	No	ls tł	he San	npled Ar	rea					
Hydric Soil Present	?	Yes X	No	with	nin a V	Vetland	?		Yes	<u>х</u>	No	
Wetland Hydrology	Present?	Yes X	No									
Remarks:												

## **VEGETATION** – Use scientific names of plants.

	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 30 ft )	% Cover	Species?	Status	Dominance Test worksheet:		
1. cer saccharinum	30	Yes	FACW	Number of Dominant Species That		
2				Are OBL, FACW, or FAC:	4	(A)
3				Total Number of Dominant Species		
4				Across All Strata:	4	(B)
5				Percent of Dominant Species That		-
	30	=Total Cover		Are OBL, FACW, or FAC:	100.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft )						-
1.				Prevalence Index worksheet:		
2.				Total % Cover of: Mul	ltiply by:	
3.				OBL species 20 x 1 =	20	-
4.				FACW species 35 x 2 =	70	-
5.				FAC species 0 x 3 =	0	-
		=Total Cover		FACU species 0 x 4 =	0	-
Herb Stratum (Plot size: 5 ft )		,		UPL species 0 x 5 =	0	-
1. Lud i ia palustris	15	Yes	OBL	Column Totals: 55 (A)	90	- (B)
2. rostis stolonifera	5	Yes	FACW	Prevalence Index = B/A =	1.64	-`´
3 Lemna minor	5	Yes	OBL			-
4				Hydrophytic Vegetation Indicators	:	
5				1 - Rapid Test for Hydrophytic V	- egetation	
6				X 2 - Dominance Test is >50%	ogenanen	
7				$\frac{1}{X}$ 3 - Prevalence Index is <3 0 <sup>1</sup>		
۲ ۹				4 - Morphological Adaptations <sup>1</sup> (F	Provide sur	oporting
a				data in Remarks or on a separ	rate sheet)	·ps
		·		Problematic Hydrophytic Vegeta	tion <sup>1</sup> (Expla	ain)
10	25	-Total Cover				
Weedy Vine Stratum (Plot size)				Indicators of hydric soil and wetland	hydrology	must
					emanc.	
I				Hydrophytic		
Z				Vegetation		
		_= I otal Cover		Present? Yes <u>× No</u>		
Remarks: (Include photo numbers here or on a separa	ate sheet.)					I

SOIL

•	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-3	10YR 2/1	100					Mucky Loam/Clay	
3-15	10YR 5/2	80	7.5YR 5/8	20	С	M	Loamy/Clayey	Prominent redox concentration
Type: C=Ci Iydric Soil Histosol Histic Ep Black Hi Hydroge Stratified 2 cm Mu X Depleted Thick Da	Dincentration, D=Depl Indicators: (A1) bipedon (A2) stic (A3) n Sulfide (A4) I Layers (A5) ick (A10) d Below Dark Surface ark Surface (A12)	e (A11)	=Reduced Matrix, M =Sandy Gle Sandy Red Stripped M Dark Surfa Loamy Mu Loamy Gle X Depleted M Redox Dar	//S=Mas //S=Mas //sec (S5) /atrix (S6 /acce (S7) /atrix (S6 /atrix (F /k Surfac	ked Sanc rix (S4) 3) trix (F1) trix (F2) 3) xe (F6)	Grains.	2Location Indicato Coas Iron- Red Very Othe	r: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils <sup>3</sup> st Prairie Redox (A16) Manganese Masses (F12) Parent Material (F21) Shallow Dark Surface (F22) r (Explain in Remarks) rs of hydrophytic vegetation and
_ Sandy M	lucky Mineral (S1)			N Sunac	е (ГО) face (Е7)		wet	and hydrology must be present
5 cm Mu	cky Peat or Peat (S?	5)	Redox Der	pression	s (F8)	,	unles	ss disturbed or problematic.
restrictive	Layer (if observed):							
Type: Depth (ir Remarks:	Layer (if observed):						Hydric Soil Presen	t? Yes <u>X</u> No
Type: Depth (ir Remarks:	Layer (if observed):						Hydric Soil Presen	t? Yes <u>X</u> No
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary India	Layer (if observed): Inches): IGY Irology Indicators: ators (minimum of o	ne is requ	ired; check all that	apply)			Hydric Soil Presen	t? Yes X No
Type: Depth (ir Remarks: IYDROLC Wetland Hy Primary India Surface X High Wa X Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep Inundatio Sparsely	DGY drology Indicators: 2ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) on Visible on Aerial In Vegetated Concave	ne is requ nagery (B Surface (	ired; check all that Water-Sta Aquatic Fa Aquatic Fa Dividized Fa Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp	apply) ined Lea una (B1 tic Plant Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat Ilain in R	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron ( tion in Ti e (C7) a (D9) temarks)	) _iving Rc [C4] Iled Soil:	Hydric Soil Presen	t? Yes X No



## **Rochester Hills Planning Commission meeting October 15, 2024**

1 message

Wycoff, Alec <alec@hfgllc.com> To: "planning@rochesterhills.org" <planning@rochesterhills.org> Fri, Oct 11, 2024 at 10:47 AM

Dear Deborah Brnabic and Rochester Hills Planning Commission,

My name is Alec Wycoff. I am writing to express my favorability of the requested one family residential detached condominium plan, wetland use permit, and tree removal permit that are included in the Tuesday, October 15, 2024, Planning Commission meeting. Should the requests be approved, my sister Nicle Wycoff will be a resident of one of the multi-unit condominium buildings.

I strongly believe that this Preliminary Site Plan and recommendation will satisfy the requirements of the Planning Commission. Furthermore, the additional housing is needed in Rochester Hills and will provide a long-term solution for my and others loved ones. The removed trees will be replaced on site as well as via the City's Tree Fund. I look forward to the approval of the mentioned requests and applaud the construction of additional housing in southwest Rochester Hills.

Sincerely,

Alec Wycoff







T: 248.482.2600 | F: 248.482.2601

2701 Cambridge Court, Suite 530 | Auburn Hills, MI 48326

alec@hfgllc.com | www.hfgllc.com | vCard f 🗓 🕒

Securities and advisory services offered through LPL Financial, a registered investment advisor. Member FINRA/SIPC.

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Request for Condominium Construction.pdf



# Upcoming Planning Commission meeting dated October 15, 2024

HANA LEWIS <lewishana@yahoo.com> To: "planning@rochesterhills.org" <planning@rochesterhills.org> Thu, Oct 10, 2024 at 11:57 AM

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Hana Lewis



rochesterhousingsolutionsmi.org



## Please Approve the Auburn Oaks Project

Joanne Avery <averyjma@gmail.com> To: planning@rochesterhills.org Fri, Oct 11, 2024 at 7:46 PM

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Joanne Avery



## Auburn Oaks

**Jowan S** <jowans2004@yahoo.com> To: planning@rochesterhills.org Thu, Oct 10, 2024 at 1:05 PM

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission <u>on October 15.</u> This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Jowan Salem, Pharm.D.

Sent from Yahoo Mail for iPhone



## Auburn Oaks Development

Larry Collette <lcollette@specialdreamsfarm.org> To: "planning@rochesterhills.org" <planning@rochesterhills.org> Cc: Larry Collette <lcollette@specialdreamsfarm.org> Mon, Oct 14, 2024 at 11:06 AM

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

### This is a project that the city of Rochester Hills will truly be proud of.

Respectfully

Larry, Mary, and Gregory Collette



# Wetlands

1 message

Marge Huggard <mahuggard1021@gmail.com> To: planning@rochesterhills.org

Tue, Oct 15, 2024 at 6:30 AM

Please maintain our wetlands for our wildlife and trees. I realize the desire for more housing : and expansion but we need to protect our community and the air/wetlands!

Marge Huggard 248-345-4980-

## RAYMOND T. ROWE DEBORAH ROWE 3280 Fairgrove Terrace Rochester Hills, MI 48309

October 14, 2024

planning@rochesterhills.org

Dear Rochester Hills Planning Commission,

We are writing to express our full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community. Our daughter, who is disabled, is looking forward to be a resident at that project.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

We strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Very truly yours,

Raymond T. Rowe

**Deborah Rowe** 



## Auburn Oaks Development

**Rosemary Rangi** <rcrangi@yahoo.com> To: planning@rochesterhills.org Cc: Rochester Solutions <rmihousingsolutions@gmail.com> Sun, Oct 13, 2024 at 11:36 AM

Planning committee-

As a longtime resident of Oakland County of fifty years, as well as a mother of an adult son who has an intellectual developmental disability, I ask for both your whole-hearted approval and support of the Auburn Oaks project.

I, like many other parents who have walked the road filled with challenges of having family member with special needs, have fears of what the future holds for our loved ones, once we are no longer here. This project, along with the Walton Oaks development, will provide an answer to address many of our concerns.

I am confident you will see, as both of these ground-breaking housing communities come to fruition, it will set both Rochester Hills and Oakland County, to be seen in a very positive and progressive light, not only in the State of Michigan, but in the United States as well.

I hope I can rely on your support of approval. Thank you.

Sincerely,

Rosemary Rangi



# **Qualified support for Angara Oaks project**

Yazbeck, Thomas <yazbeckt@msu.edu> To: "planning@rochesterhills.org" <planning@rochesterhills.org> Fri, Oct 11, 2024 at 4:17 PM

Greetings, Rochester Hills Planning Department,

I am writing to express my support of the proposed Auburn Angara Oaks development which will be deliberated on by Planning Commission on the 15th. More development along west Auburn Rd is very welcome & it is crucial to have more attached housing options, especially for populations such as disabled people. I especially appreciate the important detail of connecting this development with Harvey St.

Unfortunately, I'm not so keen on devoting 99 parking spaces to this site when there are only about 2/3 that number of units. Although transportation options for non-drivers are (currently) limited in R. Hills, it still would be great to foster walkability & alternative mobility by reducing space for parking - space which could be put to better use. This is still a good project which I hope PC approves, but I would like to see parking provision reduced for future residential development.

Thomas Yazbeck 1707 Devonwood Dr, Rochester Hills



## **Auburn Oaks Planning Commission Meeting**

Harriet Stuart <hsstuart18@gmail.com> To: planning@rochesterhills.org Tue, Oct 15, 2024 at 11:06 AM

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forwardthinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Harriet Stuart



## Auburn Oaks project

John & Leslie Bargiel <jnlbargiel79@aol.com> To: "planning@rochesterhills.org" <planning@rochesterhills.org> Tue, Oct 15, 2024 at 11:34 AM

Dear Rochester Hills Planning Commission,

We want to share our full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will offer an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Leslie and John Bargiel



## **Auburn Oaks Planning Commission Meeting**

**Michael Stuart** <mlstuart4@gmail.com> To: planning@rochesterhills.org Tue, Oct 15, 2024 at 11:00 AM

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Michael Stuart



rochesterhousingsolutionsmi.org



## **Oct. 15 Planning Commission meeting**

**Sophia Lada** <sophialada28@gmail.com> To: "planning@rochesterhills.org" <planning@rochesterhills.org> Tue, Oct 15, 2024 at 3:07 PM

Good afternoon,

My name is Sophia Lada. I am writing to express my favorability of the requested one family residential detached condominium plan, wetland use permit, and tree removal permit that are included in the Tuesday, October 15, 2024, Planning Commission meeting. Should the requests be approved, my sister-in-law Nicole Wycoff will be a resident of one of the multi-unit condominium buildings.

I strongly believe that this Preliminary Site Plan and recommendation will satisfy the requirements of the Planning Commission. Furthermore, the additional housing is needed in Rochester Hills and will provide a long-term solution for my and others loved ones. The removed trees will be replaced on site as well as via the City's Tree Fund. I look forward to the approval of the mentioned requests and applaud the construction of additional housing in southwest Rochester Hills.

Sincerely,

Sophia Lada



## Auburn Angara Oaks

THERESA POUNDERS <thepounders@comcast.net> To: "planning@rochesterhills.org" <planning@rochesterhills.org>

Tue, Oct 15, 2024 at 11:43 AM

I would like to voice my concerns regarding the large development planned for this location. First, I would like to say that I have no objection to the type of development proposed, just the location. I think the IDD community would be the ultimate neighbors. My concern in the destruction and removal of 279 trees, building on and around high quality wetlands and the impact on the wildlife and surrounding homes and communities. I own property next to this proposed development and already have had issues with flooding on the southwest end of my property. The IDD community deserves the proper foundation on which to build their homes. They are investing a significant amount of time and money provide for their loved ones. They deserve better than this! I an attaching a report that I obtained on the Egle website so planning and the IDD community can make a more informed decision. It looks like the one planning has didn't include the full report and pictures taken,

Thanks, Theresa Pounders

Auburn Angara Wetland Report 7.24.2024\_v1 (3).pdf



July 24, 2024

Bruce Michael Three Oaks Communities P.O. Box 8307 Ann Arbor, MI 48107

### Re: Wetland Delineation Report – Angara Drive (Parcels 15-32-201-001; -002; -003; -004; -006) City of Rochester Hills, Oakland County, Michigan

Dear Mr. Michael:

At your request, Barr Engineering Co. (Barr), conducted a wetland delineation of the approximately 7.36acre above-referenced property. The purpose of this report is to summarize the results of the wetland delineations conducted on May 30 and re-evaluated on July 9, 2024, and to provide a professional opinion as to potential Michigan Department of Environment, Great Lakes, and Energy (EGLE) and City of Rochester Hills jurisdiction over the identified wetland areas. Prior to the July 9 site visit, the City of Rochester Hills consultant, Kyle Hottinger of ASTI, Inc., was on site to address an action taken by a neighbor regarding the hydrology between the site and the neighboring property. A culvert drained this area of the site to the property to the northeast and that culvert had been blocked over the last winter season resulting in water ponding onto the site.

# 1.0 Area of Investigation Description

The Area of Investigation (AOI) is located west of Crooks Road and south of Auburn Road. The land cover within the AOI consists of mowed lawn, two houses and two garages, and a woodlot. The surrounding land use is comprised of residential development and vacant land.

# 1.1 Desktop Review

Barr conducted a desktop review to evaluate digital imagery for topography, soil types, and mapped wetlands within the AOI prior to the wetland delineation. As part of the desktop review, Barr staff reviewed resources such as the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS; Figure 1), Michigan Final Wetlands Inventory (MFWI; Figure 2), and aerial photography (Attachment 1).

A review of aerial photography shows evidence of past disturbance on parcel 15-32-201-006, the eastern most parcel of the site. It appears that from approximately 2014 to approximately 2019 the northern portion of this parcel was used as a landscaping storage and staging yard, and the previous owner brought in large cobble to establish a parking and storage area.

According to the WSS (Figure 1), the AOI includes well drained Fox sandy loam, till plain, 2 to 6 percent slopes (18B); somewhat poorly drained Thetford loamy fine sand, 0 to 3 percent slopes (35A); very poorly drained Granby loamy sand, 0 to 2 percent slopes (39); and well drained Urban land-Spinks complex, 0 to 8 percent slopes (62B). The Granby soil is the hydric (wetland) soil mapped within the AOI. Hydric soils are

soils that developed under prolonged periods of saturation or inundation and typically support wetland habitats in an undrained condition.

The MFWI (Figure 2) shows the AOI to contain wetland in the southeastern corner of the property as identified by the National Wetland Inventory (NWI) and Michigan Resource Inventory System (MIRIS) maps. It also shows the central and southwestern portions of the AOI to contain soil areas which include wetland soils.





#### Figure 1. NRCS Web Soil Survey

Figure 2. Michigan Final Wetlands Inventory

# 1.2 Methodology

The wetland delineation was conducted in a manner consistent with the *Corps of Engineers Wetlands Delineation Manual (USACE 1987)* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0, USACE 2010)*. The wetland delineation procedures outlined in these manuals require the evaluation of on-site vegetation, soils, and hydrologic characteristics.

The wetland boundaries were flagged in the field with alpha numerically labeled pink flagging tape and pin flags. The wetland boundaries were subsequently surveyed by Monument Engineering Group Associates, Inc. Site observations are described in the sections below.

## 1.3 Results

The AOI includes palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) habitats. The on-site investigation identified two wetlands. These wetlands were labeled as Wetland A and Wetland B. The wetland and upland areas within the AOI are described below.

### Vegetation, Soil, and Hydrology

#### Wetland A

Wetland A is a PEM/PSS wetland located within the central portion of the AOI. Wetland A continues offsite, both east and west of the AOI. The on-site portion of Wetland A is approximately **1.8** acres in size. The vegetation identified within the wetland included species such as lake sedge (*Carex lacustris*), skunk cabbage (*Symplocarpus foetidus*), common buckthorn (*Rhamnus cathartica*), and American elm (*Ulmus americana*). During the July 9<sup>th</sup> reevaluation of the wetlands, five (5) soil pits and data forms were completed at five (5) sampling points on the north edge of Wetland A, attached are data forms SP1 through SP5, along with a photolog showing the location of the sampling points. The eastern end of Wetland A exists on previously disturbed land and soil pits could not be dug due to the presence of large cobble at the surface. Hydric soil and primary and secondary wetland hydrology indicators were observed in other areas of Wetland A. The boundaries of this wetland were identified using flags A1 through A57.

#### Wetland B

Wetland B is a PFO wetland located in the southern portion of the AOI. Wetland B continues off-site south of the AOI. The on-site portion of Wetland B is approximately **0.2** acres in size. The vegetation identified within the wetland included species such as silver maple (*Acer saccharinum*). Hydric soil was assumed to be present within Wetland B. A soil pit was not dug because the soil surface was inundated by 6 inches of water. Primary and secondary wetland hydrology indicators were observed in Wetland B. The boundaries of this wetland were identified using flags B1 through B12.

#### <u>Upland</u>

The upland areas of the site were characterized by mowed lawn and scrub-shrub areas and woods. The upland areas of the site contained species such as white clover (*Trifolium repens*), dandelion (*Taraxacum officinale*), multiflora rose (*Rosa multiflora*), Japanese barberry (*Berberis thunbergia*), prickly ash (*Zanthoxylum americanum*), common buckthorn, Morrow's honeysuckle (*Lonicera morrowii*), black locust (*Robinia pseudoacacia*), and black cherry (*Prunus serotina*). Hydric soils and wetland hydrology indicators were not observed in the upland areas of the site.

The attached Site Survey depicts the location of the wetland areas encountered on the site. Wetland Determination Data Forms are attached for further detailed information on the wetland and upland areas within the AOI.

# **1.4 Conclusions**

Based on observations of topography, vegetation, soil, and indicators of hydrology, Barr has determined that wetland habitat is present within the AOI. These wetland areas were identified as a PEM, PSS, and PFO wetland habitat types. According to Part 303, Wetlands Protection, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, wetlands regulated by the State of Michigan include wetlands that are:

- 1. Located within 500 feet of, or having a direct surface water connection to, an inland lake, pond, river, or stream; or
- 2. Greater than 5 acres in size; or
- 3. Located within 1,000 feet of, or having a direct surface water connection to, the Great Lakes or Lake St. Clair; or
- 4. A water of the United States as that term is used in section 502(7) of the Federal Water Pollution Control Act, 33 USC 1362; or

- Known to have a documented presence of an endangered or threatened species under Part 365 of State of Michigan 1994 PA 451, as amended or the Federal Endangered Species Act of 1973, Public Law 93-205; or
- 6. Rare or imperiled.

Wetland A may be regulated under Part 303 because it continues off-site, beyond the limits of the AOI. The total size of Wetland A was not determined. If Wetland A is greater than 5 acres in size it would be regulated.

Wetland B may be regulated under Part 303 because it is part of a larger wetland complex that extends offsite and may be greater than 5 acres in total size. If Wetland B is greater than 5 acres in size it would be regulated.

The City of Rochester Hills regulates all wetlands regulated by EGLE and, in addition, regulates noncontiguous wetlands two acres in size or greater. The City of Rochester Hills also regulates noncontiguous wetlands less than two acres in size if the wetlands are deemed essential to the preservation of the natural resources of the city. Wetland A and Wetland B are likely to be regulated by the City of Rochester Hills because they appear to be greater than 2 acres in size.

Please be advised that EGLE, and the City of Rochester Hills, has regulatory authority regarding the wetland boundary location(s) and jurisdictional status of wetlands on this site. Barr's wetland determination was performed in general accordance with accepted procedures for conducting wetland determinations. Barr provides no warranty, guarantee, or other agreement in respect to the period of time for which this wetland determination will remain valid. Barr's conclusions reflect our professional opinion based on the site conditions within the AOI observed during the site visit. Discrepancies may arise between current and future wetland determinations and delineations due to changes in vegetation and/or hydrology as the result of land use practices or other environmental factors, whether on-site or on adjacent or nearby properties. We recommend our wetland boundary determination and jurisdictional opinion be reviewed by EGLE prior to undertaking any activity within any identified wetlands.

Thank you for the opportunity to provide this wetland delineation. If you have any questions, please contact me at your convenience at 810-247-1229 or Fthompson@barr.com.

Sincerely,

BARR ENGINEERING CO.

Fran Thompson Ecologist

# References

- U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual.* Washington, DC.
- USACE. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)

**Figure:** Site Survey

### Attachments:

Attachment 1 – Historic Aerial Photography Attachment 2 – USACE Wetland Determination Data Sheets

UTILITY CROSSINGS						
WETLAND	SANITARY	WATERMAIN	STORM SEWER			
WETLAND A	248 LF - 8" SEWER	245 LF – 8" WATER MAIN	247 LF – 36" STORM SEWER 125 LF – 12" STORM SEWER			
WETLAND B	112 LF – 8" SEWER (DIRECTIONAL DRILL)	NA	12 INCH OUTLET W/ RIPRAP			

	25' NATURAL FEATURES	SETBACK DISTURBANCES	
WETLAND	LENGTH OF 25' SETBACK	LENGTH OF DISRUPTION OF 25' SETBACK	REDUCTION
WETLAND A – DISTURBANCE 1	1,201 LF	632 LF	20,396 SF (PERMANENT)
WETLAND A – DISTURBANCE 2	1,201 LF	123 LF	2,704 SF (TEMP RESTORED)
WETLAND B	344 LF	344 LF	2,122 SF (PERMANENT) 3,318 SF (TEMP RESTORED)

WETLAND DISTURBANCES						
WETLAND	AREA OF WETLAND (ONSITE)	AREA OF DISRUPTION OF WETLAND	WETLAND VOLUME			
WETLAND A - DISTURBANCE 1	78,062 SF	29,356 SF	5,522 CY (FILL)			
WETLAND A – DISTURBANCE 2	78,062 SF	25 SF	<1 CY (FILL)			
WETLAND B - DISTURBANCE 1	9,367 SF	361 SF	79 CY (FILL)			
WETLAND B – DISTURBANCE 2	9,367 SF	69 SF	1 CY (CUT)			





Attachments 1




















Attachment 2



Barr Footer: ArcGISPro 3.3, 2024-07-11 15:14 File: I: Projects/22/63/1119/Maps/Report/ThreeOaks\_AuburnAngara\_PhotoLog\_20240709.aprx Layout: ThreeOaks\_AuburnAngara\_PhotoLog\_20240709 User: MAC2







<image>

SP2 facing north



Date: 7/9/2024

SP2

Flag No: A27 Page 2 of 6 THREE OAKS AUBURN ANGARA Photo Locations Three Oaks Communities, LLC Rochester Hills, Michigan

**BARR**.

Note: Photo locations are approximate

Barr Footer: ArcGISPro 3.3, 2024-07-11 15:14 File: 1: Projects 2216311191Maps\Report\ThreeOaks\_AuburnAngara\_PhotoLog\_20240709.aprx Layout: ThreeOaks\_AuburnAngara\_PhotoLog\_20240709 User: MAC2











## Date: 7/9/2024

SP3

Note: Photo locations are approximate

Flag No: A29 Page 3 of 6 THREE OAKS AUBURN ANGARA Photo Locations Three Oaks Communities, LLC Rochester Hills, Michigan

**BARR**.

Barr Footer: ArcGISPro 3.3, 2024-07-11 15:14 File: I:\Projects\22\63\1119\Maps\Report\ThreeOaks\_AuburnAngara\_PhotoLog\_20240709.aprx Layout: ThreeOaks\_AuburnAngara\_PhotoLog\_20240709 User: MAC2





Note: Photo locations are approximate

Barr Footer: ArcGISPro 3.3, 2024-07-11 15:14 File: I:\Projects\22\63\1119\Maps\Report\ThreeOaks\_AuburnAngara\_PhotoLog\_20240709.aprx Layout: ThreeOaks\_AuburnAngara\_PhotoLog\_20240709.









WETLAND A facing north



Date: 7/9/2024

Sample Point ID: Overview

Note: Photo locations are approximate

Flag No: A Page 6 of 6 THREE OAKS AUBURN ANGARA Photo Locations Three Oaks Communities, LLC Rochester Hills, Michigan

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Ang	ara Oaks	City/Co	ounty: Rochester Hi	lls/Oakland	l Co.	Sampling Date:	5/30/2024
Applicant/Owner: Three	ee Oaks Communities			State:	MI	Sampling Point:	A56 UPL
Investigator(s): Fran Thor	npson, Barr Engineering Co.	Section	Township, Range:	S32, T3N	, R11E		
Landform (hillside, terrace	e, etc.): hillslope		Local relief (conca	ve, convex	, none): <u>c</u>	convex	
Slope (%): 0-2 Lat	:: 42.63213	Long:	-83.18170		[	Datum: NAD 83	
Soil Map Unit Name: Granby loamy sand NWI classification: Upland							
Are climatic / hydrologic o	Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)						
Are Vegetation No , Sc	il <u>No</u> , or Hydrology <u>No</u> si	ignificantly disturbed?	Are "Normal Circun	nstances" p	present?	Yes <u>X</u> No	
Are Vegetation No , Sc	oil <u>No</u> , or Hydrology <u>No</u> n	aturally problematic?	(If needed, explain	any answe	rs in Ren	narks.)	
SUMMARY OF FINI	DINGS – Attach site ma	p showing sampl	ing point locati	ons, trar	nsects,	important feat	tures, etc.
Hydrophytic Vegetation Hydric Soil Present?	Present? Yes <u>No</u> Yes <u>No</u>	X Is the second	ne Sampled Area nin a Wetland?	Ye	s	No_X	
Wetland Hydrology Pres	ent? Yes No	X					

Remark	s.

All three wetland criteria are not met. Sampling point is upland. This sampling point represents the upland areas adjacent to Wetlands A and B.

#### VEGETATION - Use scientific names of plants.

	Absolute	Dominant	Indicator		
Tree Stratum (Plot size: 30 ft )	% Cover	Species?	Status	Dominance Test worksheet:	
1. Prunus serotina	35	Yes	FACU	Number of Dominant Species That	
2. Robinia pseudoacacia	30	Yes	FACU	Are OBL, FACW, or FAC: 2	(A)
3				Total Number of Dominant Species	
4				Across All Strata: 6	(B)
5.				Percent of Dominant Species That	
	65	=Total Cover		Are OBL, FACW, or FAC: 33.39	6 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft	)				
1. Rhamnus cathartica	25	Yes	FAC	Prevalence Index worksheet:	
2. Lonicera morrowii	15	Yes	FACU	Total % Cover of: Multiply by	
3. Berberis thunbergii	5	No	FACU	OBL species 0 x 1 = 0	
4.				FACW species 0 x 2 = 0	
5.				FAC species 45 x 3 = 135	
	45	=Total Cover		FACU species 95 x 4 = 380	
Herb Stratum (Plot size: 5 ft )				UPL species $0 \times 5 = 0$	
1. Rhamnus cathartica	20	Yes	FAC	Column Totals: 140 (A) 515	(B)
2. Rosa multiflora	10	Yes	FACU	Prevalence Index = B/A = 3.68	
3.					
4.				Hydrophytic Vegetation Indicators:	
5.				1 - Rapid Test for Hydrophytic Vegetatio	'n
6.				2 - Dominance Test is >50%	
7.				3 - Prevalence Index is ≤3.0 <sup>1</sup>	
8.				4 - Morphological Adaptations <sup>1</sup> (Provide	supporting
9.				data in Remarks or on a separate she	et)
10.				Problematic Hydrophytic Vegetation <sup>1</sup> (E:	xplain)
	30	=Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrolo	av must
Woody Vine Stratum (Plot size:	)			be present, unless disturbed or problematic.	gymast
1.				Hydrophytic	
2.				Vegetation	
		=Total Cover		Present? Yes No X	
Remarks: (Include photo numbers here or on a sepa	rate sheet.)				

Depth	Matrix		Redo	x Featur	es			,		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-12	10YR 3/2	100					Loamy/Clayey			
12-18	10YR 5/4	100					Loamy/Clayey			
	·									
$\frac{1}{1}$ Turne: C=C		lation PM-	-Roduced Metrix		kod Sand			DI-Doro Liping M-Mo	triv	
Hydric Soil	Indicators:		-Reduced Matrix, N	10-11/185	Keu Sano	Giains		for Problematic Hydri	c Soils <sup>3</sup>	
Histosol	(A1)		Sandy Gle	ved Mat	rix (S4)		Coast	Prairie Redox (A16)	0 00110 .	
Histic E	pipedon (A2)		Sandy Red	lox (S5)			Iron-M	anganese Masses (F12	)	
Black H	istic (A3)		Stripped M	latrix (Se	6)		Red Pa	arent Material (F21)	/	
Hydroge	en Sulfide (A4)		Dark Surfa	ce (S7)	,		Very S	hallow Dark Surface (F2	22)	
Stratifie	d Layers (A5)		Loamy Mu	cky Min	eral (F1)		Other	(Explain in Remarks)		
2 cm Mi	uck (A10)		Loamy Gle	yed Ma	trix (F2)					
Deplete	d Below Dark Surface	e (A11)	Depleted N	/latrix (F	3)					
Thick D	ark Surface (A12)		Redox Dar	k Surfac	ce (F6)		<sup>3</sup> Indicators	of hydrophytic vegetation	on and	
Sandy M	/lucky Mineral (S1)		Depleted [	Dark Sur	face (F7)	)	wetlan	wetland hydrology must be present,		
5 cm Mi	ucky Peat or Peat (S3	3)	Redox Dep	pression	s (F8)		unless	disturbed or problemati	С.	
Restrictive	Layer (if observed):									
Туре:										
Depth (I	nches):						Hydric Soil Present?	Yes	NoX	
HYDROLO	DGY									
Wetland Hy	drology Indicators:									
Primary Indi	cators (minimum of c	one is requi	red; check all that	apply)			Secondary	Indicators (minimum of	two required)	
Surface	Water (A1)		Water-Stai	ned Lea	aves (B9)		Surfac	e Soil Cracks (B6)		
High Wa	ater Table (A2)		Aquatic Fa	una (B1	3)		Draina	ge Patterns (B10)		
Saturati	on (A3)		True Aqua	tic Plant	s (B14)		Dry-Se	ason Water Table (C2)		
Water M	larks (B1)		Hydrogen	Sulfide (	Odor (C1	)	Crayfis	sh Burrows (C8)		
Seaime	nt Deposits (B2)			nizospr	ieres on l		.00ts (C3) Satura	tion visible on Aerial Im	agery (C9)	
	posits (B3) at or Crust (B4)		Presence (	n Reduc	tion in Ti	(C4) lled Soil		a of Stressed Plants (D	1)	
Iron Der	posits (B5)		Thin Muck	Surface	e (C7)		FAC-N	leutral Test (D5)		
Inundati	on Visible on Aerial I	magery (B7	) Gauge or \	Nell Dat	a (D9)					
Sparsel	y Vegetated Concave	Surface (E	38) Other (Exp	lain in F	Remarks)					
Field Obse	rvations:									
Surface Wa	ter Present? Ye	s	No X	Depth (i	nches):					
Water Table	Present? Ye	s	No X	Depth (i	nches):					
Saturation F	Present? Ye	s	No <u>X</u>	Depth (i	nches): _		Wetland Hydrology	Present? Yes	<u>No X</u>	
(includes ca	pillary fringe)									
Describe Re	ecorded Data (stream	gauge, mo	onitoring well, aeria	l photos	, previou	s inspec	ctions), if available:			
Domorkov										
Rendiks.										

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Ang	gara Oaks	City/County: Ro	ochester Hills/Oak	and Co.	Sampling Date:	5/30/2024
Applicant/Owner: Th	ree Oaks Communities		State:	МІ	Sampling Point:	A56 WET
Investigator(s): Fran Tho	mpson, Barr Engineering Co.	Section, Townsh	p, Range: <u>S32,</u>	Г3N, R11E		
Landform (hillside, terra	ce, etc.): depression	Local re	elief (concave, con	vex, none):	concave	
Slope (%): 0-2 La	at: 42.63231	Long: -83.1818	30		Datum: NAD 83	
Soil Map Unit Name: Granby loamy sand NWI classification: PEM/PSS						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)						
Are Vegetation No , S	oil <u>No</u> , or Hydrology <u>No</u> signi	ificantly disturbed? Are "No	mal Circumstance	es" present?	Yes <u>X</u> No	
Are Vegetation No , S	oil <u>No</u> , or Hydrology <u>No</u> natu	rally problematic? (If need	ed, explain any ans	swers in Re	marks.)	
SUMMARY OF FIN	DINGS – Attach site map	showing sampling poi	nt locations, t	ransects	, important fea	tures, etc.
Hydrophytic Vegetation	Present? Yes X No	Is the Samp	ed Area			
Hydric Soil Present?	Yes X No	within a Wet	land?	Yes X	No	
Wetland Hydrology Pre	sent? Yes X No					

Remarks:

## **VEGETATION** – Use scientific names of plants.

	Absolute	Dominant	Indicator					
Tree Stratum (Plot size: 30 ft )	% Cover	Species?	Status	Dominance Test	t workshe	eet:		
1. Ulmus americana	20	Yes	FACW	Number of Domir	nant Spec	ies That		
2				Are OBL, FACW,	, or FAC:	_	5	_(A)
3				Total Number of	Dominant	Species		
4				Across All Strata	:	_	5	(B)
5				Percent of Domir	nant Spec	ies That		
	20	=Total Cover		Are OBL, FACW	, or FAC:	_	100.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15	)							
1. Rhamnus cathartica	25	Yes	FAC	Prevalence Inde	x worksh	neet:		
2. Cornus amomum	10	Yes	FACW	Total % Cov	ver of:	Mu	tiply by:	_
3				OBL species	40	x1=	40	_
4				FACW species	30	x 2 =	60	_
5				FAC species	25	x 3 =	75	_
	35	=Total Cover		FACU species	0	x 4 =	0	
Herb Stratum (Plot size: 5 ft )				UPL species	0	x 5 =	0	
1. Carex lacustris	20	Yes	OBL	Column Totals:	95	(A)	175	(B)
2. Symplocarpus foetidus	15	Yes	OBL	Prevalence Inc	dex = B/A	\ =	1.84	
3. Glyceria striata	5	No	OBL					
4.				Hydrophytic Veg	getation I	ndicators	:	
5.				1 - Rapid Tes	st for Hyd	rophytic V	egetation	
6.				X 2 - Dominano	ce Test is	>50%		
7.				X 3 - Prevalence	ce Index is	s ≤3.0 <sup>1</sup>		
8.				4 - Morpholo	gical Ada	ptations <sup>1</sup> (F	Provide su	pporting
9.				data in Re	marks or	on a sepa	rate sheet)	)
10.				Problematic	Hydrophy	tic Vegeta	tion <sup>1</sup> (Expl	ain)
	40	=Total Cover		<sup>1</sup> Indicators of hyd	tric soil ar	nd wetland	hydrology	must
Woody Vine Stratum (Plot size: NA	)			be present, unles	s disturbe	ed or probl	ematic.	maor
1				Hydrophytic				
2				Vegetation				
		=Total Cover		Present?	Yes X	No		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)							

(inches)         Color (mc           0-10         10YR 2/           10-16         10YR 4/	ist) <u>%</u> 2 <u>100</u> 1 <u>80</u>	Color (moist) 10YR 4/6	% 20	Type <sup>1</sup> C	Loc <sup>2</sup>	Texture Loamy/Clayey Loamy/Clayey	Remarks Prominent redox concentrations
0-10 10YR 2/ 10-16 10YR 4/	100       1       80	10YR 4/6	20	C	M	Loamy/Clayey Loamy/Clayey	Prominent redox concentrations
10-16 10YR 4/	1 <u>80</u> 	10YR 4/6	20	С	М	Loamy/Clayey	Prominent redox concentrations
	·						
<sup>1</sup> Type: C=Concentration, [	D=Depletion, RM	Reduced Matrix, I	MS=Masł	ked Sand	d Grains	²Location	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:						Indicator	s for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Gle	eyed Matı	rix (S4)		Coas	t Prairie Redox (A16)
Histic Epipedon (A2)		Sandy Re	dox (S5)			Iron-I	Manganese Masses (F12)
Black Histic (A3)		Stripped N	/latrix (S6	6)		Red I	Parent Material (F21)
Hydrogen Sulfide (A4)		Dark Surfa	ace (S7)			Very	Shallow Dark Surface (F22)
Stratified Layers (A5)		Loamy Mu	ucky Mine	eral (F1)		Othe	r (Explain in Remarks)
2 cm Muck (A10)		Loamy Gl	eyed Mat	rix (F2)			
X Depleted Below Dark S	Surface (A11)	X Depleted	Matrix (F3	3)		<u>^</u>	
Thick Dark Surface (A1	12)	Redox Da	rk Surfac	æ (F6)		<sup>3</sup> Indicator	s of hydrophytic vegetation and
Sandy Mucky Mineral (	S1)	Depleted	Dark Surf	face (F7)	)	wetla	nd hydrology must be present,
5 cm Mucky Peat or Pe	eat (S3)	Redox De	pressions	s (F8)		unles	s disturbed or problematic.
Restrictive Layer (if obse	rved):						
Туре:							
Depth (inches):						Hydric Soil Present	? Yes <u>X</u> No
HYDROLOGY							
Wetland Hydrology Indica	ators:					Casanda	
Y Surface Water (A1)	in oi one is requi	Water-Sta	apply)	Vec (80)	)	<u>Seconda</u>	y maicators (minimum or two require)
High Water Table (A2)		Aquatic Fa	auna (B1)	3)	)	Ouria	age Patterns (B10)
Saturation (A3)		True Aqua	atic Plants	s (B14)		Drv-S	Season Water Table (C2)
Water Marks (B1)		Hydrogen	Sulfide C	Odor (C1	)	Cravi	fish Burrows (C8)
Sediment Deposits (B2	2)	Oxidized F	Rhizosph	eres on I	, Living Ro	oots (C3) Satur	ration Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence	of Reduc	ed Iron	(C4)	Stunt	ed or Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent Irc	on Reduc	tion in Ti	illed Soil	s (C6) X Geor	norphic Position (D2)
Iron Deposits (B5)		Thin Muck	Surface	(C7)		X FAC-	Neutral Test (D5)
Inundation Visible on A	erial Imagery (B	7)Gauge or	Well Data	a (D9)			
Sparsely Vegetated Co	oncave Surface (I	38)Other (Ex	olain in R	emarks)	)		
Field Observations:	Yes X	No	Depth (ir	nches): -	1		
Field Observations: Surface Water Present?			Depth (ir	nches): _			
Field Observations: Surface Water Present? Water Table Present?	Yes	No	D	I		Wotland Hydrolog	
Field Observations: Surface Water Present? Water Table Present? Saturation Present?	Yes Yes	No No	Depth (ir	nches): _		wetiand hydrolog	$y \text{ Present? } \text{ res} \underline{\land} \text{ NO} \underline{\_}$
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes Yes	No No	Depth (ir	nches): -			
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s	Yes Yes	No No onitoring well, aeria	Depth (in	nches): _ , previou	is inspec	tions), if available:	
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks:	Yes Yes	No No onitoring well, aeria	Depth (in	nches): _ , previou	is inspec	tions), if available:	

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-10-16; the propor	nent agency is CECW-CO-R	(Authority: AR 335-15, paragraph 5-2a)
Project/Site: Auburn Angara Oaks	City/County: Rochest	ter Hills/Oakland Co. Sampling Date: 5/30/2024
Applicant/Owner: Three Oaks Communities		State: MI Sampling Point: B4 WET
nvestigator(s): Fran Thompson, Barr Engineering Co	o. Section, Township, Rar	nge: S32, T3N, R11E
andform (hillside terrace etc.): depression	Local relief (c	concave convex none): convcave
Sone (%): 0-2 Lat: 42.63187	2004 10101 (0	Datum: NAD 83
Soll Man Linit Name: Cranby Joamy and	Eolig03.10100	
re climatic / hydrologic conditions on the site typica	If for this time of year? Yes X	No (If no, explain in Remarks.)
vre Vegetation No , Soil No , or Hydrology No	significantly disturbed? Are "Normal C	Circumstances" present? Yes X No
<pre>\re Vegetation No , Soil No , or Hydrology No</pre>	naturally problematic? (If needed, exp	plain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site r	map showing sampling point lo	cations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X	No Is the Sampled Ar No within a Wetland?	rea ? Yes X No
Wetland Hydrology Present? Yes X	No	
Remarks:		
All three wetland criteria are met. Sampling point is	s wetland.	
<b>/EGETATION</b> – Use scientific names of p	plants.	
	Absolute Dominant Indicator	
<u>Iree Stratum</u> (Plot size: <u>30 ft</u> )	<u>% Cover</u> <u>Species?</u> <u>Status</u>	Dominance Test worksheet:
2	_ <u>80 Yes</u> <u>FACW</u>	Number of Dominant Species That
3		
4.		Across All Strata: 1 (B)
5.		Percent of Dominant Species That
	80 =Total Cover	Are OBL, FACW, or FAC: 100.0% (A/B)
Sapling/Shrub Stratum (Plot size: NA	_)	
1		Prevalence Index worksheet:
2		Total % Cover of: Multiply by:
3		OBL species x 1 =0
4		FACW species $80 \times 2 = 160$
5		FAC species $0 \times 4 = 0$
Herb Stratum (Plot size: NA )		$\frac{112}{12} = \frac{112}{12} = 1$
1		Column Totals: $80$ (A) $160$ (B)
2.		Prevalence Index = $B/A = 2.00$
3.		
4.		Hydrophytic Vegetation Indicators:
5.		1 - Rapid Test for Hydrophytic Vegetation
6.		X 2 - Dominance Test is >50%
7		X 3 - Prevalence Index is $\leq 3.0^{1}$
8		4 - Morphological Adaptations <sup>1</sup> (Provide supportin
9		data in Remarks or on a separate sheet)
10		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	=Total Cover	<sup>1</sup> Indicators of hydric soil and wetland hydrology must

No

Yes X

Hydrophytic

Vegetation Present?

2.	
	=Total Cover
Do	marke: (Include photo numbers here or on a congrate sheet)

(Plot size: NA )

Remarks: (Include photo numbers here or on a separate sheet.)

Woody Vine Stratum

1.

Depth	Matrix		Redo	x Featur	es				,	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textu	ire	Remarks	
·			· · ·							
<sup>1</sup> Type: C=0	Concentration, D=De	pletion, RM=	Reduced Matrix, N	MS=Mas	ked Sand	d Grains	S	<sup>2</sup> Location: PL=	Pore Lining, M=Matr	ix.
Hydric Soi	I Indicators:	,						Indicators for	Problematic Hydric	Soils <sup>3</sup> :
Histoso	ol (A1)		Sandy Gle	eyed Mat	rix (S4)			Coast Prai	rie Redox (A16)	
Histic E	Epipedon (A2)		Sandy Red	dox (S5)	( )			Iron-Manga	anese Masses (F12)	
Black H	listic (A3)		Stripped N	1atrix (Se	3)			Red Paren	t Material (F21)	
Hydrog	en Sulfide (A4)		Dark Surfa	ace (S7)	,			Very Shallo	ow Dark Surface (F22	2)
Stratifie	ed Layers (A5)		Loamy Mu	icky Min	eral (F1)			X Other (Exp	lain in Remarks)	,
2 cm M	luck (A10)		Loamy Gle	eyed Ma	trix (F2)			、 '	,	
Deplete	ed Below Dark Surfac	e (A11)	Depleted M	Matrix (F	3)					
Thick D	ark Surface (A12)	( )	Redox Dai	rk Surfac	ce (F6)			<sup>3</sup> Indicators of h	ydrophytic vegetatior	n and
Sandy I	Mucky Mineral (S1)		Depleted [	Dark Sur	face (F7)	)		wetland hy	drology must be pres	ent,
5 cm M	lucky Peat or Peat (S	3)	Redox De	pression	s (F8)			unless dist	urbed or problematic	
Restrictive	Layer (if observed)	:								
Type:	•									
Depth (	inches):		_				Hydric Soi	I Present?	Yes X	No
HYDROL	OGY									
Wetland H	ydrology Indicators	:								
Primary Ind	licators (minimum of	one is requir	ed; check all that	apply)				Secondary Indi	icators (minimum of t	wo required)
X Surface	e Water (A1)		Water-Sta	ined Lea	aves (B9)	)		Surface So	oil Cracks (B6)	
High W	ater Table (A2)		Aquatic Fa	auna (B1	3)			Drainage P	Patterns (B10)	
Saturat	ion (A3)		True Aqua	itic Plant	s (B14)			Dry-Seaso	n Water Table (C2)	
X Water M	Marks (B1)		Hydrogen	Sulfide (	Odor (C1	)		Crayfish Bu	urrows (C8)	
Sedime	ent Deposits (B2)		Oxidized F	Rhizosph	eres on l	Living R	loots (C3)	Saturation	Visible on Aerial Ima	gery (C9)
Drift De	eposits (B3)		Presence	of Redu	ced Iron	(C4)		Stunted or	Stressed Plants (D1)	)
Algal M	lat or Crust (B4)		Recent Iro	n Reduc	tion in Ti	illed Soi	ls (C6)	X Geomorphi	ic Position (D2)	
Iron De	posits (B5)		Thin Muck	Surface	e (C7)			X FAC-Neutr	al Test (D5)	
	tion Visible on Aerial	Imagery (B7	Gauge or	Well Dat	a (D9)					
X Sparse	ly vegetated Concav	e Surface (B	8)Other (Exp	Diain in F	kemarks)					
Field Obse	ervations:	.,		-		•				
Surface Wa	aller Present? Y	es <u>X</u>		Depth (i	ncnes):	6				
Water Table	e Present? Y	es	No	Depth (i	nches):		Matland		verita Veri V	Na
Saturation I	Present? Y	es		Depth (I	ncnes):		vvetland	nyarology Pre	esent? Yes X	NO
Uncludes Ca	apiliary minge)		nitoring woll porio	Inhotoo	nroviou	e inener	tions) if ava	ilahla:		
Describe R	ecorded Data (streat	n yauye, mo	monny wen, aeria	ii priotos	, previou	s inspec	Suons), II ava			
Remarks <sup>.</sup>										
. ternanto.										

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks	City/County: Roches	ster Hills/Oakland Co.	Sampling Date:	7/9/2	024
Applicant/Owner: Three Oaks Communities		State: MI	Sampling Point:	S	SP1
Investigator(s): Fran Thompson, Barr Engineering Co.	Section, Township, Ra	ange: <u>S32, T3N, R11E</u>			
Landform (hillside, terrace, etc.): terrace	Local relief (	concave, convex, none): <u>c</u>	oncave		
Slope (%): 0-1 Lat: 42.6332694	Long: <u>-83.1809722</u>	C	Datum: WGS		
Soil Map Unit Name: Fox sandy loam, till plain, 2 to 6 percent slopes		NWI classifi	cation: NONE		
Are climatic / hydrologic conditions on the site typical for this time of y	vear? Yes	No (If no, expl	ain in Remarks.)		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantly dis	turbed? Are "Normal (	Circumstances" present?	Yes <u>X</u> N	o	_
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally proble	matic? (If needed, ex	plain any answers in Rem	narks.)		
SUMMARY OF FINDINGS – Attach site map showing	sampling point lo	ocations, transects,	important fea	atures	, etc.
Hydrophytic Vegetation Present?       Yes       X       No         Hydric Soil Present?       Yes       No       X         Wetland Hydrology Present?       Yes       X       No	Is the Sampled A within a Wetland	rea ? Yes	No <u>X</u>		
Remarks: Hydrology on site has been altered.					
VEGETATION – Use scientific names of plants.					
Absolute         I           Tree Stratum         (Plot size: 30 ft )         % Cover         3	Dominant Indicator Species? Status	Dominance Test work	<sheet:< td=""><td></td><td></td></sheet:<>		
1. Aces saccharinum         10           2.	Yes FACW	Number of Dominant S Are OBL, FACW, or FA	Species That	2	(A)
3		Total Number of Domir Across All Strata:	nant Species	2	- (B)
5 =T	otal Cover	Percent of Dominant S Are OBL, FACW, or FA	pecies That AC: 10	0.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft )					
1		Prevalence Index wor	rksheet:		

$\underline{\text{Tree Stratum}} \qquad (\text{Flot size.}  \underline{\text{SUR}})$	% Cover	Species?	Status	Dominance rest worksheet.		
1. Aces saccharinum       2.	10	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC:	2	_(A)
3				Total Number of Dominant Species Across All Strata:	2	(B)
5	10	=Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft	)					
1				Prevalence Index worksheet:		
2				Total % Cover of: N	lultiply by:	_
3				OBL species 0 x 1 =	0	_
4				FACW species 105 x 2 =	210	_
5				FAC species 5 x 3 =	15	_
		=Total Cover		FACU species 0 x 4 =	0	_
Herb Stratum (Plot size: 5 ft )				UPL species 0 x 5 =	0	_
1. Agrostis stolonifera	95	Yes	FACW	Column Totals: 110 (A)	225	(B)
2. Acer rubrum	5	No	FAC	Prevalence Index = B/A =	2.05	
3.						
4.				Hydrophytic Vegetation Indicato	rs:	
5.				1 - Rapid Test for Hydrophytic	Vegetation	
6.				X 2 - Dominance Test is >50%		
7.				3 - Prevalence Index is ≤3.0 <sup>1</sup>		
8.				4 - Morphological Adaptations	(Provide su	pporting
9.				data in Remarks or on a sep	parate sheet	)
10.	·			Problematic Hydrophytic Vege	tation <sup>1</sup> (Expl	ain)
Woody Vine Stratum (Plot size:	100	=Total Cover		<sup>1</sup> Indicators of hydric soil and wetlar be present, unless disturbed or pro	nd hydrology blematic.	must
1.				Hydrophytic		
2.				Vegetation		
		=Total Cover		Present? Yes X No		

Remarks: (Include photo numbers here or on a separate sheet.)

Depth	cription: (Descr Matri	x x	n needed to doc Redo	u <b>ment t</b> x Featur	ne indica <sup>.</sup> es	tor or (	confirm the absence	of indicators.)
(inches)	Color (moist	) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR 2/2	100					Sandy	unmasked sand grains/ Salt Pepper
-								
17			De dus e d Matria A	10 14 1			21	DL Dana Linin n M Mateira
Hydric Soil	Indicators	Jepieuon, Rivi=	Reduced Matrix, r	vis=ivias	ked Sand	Grains		: PL=Pore Lining, M=Matrix.
Histoso			Sandy Gle	wed Mat	rix (S4)		Coas	t Prairie Redox (A16)
Histic F	nipedon (A2)		Sandy Re	dox (S5)	IIX (04)		Uron-	Manganese Masses (F12)
Black H	listic (A3)		Stripped M	latrix (Se	6)		Red	Parent Material (F21)
Hvdroae	en Sulfide (A4)		Dark Surfa	ace (S7)	-)		Verv	Shallow Dark Surface (F22)
Stratifie	d Layers (A5)		Loamy Mu	icky Min	eral (F1)		Othe	r (Explain in Remarks)
2 cm M	uck (A10)		Loamy Gle	eyed Ma	trix (F2)			
Deplete	d Below Dark Sur	face (A11)	Depleted I	Matrix (F	3)			
Thick D	ark Surface (A12)		Redox Da	rk Surfac	ce (F6)		<sup>3</sup> Indicator	s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)			Depleted [	Dark Sur	face (F7)		wetla	nd hydrology must be present,
5 cm M	ucky Peat or Peat	(S3)	Redox De	pression	s (F8)		unles	ss disturbed or problematic.
Restrictive	Layer (if observe	ed):						
Type:								
Depth (i	inches):						Hydric Soil Present	t? Yes <u>No X</u>
HYDROLO	OGY							
Wetland Hy	ydrology Indicato	rs:						
Primary Ind	icators (minimum	of one is require	ed; check all that	apply)			Seconda	ry Indicators (minimum of two required)
Surface	Water (A1)		Water-Sta	ined Lea	aves (B9)		Surfa	ace Soil Cracks (B6)
X High Wa	ater Table (A2)			auna (B1	3)			hage Patterns (B10)
X Saturati	ION (A3) Marks (B1)		True Aqua	sulfide (	S (B14) Odor (C1)		Dry-s	fish Burrows (C8)
Sedime	int Deposits (B2)			Rhizosnh	eres on l	' ivina R	oots (C3) Satu	ration Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Presence	of Redu	ced Iron (	C4)	Stuni	ted or Stressed Plants (D1)
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Til	led Soi	ls (C6) Geor	norphic Position (D2)
Iron Dep	posits (B5)		Thin Muck	Surface	e (C7)		X FAC	Neutral Test (D5)
Inundati	ion Visible on Aer	al Imagery (B7)	) Gauge or '	Well Dat	ta (D9)			
Sparsel	y Vegetated Conc	ave Surface (B	8)Other (Exp	olain in F	Remarks)			
Field Obse	rvations:							
Surface Wa	ater Present?	Yes	No <u>X</u>	Depth (i	nches):			
Water Table	e Present?	Yes X	No	Depth (i	nches):	12		
Saturation F	Present?	Yes X	No	Depth (i	nches): _	10	Wetland Hydrolog	gy Present? Yes <u>X</u> No
(includes ca	apillary fringe)			1			(1) (1) (1) (1) (1) (1)	
Describe Re	ecorded Data (stre	am gauge, moi	nitoring well, aeria	a photos	, previous	s inspec	ctions), if available:	
Remarks:								

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

			••••		
Project/Site: Auburn Angara Oaks		City/Coun	ity: Rochest	er Hills/Oakland Co.	Sampling Date: 7/9/2024
Applicant/Owner: Three Oaks Communities				State: MI	Sampling Point: SP2
Investigator(s): Fran Thompson, Barr Engineering Co.	:	Section, To	ownship, Rai	nge: S32, T3N, R11E	
Landform (hillside, terrace, etc.): toe slope		L	.ocal relief (c	oncave, convex, none):	concave
Slope (%): 0-2 Lat: 42.63213		Long: -8	3.18170	· · · · · · ·	Datum: WGS
Soil Map Unit Name: Fox sandy loam. till plain. 2 to 6 per	cent slopes	_		NWI classif	ication: Upland
Are climatic / bydrologic conditions on the site typical for t	this time of ve	ar?	Yes X	No (If no exp	lain in Remarks )
Are Vegetation Soil or Hydrology sign	nificantly distu	urbed? Au	re "Normal C	ircumstances" present?	
Are Vegetation, on Hydrologysign		notio? /H	Freeded ov	alain any anguara in Par	
		iauc? (ii			naiks.)
SUMMARY OF FINDINGS – Attach site map	showing s	sampling	g point lo	cations, transects,	, important features, etc.
Hydrophytic Vegetation Present?       Yes       X       No         Hydric Soil Present?       Yes       X       No         Wetland Hydrology Present?       Yes       X       No         Remarks:       Sample Point taken at flag A27. Hydrology has been alter	ered on site	Is the within	Sampled Ar a Wetland?	ea Yes <u>X</u>	No
VEGETATION – Use scientific names of plants	S.				
Free Stratum (Dist circ) 20 ft )	Absolute Do	ominant	Indicator	Dominones Testar	kahaatu
<u>     I ree Stratum</u> (Plot size: <u>30 π</u> )	<u>% Cover Sp</u>			Dominance Test wor	ksneet:
2	15	165		Are OBL FACW or F	Species That
3.				Total Number of Domi	inant Species
4.				Across All Strata:	3(B)
5.				Percent of Dominant S	Species That
_	15=Tot	tal Cover		Are OBL, FACW, or F	AC: <u>100.0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft )	_				
1. <u>Rhamnus cathartica</u>	5	Yes	FAC	Prevalence Index wo	rksheet:
2		·			
з		·		EACW species	$x_1 = 5$
۲ ۲		·		FAC species 5	$x_{3} = \frac{150}{15}$
·		tal Cover		FACU species 0	$x = \frac{10}{x 4} = \frac{10}{0}$
Herb Stratum (Plot size: 5 ft )				UPL species 0	$x_{5} = 0$
1. Agrostis stolonifera	80	Yes	FACW	Column Totals: 10	5 (A) 210 (B)
2. Juncus articulatus	5	No	OBL	Prevalence Index =	= B/A = 2.00
3.					
4				Hydrophytic Vegetati	ion Indicators:
5				1 - Rapid Test for	Hydrophytic Vegetation
6				X 2 - Dominance Te	st is >50%
7				X 3 - Prevalence Inc	lex is ≤3.0 <sup>1</sup>
8				4 - Morphological data in Remark	Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
10				Problematic Hydro	ophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: )	85 =Tot	tal Cover		<sup>1</sup> Indicators of hydric so be present, unless dis	bil and wetland hydrology must turbed or problematic.
1				Hydrophytic	

=Total Cover

Remarks: (Include photo numbers here or on a separate sheet.)

2.

Hydrophytic

Yes X

No

Vegetation

Present?

Profile Desc	ription: (Describe	to the dept	h needed to doc	ument ti	ne indica	ator or o	confirm the absence of	of indicators.)	
Depth	Matrix	-	Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-2	10YR 2/1	100					Mucky Loam/Clay		
2-6	10YR 5/2	80	10YR 6/8	20	С	M	Loamy/Clayey	Prominent redox concentrations	
6-15	10YR 2/2	100					Loamv/Clavev		
				·					
				·					
				·					
<u> </u>									
<sup>1</sup> Type: C=Co	ncentration, D=Dep	pletion, RM=I	Reduced Matrix, I	MS=Mas	ked Sand	d Grains	<sup>2</sup> Location	PL=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators:						Indicator	s for Problematic Hydric Soils':	
	A1)		Sandy Gle	eyed Mat	rix (S4)		Coas	t Prairie Redox (A16)	
Histic Epi	pedon (A2)		Sandy Re	dox (S5)			Iron-N	Manganese Masses (F12)	
Black His	tic (A3)			Aatrix (Se	5)			Parent Material (F21)	
Hydroger	Sulfide (A4)		Dark Surfa	ace (S7)			Very	Shallow Dark Surface (F22)	
	Layers (A5)			ICKY WING	eral (F1)			(Explain in Remarks)	
	K (AIU) Balaw Dark Surfaa	a (A11)	Loamy Gr	eyed Mat	111X (FZ)				
	Below Dark Surface	e (ATT)		rk Surfor	3) 20 (EG)		31. dia tanàna 6 kaodim-kaodim-kaodim-kaodim-kaodim-kaodim-kaodim-kaodim-kaodim-kaodim-kaodim-kaodim-kaodim-kao		
Sandy Mi	k Sullace (A12)			Dark Sur	е (го) face (Е7)		Indicators of hydrophytic vegetation and		
5 cm Mu	ky Peat or Peat (S	3)			ace (F7)		wella	s disturbed or problematic	
				pression	3 (1 0)		dilles		
Restrictive L	ayer (if observed)								
Dopth (in	choc):		_				Hydric Soil Procont		
			_				Hyunc Son Fresent		
Remarks:									
	<u>ov</u>								
HIDROLO	GY								
Wetland Hyd	rology Indicators	:							
Primary Indic	ators (minimum of	one is require	ed; check all that	apply)	(50)		<u>Secondar</u>	y Indicators (minimum of two required)	
	Vater (A1)		Water-Sta	ined Lea	ives (B9)		Surface Soil Cracks (B6)		
	er Table (A2)			auna (B1	3) 2 (D14)		Drainage Patterns (B10)		
	(A3)			Sulfido (	S (D 14) Ddor (C1	<b>`</b>	Dry-c	ich Rurrows (CR)	
	Deposite (B2)			Suillue ( Shizosoh		) ivina R	oots (C3) Satur	ation Visible on Aerial Imagen/ (CQ)	
Drift Dep	nsite (B3)		Presence	of Reduc		(C4)	Stunt	ed or Stressed Plants (D1)	
X Algal Mat	or Crust (B4)		Recent Irr	on Reduc	tion in Ti	lled Soil	Sturiled or Stressed Plants (D1)		
Iron Dep	sits (B5)		Thin Muck	Surface	(C7)		X FAC-	Neutral Test (D5)	
Inundatio	n Visible on Aerial	Imagery (B7)	Gauge or	Well Dat	a (D9)				
Sparsely	Vegetated Concav	e Surface (B	3) Other (Ex	plain in R	(emarks)				
Field Observ	vations:		· <u> </u>				Τ		
Surface Wate	er Present? Y	es	No X	Depth (i	nches):				
Water Table	Present? Y	es X	No	Depth (i	, – nches):	9			
Saturation Pr	esent? Y	es X	No	Depth (i	nches):	5	Wetland Hydrolog	y Present? Yes X No	
(includes cap	illary fringe)				· -				
Describe Rec	orded Data (strean	n gauge, mor	nitoring well, aeria	al photos	, previou	s inspec	tions), if available:		

Remarks:

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

						_				
Project/Site: Auburn	n Angara Oaks			City/Co	ounty: Roches	ter Hil	ls/Oakland Co.	Sampling Da	ate: 7/9/2	2024
Applicant/Owner:	Three Oaks (	Communities					State: MI	Sampling Po	oint:	SP 3
Investigator(s): Fran	n Thompson, Ba	arr Engineering	g Co.	Section,	Township, Ra	ange:	S32, T3N, R11	E		
Landform (hillside, t	terrace, etc.): s	houlder			Local relief (	conca	ve, convex, none	e): convex		
Slope (%):1-2	Lat: 42.633	25278		Long:	-83.18079722	2		Datum: WGS		
Soil Map Unit Name: Granby loamy sand NWI classification: NONE										
Are climatic / hydrol	logic conditions	on the site ty	pical for this time of y	ear?	Yes X	No	(If no, e	explain in Remark	<s.)< td=""><td></td></s.)<>	
Are Vegetation	, Soil ,	or Hydrology	significantly dis	turbed?	Are "Normal (	Circum	stances" preser	nt? Yes X	No	
Are Vegetation	, Soil,	or Hydrology	naturally proble	matic?	(If needed, ex	cplain a	any answers in F	Remarks.)		_
SUMMARY OF	FINDINGS	- Attach si	te map showing	sampli	ing point lo	ocatio	ons, transec	ts, important	feature	s, etc.
Hydrophytic Vegetation Present?       Yes       X       No       Is the Sampled Area         Hydric Soil Present?       Yes       No       X         Wetland Hydrology Present?       Yes       X       No										
Remarks: Sample Point take	n north of Flag	30.								
VEGETATION -	– Use scient	ific names o	of plants.							
Tree Stratum	(Plot size:	30 ft)	Absolute I % Cover	Dominant Species?	Indicator Status	Do	minance Test w	orksheet:		
1. 2.					·	Nur Are	mber of Dominar OBL, FACW, o	nt Species That r FAC:	2	(A)
3						Tot Acr	al Number of Do oss All Strata:	minant Species	2	(B)
5.				otal Cove		Per Are	cent of Dominar	nt Species That r FAC:	100.0%	(A/B)

4				ACIOSS All Strata	•	-	2	_(D)
5		=Total Cover		Percent of Domir Are OBL, FACW,	ant Spec , or FAC:	cies That	100.0%	_(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft	)							
1				Prevalence Inde	x works	heet:		
2				Total % Cov	er of:	Mu	Itiply by:	_
3				OBL species	25	x 1 =	25	_
4				FACW species	40	x 2 =	80	_
5.				FAC species	0	x 3 =	0	
		=Total Cover		FACU species	0	x 4 =	0	
Herb Stratum (Plot size: 5 ft )				UPL species	0	x 5 =	0	_
1. Eleocharis olivacea	25	Yes	OBL	Column Totals:	65	(A)	105	(B)
2. Cyperus esculentus	20	Yes	FACW	Prevalence Inc	dex = B//	A =	1.62	
3. Agrostis stolonifera	10	No	FACW					
4. Symphyotrichum lateriflorum	5	No	FACW	Hydrophytic Veg	jetation	Indicators	5:	
5. Phalaris arundinacea	5	No	FACW	1 - Rapid Tes	st for Hyd	drophytic V	egetation	
6.				X 2 - Dominand	ce Test is	s >50%		
7.				3 - Prevalenc	e Index i	s ≤3.0 <sup>1</sup>		
8.				4 - Morpholo	gical Ada	ptations <sup>1</sup> (	Provide su	pporting
9.				data in Re	marks or	on a sepa	rate sheet	)
10.				Problematic	Hydrophy	/tic Vegeta	ution <sup>1</sup> (Expl	ain)
	65	=Total Cover		<sup>1</sup> Indicators of hvd	lric soil a	nd wetland	l hvdroloav	must
Woody Vine Stratum (Plot size:	)			be present, unles	s disturb	ed or prob	lematic.	
1.				Hydrophytic				
2.				Vegetation				
		=Total Cover		Present?	Yes X	No		
Remarks: (Include photo numbers here or on a sepa	rate sheet	.)		<b>I</b>		-		
· · · · · · · · · · · · · · · · · · ·		,						

Profile Desc	cription: (Describe	to the dept	h needed to doc	ument th	ne indica	tor or o	confirm the absence of	of indicators.)		
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)		Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks		
0-2	10YR 2/1	100					Loamy/Clayey			
2-13	7.5YR 4/1	50	10YR 3/2	40			Loamy/Clayey			
			10YR 5/6	10	C	М		Prominent redox concentrations		
$\frac{1}{1}$ Type: C=C	oncentration D=De		Reduced Matrix	/S=Masl		Grains		PI =Pore Lining M=Matrix		
Hydric Soil	Indicators:			10-11/1031	Keu Gand			rs for Problematic Hydric Soils <sup>3</sup>		
Histosol	(Δ1)		Sandy Gle	wed Mat	riv (S4)		Coas	t Prairie Redox (A16)		
Histic Fr	vinedon (A2)		Sandy Re	dox (S5)	11X (04)		lron-N	Manganese Masses (F12)		
Black Hi	stic (A3)		Stripped M	latrix (Sf	5)		Red F	Parent Material (F21)		
Hydroge	n Sulfide (A4)		Dark Surfa	ace $(S7)$	,		Verv	Shallow Dark Surface (F22)		
Stratified	Lavers (A5)		L oamy Mi	icky Mine	eral (F1)		Other	r (Explain in Remarks)		
2 cm Mu	ick (A10)		L oamy Gle	eved Mat	rix (F2)			()		
Depleted	d Below Dark Surfac	ce (A11)	Depleted I	Matrix (F:	3)					
Thick Da	ark Surface (A12)	( )	' Redox Da	rk Surfac	æ (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and			
Sandy M	lucky Mineral (S1)		Depleted I	Dark Sur	face (F7)		wetla	nd hydrology must be present,		
5 cm Mu	5 cm Mucky Peat or Peat (S3)			pression	s (F8)		unless disturbed or problematic.			
Restrictive	Laver (if observed)	):						·		
Type:		,								
Depth (ir	nches):		_				Hydric Soil Present	? Yes No X		
Remarks			—				-			
Large gravel	angular rock at 13	inches below	the surface							
00	0									
HYDROLC	)GY									
Wetland Hy	drology Indicators	:								
Primary Indi	<u>cators (minimum of</u>	one is require	ed; check all that	apply)			Secondar	y Indicators (minimum of two required)		
Surface	Water (A1)		Water-Sta	ined Lea	ves (B9)		Surfa	ice Soil Cracks (B6)		
High Wa	iter Table (A2)		Aquatic Fa	auna (B1	3)		Drainage Patterns (B10)			
Saturatio	on (A3)		True Aqua	tic Plant	s (B14)		Dry-S	Season Water Table (C2)		
Water M	larks (B1)		Hydrogen	Sulfide C	Ddor (C1	)	Crayf	fish Burrows (C8)		
Sedimer	nt Deposits (B2)			Rhizosph	eres on l	_iving R	oots (C3) Satur	ration Visible on Aerial Imagery (C9)		
Drift Dep	posits (B3)		Presence	of Reduc	ed Iron (	C4)	Stunt	ed or Stressed Plants (D1)		
X Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So				lled Soil	Is (C6) Geon	norphic Position (D2)				
Iron Dep	oosits (B5)	(DZ)		Surface	(C7)		X FAC-	Neutral Test (D5)		
	on visible on Aerial	Imagery (B7)	Gauge or	vveli Dati	a (D9) Iomorko)					
Sparsely		e Sullace (Do			emarks)		Т			
Field Obser	vations:			Donth /						
Wotor Tokin	Brocont? Y	es			nones):					
Saturation D	resent? Y	es		Depth (II	nches):		Wotland Hydrolog	ny Prosont? Vos V No		
(includes car	nesent: 1			Dehiii (ii						
Describe Ro	corded Data (stream	n daude mor	nitoring well serie	l photos	previou	s insner	tions) if available.			
	Served Data (Streat	94490, 1101		- P.10.03	, P. Stilla	- mopet	, i available.			

Remarks:

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks	City/Cou	unty: Rochester Hil	ls/Oakla	nd Co.	Sampling Date:	7/9/2024
Applicant/Owner: Three Oaks Communities			State:	MI	Sampling Point:	SP4
Investigator(s): Fran Thompson, Barr Engineering Co.	Section,	Township, Range:	S32, T	3N, R11E		
Landform (hillside, terrace, etc.): back slope		Local relief (concav	/e, conv	ex, none):	concave	
Slope (%): 01 Lat: 42.6332222	Long:	-83.1807778			Datum: WGS	
Soil Map Unit Name: Granby loamy sand			11	IWI classi	fication: NONE	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?	Yes <u>X</u> No		(If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologysignificantly distu	Are "Normal Circum	istances	" present?	Yes No		
Are Vegetation, Soil, or Hydrologynaturally problem	natic?	(If needed, explain a	any ans	vers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site map showing	sampli	ng point locatio	ons, tr	ansects	, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes X No	Is th	e Sampled Area				
Hydric Soil Present? Yes No X	with	in a Wetland?	`	′es	No X	
Wetland Hydrology Present? Yes X No						
Remarks:						

# **VEGETATION** – Use scientific names of plants.

	Absolute	Dominant	Indicator				
Tree Stratum (Plot size: 30 ft )	% Cover	Species?	Status	Dominance Test worksheet:			
1				Number of Dominant Species That			
2				Are OBL, FACW, or FAC:	1 (A)		
3				Total Number of Dominant Species			
4				Across All Strata:	1 (B)		
5				Percent of Dominant Species That			
		=Total Cover		Are OBL, FACW, or FAC:	100.0% (A/B)		
Sapling/Shrub Stratum (Plot size: 15 ft	)						
1				Prevalence Index worksheet:			
2.				Total % Cover of: Multi	ply by:		
3.				OBL species 0 x 1 =	0		
4.				FACW species 71 x 2 =	142		
5.				FAC species 1 x 3 =	3		
		=Total Cover		FACU species 0 x 4 =	0		
Herb Stratum (Plot size: 5 ft )				UPL species 0 x 5 =	0		
1. Agrostis stolonifera	60	Yes	FACW	Column Totals: 72 (A)	145 (B)		
2. Cyperus esculentus	5	No	FACW	Prevalence Index = B/A = 2	.01		
3. Acer rubrum	1	No	FAC				
4. Bidens frondosa	1	No	FACW	Hydrophytic Vegetation Indicators:			
5. Agrostis gigantea	5	No	FACW	1 - Rapid Test for Hydrophytic Vegetation			
6.				X 2 - Dominance Test is >50%	-		
7.				$3 - Prevalence Index is \leq 3.0^{1}$			
8.				4 - Morphological Adaptations <sup>1</sup> (P	rovide supporting		
9.				data in Remarks or on a separa	ate sheet)		
10.				Problematic Hydrophytic Vegetati	on <sup>1</sup> (Explain)		
	72	=Total Cover		<sup>1</sup> Indicators of bydric soil and wotland k			
Woody Vine Stratum (Plot size:	)			be present, unless disturbed or proble	matic.		
1				Hydrophytic			
2				Vegetation			
		=Total Cover		Present? Yes X No			
Pomarka: (Includa photo numbero haro ar an a cana	rate aboat )			1			

Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth	needed to docu	ument th	ne indica	ator or o	confirm the absence of	of indicators.)		
Depth Matrix	Redo	x Feature	es					
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-3 10YR 2/1 10					Loamy/Clayey			
3-11 10YR 4/3 90	10YR 5/6	10	С	М	Loamy/Clayey	Distinct redox concentrations		
11-15 7.5YR 5/2 70	7.5YR 5/6	30	С	М		Prominent redox concentrations		
<u> </u>					2			
Type: C=Concentration, D=Depletion, RM=R	educed Matrix, N	/IS=Masi	ked Sand	d Grains	Location:	: PL=Pore Lining, M=Matrix.		
Hydric Soll Indicators:	Sandy Cla	und Mat	iv (C1)		Indicator	s for Problematic Hydric Solis":		
HISIOSOI (AT)	Sandy Gie	yed Mati	1x (54)		Coas			
Histic Epipedon (A2)     Right Histic (A2)		JOX (33) Intriv (86				Parent Meterial (E21)		
Hudrogon Sulfide (A4)	Supped to	iatrix (30	)			Shallow Dark Surface (E22)		
Stratified Lavers (45)		cky Mine	ral (E1)			(Fxnlain in Remarks)		
-2  cm Muck (A10)	Loamy Gle	wed Mat	rix (F2)					
Depleted Below Dark Surface (A11)	Depleted M	/atrix (F:	3)					
Thick Dark Surface (A12)	Redox Dar	k Surfac	e (F6)		<sup>3</sup> Indicator	s of hydrophytic vegetation and		
Sandy Mucky Mineral (S1)	Depleted D	Dark Surf	ace (F7	)	wetland hydrology must be present.			
5 cm Mucky Peat or Peat (S3)	Redox Dep	pressions	s (F8)		unless disturbed or problematic.			
Restrictive Layer (if observed):								
Type:								
Depth (inches):	-				Hydric Soil Present	? Yes No X		
Remarks:	-							
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one is required	d; check all that	apply)			Secondar	y Indicators (minimum of two required)		
Surface Water (A1)	Water-Stai	ined Lea	ves (B9)		Surfa	ce Soil Cracks (B6)		
High Water Table (A2)	Aquatic Fa	iuna (B1	3)		Drainage Patterns (B10)			
Saturation (A3)	True Aqua	tic Plants	s (B14)		Dry-Season Water Table (C2)			
Water Marks (B1)	Hydrogen	Sulfide C	Odor (C1	)	Crayf	ïsh Burrows (C8)		
Sediment Deposits (B2)	Oxidized R	Rhizosph	eres on l	_iving R	oots (C3)Satur	ation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of	of Reduc	ed Iron	(C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iro	n Reduc	tion in Ti	lled Soil	s (C6) Geomorphic Position (D2)			
Iron Deposits (B5)		Surface	(U7)		X FAC-	Neutral Test (D5)		
Sparsely Vegetated Conceive Surface (B7)	Gauge or V	ven Dati	a (D9) omorko)					
			emarks		1			
Field Ubservations:	No Y	Donth /:-						
Water Table Present? Yes		Depth (If	iches):					
Saturation Present? Ves		Depth (ii Depth (ii	ncheel.		Wetland Hydrolog	uv Present? Ves X No		
	<u></u>	Sobar (II						
(includes capillary fringe)								

Remarks:

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks				City/Co	ounty:	Roche	ster Hi	lls/Oa	kland	Co.	Sampling D	Date:	7/9/2024	
Applicant/Owner: Thi	ee Oaks C	ommunitie	s						State	e:	MI	Sampling P	oint:	SP5
Investigator(s): Fran Tho	mpson, Ba	rr Enginee	ring Co.		Section,	, Town	iship, R	ange:	S32,	T3N	R11E			
Landform (hillside, terrac	e, etc.): <u>to</u>	e slope				Loca	al relief	(conca	ve, co	nvex,	none):	concave		
Slope (%): <u>0-1</u> La	t: <u>42.6331</u>	833			Long:	-83.1	808972					Datum: WGS	;	
Soil Map Unit Name: Gra	anby loamy	sand								NW	I classif	ication: PSS		
Are climatic / hydrologic	conditions	on the site	typical for	r this time of ye	ear?	Yes	X	No		_ (If	no, exp	lain in Remai	rks.)	
Are Vegetation, S	oil, c	or Hydrolog	jysi	ignificantly dist	urbed?	Are "	Normal	Circum	nstand	es" p	resent?	Yes	No	
Are Vegetation, S	oil, c	or Hydrolog	jyn	aturally probler	matic?	(If ne	eded, e	xplain	any a	nswei	rs in Rei	marks.)		
SUMMARY OF FIN	DINGS -	· Attach	site ma	p showing	sampli	ing p	oint l	ocati	ons,	tran	sects	, importan	t feat	tures, etc.
Hydrophytic Vegetation	Present?	Yes X	No		Is th	ne Sar	npled A	Area						
Hydric Soil Present?		Yes X	No		with	nin a V	Vetland	1?		Yes	<u>х</u>	No	_	
Wetland Hydrology Pres	sent?	Yes X	No											
Remarks:														

# **VEGETATION** – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1 Acer saccharinum	30	Yes	FACW	Number of Deminant Spacing That		
2.		, <u> </u>		Are OBL, FACW, or FAC:	4	(A)
3		·		Total Number of Dominant Species Across All Strata:	4	_ (B)
5	30	=Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft )						
1				Prevalence index worksneet:	14 I I	
2						-
3				$\begin{array}{c} \text{OBL species} \\ \text{FACW encoded} \\ \end{array}$		-
4				FACW species 35 $x 2 =$		-
5				FAC species x 3 = _		-
Lloth Strotum (Dist size: Eft.)		, – Total Cover		FACO species X4 = _		-
<u>Held Stratum</u> (Plot size. <u>5 it</u> )	15	Vaa		$\begin{array}{c} \text{OPL species} \\ \text{Column Tatala} \\ \end{array} = \begin{array}{c} 55 \\ 56 \\ 56 \\ 56 \\ 56 \\ 56 \\ 56 \\ 56 $		- (D)
Ludwigia paiustris		Yes		Column Totals: 55 (A)	90	- <sup>(B)</sup>
2. Agrostis stolonirera	5	Yes		Prevalence index = B/A =	1.04	-
3. Lemna minor	5	Yes	OBL			
4				Hydrophytic vegetation indicators	:	
5				1 - Rapid Test for Hydrophytic Ve	egetation	
6				X 2 - Dominance Test is >50%		
<i>1.</i>				$X_3$ - Prevalence Index is $\leq 3.0^{\circ}$		
8				4 - Morphological Adaptations (F	Provide sup	porting
9						
10				Problematic Hydrophytic Vegeta	tion' (Expla	ain)
Woody Vine Stratum (Plot size:)	25	_=Total Cover		<sup>1</sup> Indicators of hydric soil and wetland be present, unless disturbed or probl	hydrology ematic.	must
1				Hydrophytic		
2.				Vegetation		
		=Total Cover		Present? Yes <u>X</u> No_		
Remarks: (Include photo numbers here or on a separa	ate sheet.)					

	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-3	10YR 2/1	100					Mucky Loam/Clay		
3-15	10YR 5/2	80	7.5YR 5/8	20	С	M	Loamy/Clayey	Prominent redox conce	ntrations
Type: C=Cd Iydric Soil Histosol Histic Ep Black Hi Hydroge Stratified 2 cm Mu X Depleted Thick Da	Dincentration, D=Depl Indicators: (A1) bipedon (A2) stic (A3) n Sulfide (A4) I Layers (A5) ick (A10) d Below Dark Surface ark Surface (A12)	etion, RM	=Reduced Matrix, M Sandy Gle Sandy Red Stripped M Dark Surfa Loamy Mu Loamy Gle X Depleted M Redox Dar	/IS=Masi yed Matu lox (S5) latrix (S6 ce (S7) cky Mine yed Mat /atrix (Fi k Surfac	ked Sanc rix (S4) 3) rix (F1) rix (F2) 3) re (F6)	Grains.	<sup>2</sup> Location Indicato Coas Iron- Red Very Othe <sup>3</sup> Indicato	: PL=Pore Lining, M=Matrix rs for Problematic Hydric S at Prairie Redox (A16) Manganese Masses (F12) Parent Material (F21) Shallow Dark Surface (F22 r (Explain in Remarks)	د. Soils <sup>3</sup> : )
_ Sandy M	lucky Mineral (S1)			)ark Sur	face (F7)		wetla	and hydrology must be prese	ent
5 cm Mu	ckv Peat or Peat (S3	5)	Redox Der	pression	s (F8)		unles	s disturbed or problematic.	, ,
lestrictive	Layer (if observed):								
Restrictive Type: Depth (ir Remarks:	Layer (if observed):						Hydric Soil Presen	t? Yes X	<u>No</u>
Ype: Depth (ir Remarks:	Layer (if observed):						Hydric Soil Presen	t? Yes <u>X</u>	No
Ype: Depth (ir Remarks: YDROLC	Layer (if observed): Inches): IGY Irology Indicators:						Hydric Soil Presen	!? Yes <u>X</u>	No
Restrictive         Type:         Depth (ir         Remarks:         IYDROLC         Vetland Hy         Primary India         Surface         X         High Wa         X         Saturation         Water M         Sedimer         Drift Dep         X         Algal Ma         Inundation         Sparsely	Ager (if observed): hches): IGY drology Indicators: sators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) iosits (B3) t or Crust (B4) osits (B5) on Visible on Aerial In Vegetated Concave	ne is requ nagery (B Surface (	ired; check all that is Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp	apply) ned Lea una (B1 tic Plant Sulfide ( thizosph of Reduc n Reduc Surface Well Dat lain in R	ves (B9) 3) s (B14) Ddor (C1 eres on l ced Iron ( tion in Ti c(C7) a (D9) etemarks)	) _iving Ro (C4) Iled Soil:	Hydric Soil Presen	t? Yes X ry Indicators (minimum of tw ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imag ted or Stressed Plants (D1) norphic Position (D2) -Neutral Test (D5)	No