

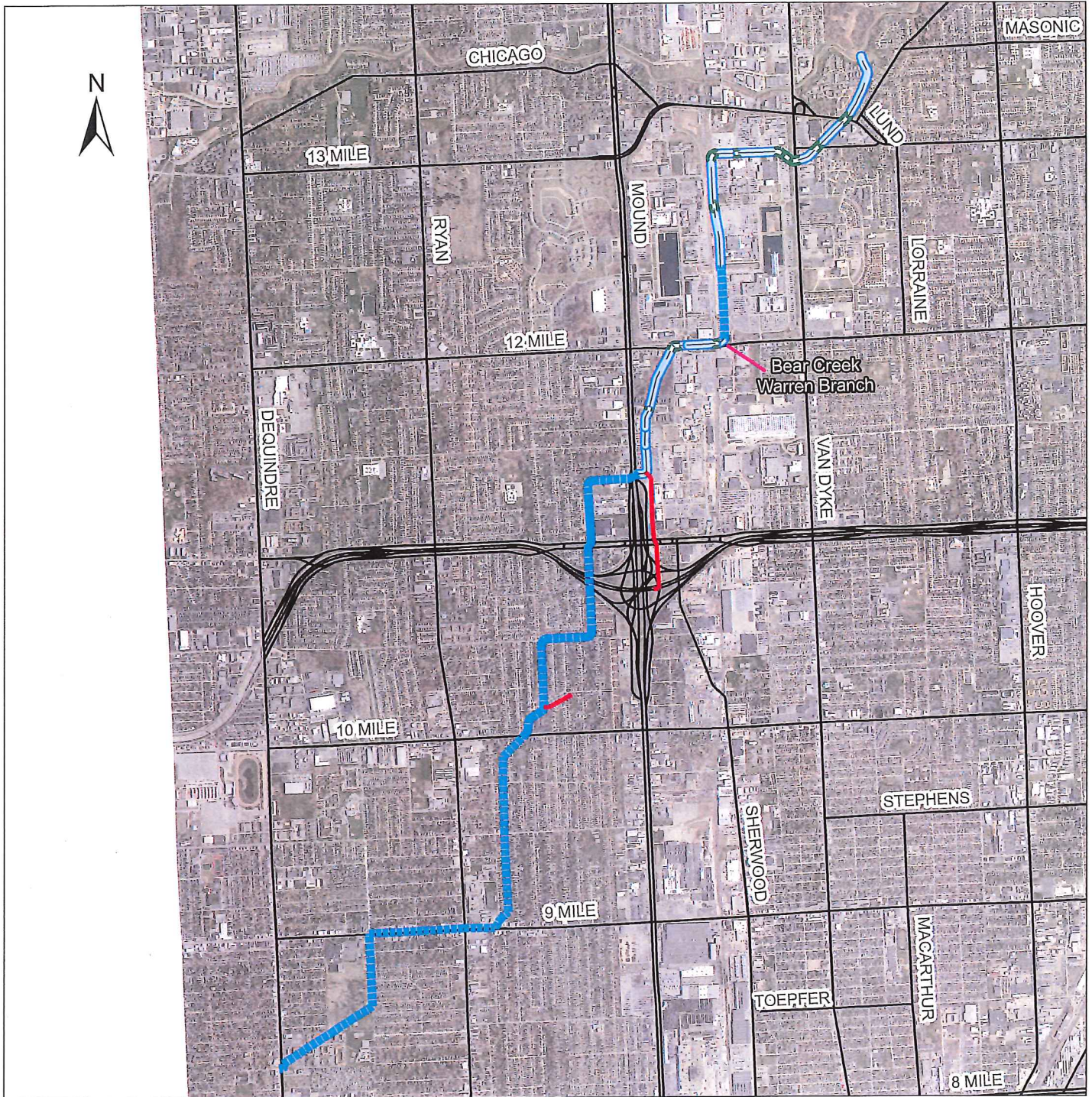
Gregg
Miller
Nash

BEAR CREEK
INTER-COUNTY DRAINAGE BOARD
MARCH 26, 2019
10:00 A.M.
AGENDA

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda	
3. Approval of Minutes of meeting of February 26, 2019	3
4. Public Participation	
5. Project Update – Jeff Bednar/Lou Urban/Karen Ridgway	6
6. Consideration for approval of invoices (see attached)	10
7. Financial Update – Bruce Manning	11
8. Old Business	
9. New Business	
10. Adjourn	

BEAR CREEK DRAIN (INTER COUNTY)

CENTERLINE/WARREN/OAKLAND COUNTY



Legend



Drain Length (Feet/Miles):
54,012.44 / 10.23

- | Enclosed Gravity | Open Channel |
|------------------|--------------|
| < 60" Dia | Ditch |
| >= 60" Dia | Pond |
| Culvert | |



A meeting of the Inter-County Drainage Board for the **BEAR CREEK DRAIN** was held in the Office of the Macomb County Public Works Commissioner, 21777 Dunham Road, Clinton Township, Michigan on February 26, 2019.

PRESENT: Michael Gregg, Chairman
Michigan Department of Agriculture & Rural Development

Candice S. Miller, Secretary
Macomb County Public Works Commissioner

Steve Korth, P.E., Member
Office of Oakland County Water Resources Commissioner

ALSO PRESENT: Robert Wiley, St. Clair County Drain Commissioner; Jeff Bednar P.E., Environmental Resources Manager, Dan Heaton, Communications Manager, Bruce Manning, Financial Manager, Tom Stockel, Construction Engineer, Madison Tanghe, Senior Secretary, Macomb County Public Works; Mike MacDonald, Hubbell, Roth & Clark; Tim Pollizzi, City of Rochester Hills

The Chairman called the meeting to order at 10:08 a.m.

A motion was made by Mr. Korth, supported by Ms. Miller to approve the agenda as presented.

Adopted: YEAS: 3
NAYS: 0

The meeting was open to the public participation, then closed, there being no comments from the public.

The minutes of the meeting of January 22, 2019 were presented. A motion was made by Mr. Korth, supported by Ms. Miller to approve the minutes as presented.

Adopted: YEAS: 3
NAYS: 0

Mr. Bednar updated the board that the condition assessment on the Warren Branches area is wrapping up. The Bear Creek Hydraulic Analysis project team met with Detroit Arsenal, who may be able to give the district a portion of the Centerline Gardens property (10-20 acres) as long as the study shows there is a benefit to the district. The Hydraulic Study will consider regional storage at that property. The project team has also reached out to Department of Roads since the Mound Road reconstruction project will have to meet certain storm water standards. We are meeting with General Motors later this week to talk about timing and types of improvements they would be willing to explore on their property. Lastly, the team reached out to the property owner that is north of Centerline Gardens. It may be possible to relocate the drain so the owner would have one continuous piece of property.

We further learned that MDOT has a pump station that pumps flow from I-696 into the Bear Creek at the Detroit Arsenal. Detroit Arsenal notes that the MDOT pumps floods them out. Ms. Miller wants this issue on a future agenda item to further discuss.

A motion was made by Mr. Korth, supported by Ms. Miller to receive and file the project update by Mr. Bednar.

Adopted: YEAS: 3
NAYS: 0

The Chairman presented the invoice totaling \$3,489.50 as provided to the Board for review and approval.

A motion was made by Ms. Miller, supported by Mr. Korth to approve the invoices as presented.

Adopted: YEAS: 3
NAYS: 0

A motion was made by Mr. Korth, supported by Ms. Miller to receive and file the financial report presented by Mr. Manning

There being no further business, it was moved by Ms. Miller, supported by Mr. Korth that the meeting of the Bear Creek Inter-County Drainage Board be adjourned.

Adopted: YEAS: 3
NAYS: 0

The meeting was adjourned at approximately 10:24 a.m.



Candice Miller, Secretary
Bear Creek Inter-County Drainage Board

STATE OF MICHIGAN
COUNTY OF MACOMB

I certify that the foregoing is a true and correct copy of proceedings taken by the Inter-County Drainage Board for the Drainage District shown on the attached set of Minutes, on February 26, 2019. The original of which is on file in the Public Works Commissioner's Office. Public notice of the meeting was given pursuant to Act No. 267, Public Acts of Michigan, 1975, including, in the case of a special or rescheduled meeting or a meeting secured for more than 36 hours, notice by posting at least 18 hours prior to the time set for the meeting.


Candice Miller, Secretary
Bear Creek Inter-County Drainage Board

DATED: 2/26/19

PROGRESS UPDATE

PROJECT: Bear Creek – Hydraulic Study
AEW Job # 0211-0187-3

DATE: March 18, 2019

UPDATE BY: Louis J. Urban, P.E.

1.) Potential Improvements to the Bear Creek Drain

AEW continued the investigation of drain improvement locations and coordination meetings with public and private entities. The City of Warren, Detroit Arsenal, Macomb County Department of Roads and General Motors have a vested interest in the lowering of the water surface elevation of the Bear Creek and are in support of this effort. Other property owners will be contacted contingent upon the hydraulic benefits of storage in the main line Bear Creek or tributary drains as determined through the hydraulic modeling effort.

A synopsis of the coordination meetings is as follows:

- A meeting between representatives from AEW, MCPWO and Macomb County Department of Roads was held January 14, 2019.
 - The MDoR/Macomb County owns properties East and West of the Bear Creek / Mound Road crossing north of 11 Mile Road that could be utilized for drain expansion/detention.
 - The property west of Mound is used for salt storage but has unused area. The property east of Mound Road is also unused and is a maintenance issue for the MDoR.
 - Daylighting along with drain expansion/detention was proposed to the MDoR on these properties. The MDoR expressed consideration for including the improvements into the reconstruction project.
 - This location has potential for funding through 319 Clean Water Act grant monies.
 - Utilization of the Mound Road median for detention was discussed. Existing utilities and other potential conflicts will be investigated in the Mound Road reconstruction design process revealing the viability of this option.
 - The Bear Creek Drain / Mound Road Crossing just north of 11 Mile Road was discussed along with the other tributary drain crossings of Mound Road.
 - It was stated that twin 12'x12' box culverts were constructed where four 12'x12' box culverts were proposed in the Bear Creek / Mound Road Crossing Plans circa 1956-1979.
 - Hydraulic modeling will determine the actual necessary size for the crossing.
 - The MDoR expressed interest in making sure the crossing was repaired or replaced to avoid hydraulic issues and or degradation concerns impacting the new roadway.
 - MDoR stated that the Mound Road reconstruction project will include all storm water systems but other existing utilities will not be replaced.
 - The modeling of the Meckler, McCoy, and McCoy Relief Drain crossings of Mound Road will be included in our hydraulic study. The MDoR expressed an interest in confirming the capacity and integrity of these crossings.
 - Utilization of the 11 Mile Road median for potential detention was discussed.
 - The MDoR confirmed that 11 Mile Road from the railroad tracks (east) to the I-696 service drive (west) of Mound Road is owned by the MDoR/Macomb County. Utilization of the 11 Mile Road median for detention will depend on existing utilities and other potential conflicts.

- A meeting between AEW and Rodney Elnick to discuss potential Bear Creek improvements on his property 13-16-101-019 & 020, 26800 Mound Road, Warren MI 48092 was held February 7, 2019.
 - The concept of relocating the Bear Creek to the east property line was well received as was the concept of an access road serving the Elnick property connecting the Detroit Arsenal to 12 Mile Road.
 - It was also explained and understood that the relocation of the drain would be contingent upon support from General Motors, Detroit Arsenal, the Macomb County Department of Roads and the City of Warren for viable improvements.
 - Rodney expressed a willingness to assist the MCPWO in its efforts to relocate the drain by providing access through his property from Mound Road.

- A meeting between AEW, MCPWO and Detroit Arsenal to discuss potential Bear Creek improvements on the property at 6501 East Eleven Mile Road, Warren, MI. 48397 was held February 21, 2019.
 - The August 2014 rain event flooded the Gate 1 Mound Road entrance, and had negative impacts to Buildings 212 and 200B. Maintaining and protecting the Mound Road access and infrastructure is of utmost importance.
 - Detroit Arsenal will consider donating a portion of the approximate 24 acre property north of the Gate 1 Mound Road entrance for regional detention contingent on positive results from the proposed conditions hydraulic modeling. Meaning that the improvements to the Bear Creek would ensure that the 100 year and potentially the 500 year water surface elevations would not have negative impacts to the Detroit Arsenal facilities.
 - The Detroit Arsenal will retain a portion of the property necessary for their master planning needs and offered to provide their master plan layout for record.
 - This property was previously used for military housing. The housing structures have been removed but the water main, sanitary sewers, storm sewers, utilities and other infrastructure remain in place.
 - Relocation of the Bear Creek to the east property line in conjunction with an access road to 12 Mile Road was discussed. The Detroit Arsenal is in negotiations with General Motors for shared access or limited joint use of facilities. This coupled with the current regulations limiting access to the site to the existing two entrances eliminates consideration of an access road to 12 mile Road.
 - The relocation of the Bear Creek to the east property line does not appear to be necessary for regional detention on the Detroit Arsenal property. However, it may be necessary to solicit support should the expansion of the drain cross section exceed the existing easement limits for the adjacent (Elnick) parcel to the north. The relocation of the drain could include expansion of the drain to a single or double trapezoidal cross section to allow for additional storage volume on the Elnick property.
 - It was understood that the viability of drain improvements would be contingent upon the results of the proposed conditions hydraulic modeling and support from General Motors, Detroit Arsenal, the Macomb County Department of Roads, private property owners and the City of Warren.
 - Detroit Arsenal representatives expressed concerns regarding unauthorized filling of Detroit Arsenal property due to violations during a previous off site construction project. Assurances were given that the spoils from a drain cleanout or regional detention excavation would be disposed of offsite in accordance with state and local regulations.

- Detroit Arsenal representatives expressed concerns regarding the deposit of sediment after significant rain events at the 48" diameter 016 – outlet to the Bear Creek. This same line is the pumped outlet from I-696.
- A meeting between AEW, MCPWO and General Motors to discuss potential Bear Creek improvements on the property at 30001 Van Dyke Avenue, Warren, MI. 48397 was held February 28, 2019.
 - General Motors representatives discussed the campus master planning initiatives relative to the open and enclosed portions of the Bear Creek within the campus.
 - The schedule for the potential removal of the Cooling Tower Building 214 and Emissions Building 208 in section 6 was discussed. Both of these buildings are located in the open drain section of the Bear Creek paralleling Charles Kettering Road.
 - The tunnel/viaduct crossing the Bear Creek near Edward Cole Boulevard will need to remain in place. The viaduct does not appear to be in conflict with the proposed improvement area due to its close proximity to the roadway crossing at Edward Cole Boulevard.
 - The road crossing at Edward Cole Boulevard is to remain in place at this time. However there is some consideration for its removal and a new road crossing the Bear Creek Drain north of William Knudson Boulevard.
 - The removal of the 12 Mile Water Tower located at the corner of Alfred Sloan Road and 12 Mile Road was discussed. The tower is no longer in service and with its removal the drain footprint could be expanded between Charles Chayne and 12 Mile Roads.
 - General Motors representatives relayed that with the recent construction of the parking structures some of the previous parking shortages have been resolved. The parking structures allow for the daylighting the Bear Creek and the elimination of the parking lots between Zora Ark US-Dontov and Charles Chayne Roads. The parking lot removal will also benefit the GM initiative to reduce impervious area.
 - Strategies for funding sources based on drain and environmental improvements were discussed.
- A meeting between AEW and ASI to discuss hydraulic modeling needs for the existing and proposed conditions Bear Creek Drain was held March 1, 2019.
 - The proposed Bear Creek improvements generated from the aforementioned meetings with private and public entities were discussed and subsequently areas for AEW topographic survey were verified.
 - The Intercounty Drainage Board for the Red Run Drain engaged a consulting engineer in the "Study for the Repair, Maintenance and Management of the Red Run Drain" in 2018. The results of this hydraulic study and proposed improvements to the Red Run Drain will have a direct bearing on the ASI hydraulic modeling of the Bear Creek Drain.
 - The MDOT pump station discharge from the I-696 right of way at Mound Road is a concern. Confirmation of the drainage area and pump details is necessary for accurate modeling. There is some concern that the I-696 right of way drainage may extend further west including areas beyond I-75.
 - Engineering drawings for all the Bear Creek and tributary drains are necessary to facilitate the existing and proposed conditions models.
 - A flow metering budget of \$10,000 was established. This budget supports 5 flow meters for 2 months in the drains tributary to Bear Creek. ADS Environmental Services is being utilized for the flow metering.

- AEW / ASI will develop concepts for improvements to be implemented in the proposed conditions model. The results of the proposed conditions model will determine if additional areas in the tributary drains to the Bear Creek Drain should be investigated for potential improvements.
- A meeting was held between AEW, ASI and MCPWO staff March 6, 2019 to review progress and plan future activities. Jeff Bednar indicated that the open channel portions of the new SWMM5 model of Bear Creek should be based on the HEC (not SWMM) model. Field work to identify metering sites was planned. Areas of opportunity for stormwater projects/daylighting were discussed. Survey needs were discussed in the areas of opportunity. Jeff Bednar indicated that LIDAR topographic survey data was available and should be enough to develop concepts.
- ASI staff, with Amanda Oparka of MCPWO, field verified the locations for flow metering March 11, 2019. The next step is field inspect the sites with ADS and obtain a quote for the flow metering. Traffic control along Van Dyke Road (M-53) is a concern for one site and may preclude it. If so, an alternate site will be investigated. The meter data is necessary for calibration of the hydraulic model. The monitoring period is about April 1, 2019 through May 31, 2019.
- A meeting between AEW, MCPWO, HNTB (MDoR's engineering consultant) and the MDoR to coordinate potential Bear Creek improvements with the Mound Road reconstruction project is scheduled for March 29, 2019.

2.) Bear Creek Hydraulics and Hydrology

- AEW has acquired the Light Detection and Ranging (LIDAR) topography data for the areas of potential drain improvements.
 - The horizontal LiDAR data was collected at a minimum of one and one half (1.5) point per square meter. The LiDAR data was collected to meet a vertical accuracy requirement of 0.49 ft or better.
 - AEW / ASI are currently using the LIDAR topography data to design proposed drain improvements followed by modeling to confirm the hydraulic benefits.
- AEW provided ASI with the previous study report and the existing HEC and SWMM models of Bear Creek. These models were reviewed and will be the starting point for the development of a new Bear Creek SWMM5 model.
- AEW provided ASI with storm drain drawings for most of the Bear Creek and its tributary drains. The MCPWO is researching their records to provide the remaining drain drawings. ASI is reviewing and compiling the drawings for expansion of the SWMM5 model.

BEAR CREEK 3/5/19 - 3/19/19

<u>Funding Source</u>	<u>Apportionment</u>	<u>Manager</u>	<u>Vendor</u>	<u>Amount</u>	<u>Invoice Detail</u>	<u>Project Summary</u>	<u>Project Balance</u>
Bear Creek	Chapter 21	Keskeny	Aloia & Associates, P.C.	\$ 1,002.25	Invoice #18196 - 02.01.19	Vacant Land - Marcy Street	
		Bednar	Anderson, Eckstein & Westrick, Inc.	\$ 2,765.00	Invoice #120978 - 02.21.19	Condition Assessment - Warren Branch	\$ 14,697.75
		Bednar	Anderson, Eckstein & Westrick, Inc.	\$ 4,379.75	Engineering Services - 01.07.19 - 02.03.19 Invoice #120979 - 02.21.19 Engineering Services - 01.07.19 - 02.03.19	Hydraulic Study	\$ 65,620.25
Total				\$ 8,147.00			

YTD Trial Balance

Fund: Bear Creek Combined

As of Fiscal Period: Oct 1, 2018-Feb 28, 2019

	O&M Balance 9/30/2018	O&M	Total 2/28/2019
Cash - Operating	1,274,888	(6,536)	1,268,352
Accounts Receivable ⁽¹⁾	75,534		75,534
Assets			0
Liabilities ⁽¹⁾	98,929		98,929
Revenues		11,557	11,557
Expenditures		18,093	18,093
Equity	1,251,493		1,244,957

NOTES

1) Net amount of \$23,394 due to AEW for final invoices relating to SAW 1407.
Final request is going under MS4 review at state level