

**HARBOR COMMISSION AGENDA**  
**Meeting Monday, November 8<sup>th</sup>, 2021**  
**Begins at 7:00 pm**  
**315 Bridge St, Elk Rapids, MI 49629**

**1. CALL TO ORDER AND ROLL CALL**

**2. APPROVAL OF MINUTES**

- a. Harbor Commission meeting held October 11<sup>th</sup>, 2021

**3. CONFLICT OF INTEREST:** Any commission member who believes he or she has a conflict of interest regarding any item on this agenda shall so state that conflict at this time. Does any member believe they have a conflict of interest regarding any item on this agenda?

**4. CITIZENS COMMENTS:** Any citizen who wishes to address the Harbor Commission on a matter not listed on this agenda may speak at this time. Persons addressing the Harbor Commission may state their name, address and, if applicable, their affiliation. The Village President should recognize the citizen before speaking. A five-minute limitation applies unless extended by the chairman. Citizens wishing to speak on matters listed on the agenda will be permitted, under the same limitations, to speak when the matter is brought before commission.

**6. REPORTS**

- a. Staff – Harbormaster (see attachment)
- b. Council – Doug Bronkema
- c. Treasurer’s Report (see attachment)

**7. OLD BUSINESS**

- a. Barge update by Harbor Commission

**7. UNFINISHED BUSINESS**

- a. Harbor Commission Rules and Regulations discussion (Duties of Chair, Duties of Vice-Chair, Duties of Secretary, Authority of Commissioners, Harbor Commission Missions, Goals, etc.)
- b. Harbor Commission 5-year plan update

**8. NEW BUSINESS**

- a. 2022 Harbor budget items
- b. Sidewalk renovation with Ayers
- c. Conducting work with 45<sup>th</sup> Parallel Marine on docks

**9. CORRESPONDENCE**

- a. DNR 2022 seasonal rate
- b. ECG Harbor 2021 seasonal rate
- c. ACOE weekly summary

- d. ACOE forecast
- e. ACOE levels

## **10. ADJOURNMENT**

**THERE WILL BE NO ZOOM LINK FOR PUBLIC PARTICIPATION**

When: November 8<sup>th</sup>, 2021, 7:00 PM Eastern Time (US and Canada)

Topic: Harbor Commission – November 8<sup>th</sup>, 2021

**DRAFT**

## **HARBOR COMMISSION MINUTES:**

**October 11<sup>th</sup>, 2021**

**CALL TO ORDER:** Meeting called to order at 6:30 P.M.

**PRESENT:** Fisher, Blesma, Bronkema, Berck, Hansen (6:32)

**ABSENT:** Wiltse, Orschel

### **APPROVAL OF MINUTES:**

- a. Regular Harbor Commission meeting held September 13<sup>th</sup>, 2021: Commissioner Berck motioned, and Commissioner Bronkema seconded to approve minutes from the regular meeting September 13<sup>th</sup>, 2021. All members present voting yes (4-0). Motion carried.

### **REPORTS:**

- a. Harbormaster Singleton presented the monthly report to the Commission.
- b. Council: Report presented by Trustee Bronkema
- c. Treasurer: Harbormaster Singleton provided up to date FY2021-2022 revenue and expenditure report.

**CITIZENS COMMENT:** 0 citizen comments

### **OLD BUSINESS:**

- a. Barge update by Harbor Commission
- b. Sidewalk and cement pad tripping hazard at Pavilion

### **UNFINISHED BUSINESS**

- a. Harbor Commission Rules and Regulations discussion (Duties of Chair, Duties of Vice-Chair, Duties of Secretary, Authority of Commissioners, Harbor Commission Missions, Goals, etc.)
  - i. Chairman Fisher tabled the discussion to happen at the November 2021 Harbor Commission meeting

### **NEW BUSINESS:**

- a. The Harbor Chair position will be temporarily held by the Vice Chair until the first meeting in May 2022 as per the Harbor Commission Bylaws
- b. Harbormaster identified the need to have the Harbor Commission provide information on projects for the 5-year plan
- c. Harbor Commission was presented with the 2022 MDNR Seasonal Rate Schedule. A motion was made by Commissioner Berck to increase harbor seasonal boat rate to MDNR RATE 3. That motion was second by Commissioner Hansen. All harbor commissioners present voting yes (5-0) on the increase rate to 3. Motion carried.
- d. Commissioner Blesma brought forth a self-generated email to the commission regarding maximum vessel length to be allowed in the Harbor. Commission Chair Fisher advised the Harbormaster to add the item to November's agenda for further discussion.

### **CORRESPONDENCE:**

- a. Great Lakes water levels
- b. ACOE weekly Great Lakes water level update

**ADJOURNMENT:** Meeting adjourned at 6:57 P.M.



## MEMORANDUM

**TO:** Bryan Gruesbeck  
**FROM:** Mike Singleton, Harbormaster  
**DATE:** November 1<sup>st</sup>, 2021  
**RE:** October 2021 Monthly Report

1. Scheduled contracted pavilion sidewalk repair work with Ayers
2. Fixed all satellite tv coaxial cable, tied up and secured all cables under docks, repaired many cut/smashed cables, replaced three long cable runs that were damaged, rewired six additional pedestals that were not wired during the install of the power peds
3. Winterized water pipes throughout the harbor including the pavilion, lawn irrigation, day room, bath house, fuel dock, boat docks, water heaters, and all outside faucets
4. Covered all harbor signage/ordered shrink wrap for larger signage
5. Set up boater reservation and seasonal vessel system registration online
6. Boiler inspection from Licensing and Regulatory affairs, 100% compliance
7. Closed fuel dock and office for the season
8. Set up meeting for 2022 dredge project with dredge company, EGLE, Antrim Co, and Inwood harbor
9. Purchased 4 new swim buoys for Veterans Memorial Beach
10. Decommissioned channel markers and day boards
11. Removed all life rings and fire extinguishers from docks
12. Removed and cleaned all trash receptacles
13. Winterized all power equipment
14. Donated excess harbor ice to ERPD, DPW and local community members
15. Removed all hose bib/back flow preventers from spigots
16. Remove all ladders from docks/stowed ladders
17. Set up location for final security camera install
18. Painted day room trim, front entry at gas dock office, painted all gas dock vertical posts, painted irrigation boxes
19. Quarterly Diesel tax through MiMats completed
20. All harbor contracts (Directv, wifi, comcast, garbage, water, Gmosher, etc) have been suspended for the winter months to resume in the spring of 2022
21. Procured and received new dog signage for harbor gardens
22. Began working on the 2022 budget



- 23.** Audit of pavilion rental for the season
- 24.** Installed new hose reel and small connector on pump 5
- 25.** Staged all bubblers for installation



REVENUE AND EXPENDITURE REPORT FOR ELK RAPIDS VILLAGE  
 PERIOD ENDING 10/31/2021

GL NUMBER	DESCRIPTION	2021-22 AMENDED BUDGET	YTD BALANCE 10/31/2021	ACTIVITY FOR MONTH 10/31/2021	AVAILABLE BALANCE	% BDGT USED
<b>Fund 407 - HARBOR CAPITAL</b>						
<b>Dept 000</b>						
407-000-672-000	INTEREST	300.00	232.44	0.00	67.56	77.48
407-000-691-106	FROM/HARBOR/594	25,000.00	0.00	0.00	25,000.00	0.00
407-000-699-000	PRIOR YR/ENDING CASH BALANCE	300,000.00	0.00	0.00	300,000.00	0.00
<b>Net - Dept 000</b>		<b>325,300.00</b>	<b>232.44</b>	<b>0.00</b>	<b>325,067.56</b>	
<b>Dept 544 - HARBOR</b>						
407-544-755-100	FUEL HOSE/NOZZLE REPLACEMENT	5,000.00	1,306.71	0.00	3,693.29	26.13
407-544-756-100	PURCHASE BUOYS	3,000.00	0.00	0.00	3,000.00	0.00
407-544-758-400	FUEL LINE REPLACEMENT	2,500.00	0.00	0.00	2,500.00	0.00
407-544-970-100	CAP/OUTLAY/SEC/CAMERA	22,000.00	16,309.33	0.00	5,690.67	74.13
407-544-973-000	DREDGING	65,000.00	52,928.85	0.00	12,071.15	81.43
407-544-975-801	BATH HOUSE HVAC	15,000.00	0.00	0.00	15,000.00	0.00
407-544-975-805	SIDEWALK MODIFICATION	40,000.00	0.00	0.00	40,000.00	0.00
407-544-975-806	BATH HOUSE UPGRADES	6,000.00	1,245.55	0.00	4,754.45	20.76
407-544-975-807	WEBCAM	1,000.00	0.00	0.00	1,000.00	0.00
407-544-975-810	RE-SET PAVERS	1,000.00	0.00	0.00	1,000.00	0.00
407-544-975-812	OFFICE FURNITURE	1,000.00	0.00	0.00	1,000.00	0.00
407-544-975-813	FUEL OFFICE IMPROVEMENT	1,000.00	0.00	0.00	1,000.00	0.00
407-544-975-815	TRANSFORMERS	20,000.00	0.00	0.00	20,000.00	0.00
407-544-975-816	PAVILION IMPROVEMENTS	6,000.00	0.00	0.00	6,000.00	0.00
407-544-975-818	RADIOS	1,500.00	0.00	0.00	1,500.00	0.00
407-544-975-819	SEWAGE PUMP	15,000.00	0.00	0.00	15,000.00	0.00
407-544-975-820	BARGE IMPROVEMENTS	8,000.00	0.00	0.00	8,000.00	0.00
407-544-975-821	DAY ROOM	5,000.00	645.20	0.00	4,354.80	12.90
407-544-975-822	WASHER/DRYER - COIN OPERATED	5,000.00	0.00	0.00	5,000.00	0.00
<b>Net - Dept 544 - HARBOR</b>		<b>(223,000.00)</b>	<b>(72,435.64)</b>	<b>0.00</b>	<b>(150,564.36)</b>	
<b>Fund 407 - HARBOR CAPITAL :</b>						
<b>TOTAL REVENUES</b>		<b>325,300.00</b>	<b>232.44</b>	<b>0.00</b>	<b>325,067.56</b>	<b>0.07</b>
<b>TOTAL EXPENDITURES</b>		<b>223,000.00</b>	<b>72,435.64</b>	<b>0.00</b>	<b>150,564.36</b>	<b>32.48</b>
<b>NET OF REVENUES &amp; EXPENDITURES</b>		<b>102,300.00</b>	<b>(72,203.20)</b>	<b>0.00</b>	<b>174,503.20</b>	<b>70.58</b>

REVENUE AND EXPENDITURE REPORT FOR ELK RAPIDS VILLAGE  
 PERIOD ENDING 10/31/2021

GL NUMBER	DESCRIPTION	2021-22 AMENDED BUDGET	YTD BALANCE 10/31/2021	ACTIVITY FOR MONTH 10/31/2021	AVAILABLE BALANCE	% BDGT USED
<b>Fund 594 - HARBOR</b>						
<b>Dept 000</b>						
594-000-454-000	CONTRACTUAL/SEASONAL UPPER HAR	26,000.00	31,249.50	0.00	(5,249.50)	120.19
594-000-454-500	CONTRACTUAL/SEASONAL/NEW/UPPE	38,000.00	50,014.50	0.00	(12,014.50)	131.62
594-000-455-000	CONTRACTUAL/SEASONAL LOWER HAR	475,000.00	561,525.49	0.00	(86,525.49)	118.22
594-000-456-000	SALES/GAS	200,000.00	247,611.26	6,692.54	(47,611.26)	123.81
594-000-457-000	FEES/DIESEL	65,000.00	88,325.28	2,755.98	(23,325.28)	135.89
594-000-458-000	FEES/SEASONAL RAMP PASSES	8,500.00	10,008.01	0.00	(1,508.01)	117.74
594-000-458-100	FEES/DAILY RAMP PASSES/LOWER HA	6,700.00	8,494.00	364.00	(1,794.00)	126.78
594-000-459-000	FEES/TRAILER STORAGE	250.00	490.00	0.00	(240.00)	196.00
594-000-500-000	FEES/PUMP-OUT	6,000.00	6,660.00	550.00	(660.00)	111.00
594-000-500-200	FEES/ICE	4,000.00	4,644.15	50.00	(644.15)	116.10
594-000-500-300	FEES/POP	300.00	547.92	108.65	(247.92)	182.64
594-000-501-000	MERCHANDISE	1,000.00	2,178.00	20.00	(1,178.00)	217.80
594-000-503-000	FEES/BOAT SHOW	0.00	80.00	0.00	(80.00)	100.00
594-000-504-000	FEES/PAVILION RENTAL	5,000.00	4,950.00	600.00	50.00	99.00
594-000-505-000	FEES/COMMERCIAL RAMP PASS	2,000.00	1,850.00	0.00	150.00	92.50
594-000-600-000	FEES/TRANSIENT	160,000.00	184,874.37	7,938.70	(24,874.37)	115.55
594-000-672-000	INTEREST	500.00	605.49	0.00	(105.49)	121.10
594-000-693-250	REIMBURSEMENT/LIBRARY UTILITIES	2,000.00	1,822.08	963.05	177.92	91.10
594-000-694-000	MISC REVENUE	0.00	210.00	0.00	(210.00)	100.00
594-000-694-250	FEES/HARBOR WAITING LIST	2,500.00	5,720.00	500.00	(3,220.00)	228.80
594-000-695-100	LAUNDRY	1,000.00	1,078.50	170.00	(78.50)	107.85
594-000-695-200	UPPER HARBOR RAMP FEES	4,500.00	5,945.00	700.75	(1,445.00)	132.11
594-000-699-000	PRIOR YR/ENDING CASH BALANCE	250,000.00	0.00	0.00	250,000.00	0.00
<b>Net - Dept 000</b>		<b>1,258,250.00</b>	<b>1,218,883.55</b>	<b>21,413.67</b>	<b>39,366.45</b>	
<b>Dept 544 - HARBOR</b>						
594-544-700-000	SALARY & WAGES	270,369.00	168,765.77	10,222.92	101,603.23	62.42
594-544-701-000	OVERTIME	5,000.00	5,508.05	0.00	(508.05)	110.16
594-544-705-000	WAGE/HARBORMASTER	56,000.00	36,550.40	4,307.20	19,449.60	65.27
594-544-715-000	SOCIAL SECURITY	24,967.00	16,127.86	1,111.48	8,839.14	64.60
594-544-716-000	HEALTH INSURANCE	28,222.00	21,836.70	2,308.29	6,385.30	77.37
594-544-718-000	RETIREMENT	14,317.00	9,070.71	1,020.67	5,246.29	63.36
594-544-719-000	SICK & ACCIDENT	1,974.00	1,922.83	0.00	51.17	97.41
594-544-720-000	WORKER'S COMPENSATION	4,544.00	2,139.00	0.00	2,405.00	47.07
594-544-724-000	UNIFORM REPLACEMENT	3,500.00	3,199.85	0.00	300.15	91.42
594-544-730-000	POSTAGE	25.00	0.00	0.00	25.00	0.00
594-544-741-000	OFFICE/COMPUTER EQUIPMENT	3,000.00	993.30	632.33	2,006.70	33.11
594-544-751-000	FUEL	170,000.00	203,561.16	10,730.56	(33,561.16)	119.74
594-544-752-000	DIESEL GAS	60,000.00	52,750.92	4,140.79	7,249.08	87.92
594-544-754-000	MERCHANDISE	2,000.00	2,203.00	0.00	(203.00)	110.15
594-544-756-000	DUMPSTER	3,000.00	1,340.52	0.00	1,659.48	44.68
594-544-757-000	SUPPLIES	20,000.00	17,818.13	1,927.20	2,181.87	89.09
594-544-757-010	PAVILION SUPPLIES	2,000.00	20.00	0.00	1,980.00	1.00

REVENUE AND EXPENDITURE REPORT FOR ELK RAPIDS VILLAGE  
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GL NUMBER	DESCRIPTION	2021-22 AMENDED BUDGET	YTD BALANCE 10/31/2021	ACTIVITY FOR MONTH 10/31/2021	AVAILABLE BALANCE	% BDGT USED
<b>Fund 594 - HARBOR</b>						
594-544-758-000	DUES & FEES	750.00	1,266.76	22.38	(516.76)	168.90
594-544-758-700	ICE	2,500.00	3,392.58	0.00	(892.58)	135.70
594-544-759-500	POP PURCHASE	400.00	467.13	0.00	(67.13)	116.78
594-544-760-300	PROPANE	1,200.00	283.13	17.70	916.87	23.59
594-544-803-000	AUDITOR	1,258.00	1,258.40	0.00	(0.40)	100.03
594-544-804-200	PROFESSIONAL SVCS	0.00	812.81	0.00	(812.81)	100.00
594-544-818-000	CONTRACTUAL FEES	20,500.00	31,815.59	3,415.87	(11,315.59)	155.20
594-544-818-500	SOFTWARE SUPPORT	3,500.00	1,725.93	0.00	1,774.07	49.31
594-544-853-000	PHONE/CELL/LONG DISTANCE	4,500.00	1,208.81	104.65	3,291.19	26.86
594-544-854-000	TV/CABLE/INTERNET FEES	23,000.00	11,587.57	531.07	11,412.43	50.38
594-544-855-000	CREDIT CARD PROCESSING FEES	8,500.00	722.00	79.00	7,778.00	8.49
594-544-864-000	TRAINING/CONFERENCES	3,500.00	647.73	0.00	2,852.27	18.51
594-544-880-000	COMMUNITY PROMOTION	5,000.00	2,035.62	0.00	2,964.38	40.71
594-544-900-000	PRINTING/PUBLICATION	3,000.00	2,755.17	0.00	244.83	91.84
594-544-910-000	INSURANCE/LIABILITY	9,900.00	9,422.64	0.00	477.36	95.18
594-544-920-000	UTILITIES	70,000.00	63,719.18	8,109.97	6,280.82	91.03
594-544-930-000	REPAIRS AND MAINTENANCE	43,500.00	27,171.59	767.96	16,328.41	62.46
594-544-930-150	PAIVILION MAINTENANCE/REPAIRS	500.00	3,597.90	0.00	(3,097.90)	719.58
594-544-932-200	PURCHASE LUMBER	3,000.00	1,496.00	0.00	1,504.00	49.87
594-544-941-000	STORAGE RENTAL	2,700.00	3,000.00	0.00	(300.00)	111.11
594-544-956-000	MISCELLANEOUS	500.00	0.00	0.00	500.00	0.00
594-544-958-200	HARBOR ACTIVITIES	3,500.00	0.00	0.00	3,500.00	0.00
594-544-965-200	TO/GEN/101/ADMIN	3,100.00	0.00	0.00	3,100.00	0.00
594-544-965-450	TR/TO/MOTOR VEHICLE/661	12,000.00	0.00	0.00	12,000.00	0.00
594-544-967-500	HARBOR CONTRACT REFUNDS	4,500.00	6,564.00	0.00	(2,064.00)	145.87
594-544-970-800	COMPUTER/SOFTWARE PURCHASE	0.00	3,850.00	0.00	(3,850.00)	100.00
594-544-972-400	SMALL EQUIPMENT	2,500.00	2,160.80	0.00	339.20	86.43
594-544-992-000	BOND PRINCIPAL	75,000.00	75,000.00	0.00	0.00	100.00
594-544-995-000	INTEREST	0.00	7,657.50	7,657.50	(7,657.50)	100.00
594-544-996-100	BOND INTEREST	16,290.00	8,632.50	0.00	7,657.50	52.99
594-544-999-000	TO/794/HARBOR BREAKWATER	25,000.00	0.00	0.00	25,000.00	0.00
<b>Net - Dept 544 - HARBOR</b>		<b>(1,018,516.00)</b>	<b>(816,059.54)</b>	<b>(57,107.54)</b>	<b>(202,456.46)</b>	
<b>Fund 594 - HARBOR :</b>						
<b>TOTAL REVENUES</b>		<b>1,258,250.00</b>	<b>1,218,883.55</b>	<b>21,413.67</b>	<b>39,366.45</b>	<b>96.87</b>
<b>TOTAL EXPENDITURES</b>		<b>1,018,516.00</b>	<b>816,059.54</b>	<b>57,107.54</b>	<b>202,456.46</b>	<b>80.12</b>
<b>NET OF REVENUES &amp; EXPENDITURES</b>		<b>239,734.00</b>	<b>402,824.01</b>	<b>(35,693.87)</b>	<b>(163,090.01)</b>	<b>168.03</b>



REVENUE AND EXPENDITURE REPORT FOR ELK RAPIDS VILLAGE  
 PERIOD ENDING 10/31/2021

GL NUMBER	DESCRIPTION	2021-22 AMENDED BUDGET	YTD BALANCE 10/31/2021	ACTIVITY FOR MONTH 10/31/2021	AVAILABLE BALANCE	% BDGT USED
<b>Fund 794 - HARBOR BREAKWATER RESERVE</b>						
<b>Dept 000</b>						
794-000-672-000	INTEREST	500.00	439.79	0.00	60.21	87.96
794-000-695-000	FR/594/HARBOR OPERATIONS	25,000.00	0.00	0.00	25,000.00	0.00
794-000-699-000	PRIOR YR/ENDING CASH BALANCE	600,000.00	0.00	0.00	600,000.00	0.00
<b>Net - Dept 000</b>		<b>625,500.00</b>	<b>439.79</b>	<b>0.00</b>	<b>625,060.21</b>	
<b>Fund 794 - HARBOR BREAKWATER RESERVE:</b>						
<b>TOTAL REVENUES</b>		<b>625,500.00</b>	<b>439.79</b>	<b>0.00</b>	<b>625,060.21</b>	<b>0.07</b>
<b>TOTAL EXPENDITURES</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>NET OF REVENUES &amp; EXPENDITURES</b>		<b>625,500.00</b>	<b>439.79</b>	<b>0.00</b>	<b>625,060.21</b>	<b>0.07</b>
TOTAL REVENUES - ALL FUNDS		2,209,050.00	1,219,555.78	21,413.67	989,494.22	55.21
TOTAL EXPENDITURES - ALL FUNDS		1,241,516.00	888,495.18	57,107.54	353,020.82	71.57
NET OF REVENUES & EXPENDITURES		967,534.00	331,060.60	(35,693.87)	636,473.40	34.22

**Village of Elk Rapids  
Habor Monthly Statistics**

	May Harbor Stats		June Harbor Stats		July Harbor Stats	
	Revenue	Number/ Gallons Sold	Revenue	Number/ Gallons Sold	Revenue	Number/ Gallons Sold
Gas	\$7,425.12	1801	\$25,583.31	7352	\$99,170.04	23,505
Diesel	\$3,802.02	1004	\$22,832.63	6174	\$29,179.36	9,126
Transient	\$10,750.00	153	\$21,444.00	355	\$64,614.67	896
Waiting List	\$400.00	20	\$680.00	34	\$1,400.00	44
Daily Ramp Passes	\$1,869.50	267	\$1,905.50	272	\$2,310.00	330
Seasonal Ramp Passes	\$4,170.00	104	\$2,640.00	66	\$2,470.00	62

	August Harbor Stats		September Harbor Stats		October Harbor Stats	
	Revenue	Number/ Gallons Sold	Revenue	Number/ Gallons Sold	Revenue	Number/ Gallons Sold
Gas	\$72,183.00	16,130	\$22,736.97	4,962	\$6,692.54	1,550
Diesel	\$19,952.00	6,354	\$8,012.35	2,356	\$2,755.98	410
Transient	\$41,144.00	664	\$18,305.00	352	\$7,938.70	89
Waiting List	\$1,440.00	16	\$900.00	9	\$300.00	3
Daily Ramp Passes	\$2,669.00	381	\$863.00	123	\$1,067.75	153
Seasonal Ramp Passes	\$268.00	7	\$60.00	2	\$0.00	0



# Village of Elk Rapids

315 Bridge Street  
P.O. Box 398  
Elk Rapids, MI 49629-0398

Phone: 231-264-9274  
Fax: 231-264-6337

**To:** Bryan Gruesbeck, Village Manager  
**Thru:** Kaitlyn Szczypka, Village Clerk  
**From:** Mike Singleton, Harbormaster  
**Date:** March 31<sup>st</sup>, 2021  
**Re:** 2021 Harbor Slip Rates

In accordance with Michigan Department of Natural Resources Harbor Operations and Fee Schedule and as per Harbor Commission Harbormaster report from the January 11<sup>th</sup> 2021 meeting, I would recommended to Village Council to not change transient slip fees or seasonal slip fees for the 2021 season. The rates are shown below:

## ELK RAPIDS HARBOR 2021 SEASONAL RATES

### OVERALL SLIP

#### LENGTH IN FEET

30'	\$2,444.00
38'	\$3,281.00
44	\$4,039.00
45' to 46'	\$4,120.00
47' to 50'	\$4,682.00
51' to 55'	\$5,207.00
56' to 58'	\$5,643.00
59' to 60'	\$5,868.00
70'	\$6,846.00

### Upper Harbor Seasonal

Phase I: \$1249.00

Phase II: \$2330.00



2022 Seasonal Rates

	Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	Rate 6	Rate 7	Rate 8	Rate 9	Rate 10
Slip Length										
<b>20</b>	<b>\$2,200</b>	<b>\$2,040</b>	<b>\$1,880</b>	<b>\$1,720</b>	<b>\$1,540</b>	<b>\$1,360</b>	<b>\$1,220</b>	<b>\$1,040</b>	<b>\$840</b>	<b>\$700</b>
21	\$2,310	\$2,142	\$1,974	\$1,806	\$1,617	\$1,428	\$1,281	\$1,092	\$882	\$735
22	\$2,420	\$2,244	\$2,068	\$1,892	\$1,694	\$1,496	\$1,342	\$1,144	\$924	\$770
23	\$2,530	\$2,346	\$2,162	\$1,978	\$1,771	\$1,564	\$1,403	\$1,196	\$966	\$805
24	\$2,640	\$2,448	\$2,256	\$2,064	\$1,848	\$1,632	\$1,464	\$1,248	\$1,008	\$840
<b>25</b>	<b>\$2,750</b>	<b>\$2,550</b>	<b>\$2,350</b>	<b>\$2,150</b>	<b>\$1,925</b>	<b>\$1,700</b>	<b>\$1,525</b>	<b>\$1,300</b>	<b>\$1,050</b>	<b>\$875</b>
26	\$2,860	\$2,652	\$2,444	\$2,236	\$2,002	\$1,768	\$1,586	\$1,352	\$1,092	\$910
27	\$2,970	\$2,754	\$2,538	\$2,322	\$2,079	\$1,836	\$1,647	\$1,404	\$1,134	\$945
28	\$3,080	\$2,856	\$2,632	\$2,408	\$2,156	\$1,904	\$1,708	\$1,456	\$1,176	\$980
29	\$3,190	\$2,958	\$2,726	\$2,494	\$2,233	\$1,972	\$1,769	\$1,508	\$1,218	\$1,015
<b>30</b>	<b>\$3,300</b>	<b>\$3,060</b>	<b>\$2,820</b>	<b>\$2,580</b>	<b>\$2,310</b>	<b>\$2,040</b>	<b>\$1,830</b>	<b>\$1,560</b>	<b>\$1,260</b>	<b>\$1,050</b>
31	\$3,410	\$3,162	\$2,914	\$2,666	\$2,387	\$2,108	\$1,891	\$1,612	\$1,302	\$1,085
32	\$3,520	\$3,264	\$3,008	\$2,752	\$2,464	\$2,176	\$1,952	\$1,664	\$1,344	\$1,120
33	\$3,630	\$3,366	\$3,102	\$2,838	\$2,541	\$2,244	\$2,013	\$1,716	\$1,386	\$1,155
34	\$3,740	\$3,468	\$3,196	\$2,924	\$2,618	\$2,312	\$2,074	\$1,768	\$1,428	\$1,190
<b>35</b>	<b>\$3,850</b>	<b>\$3,570</b>	<b>\$3,290</b>	<b>\$3,010</b>	<b>\$2,695</b>	<b>\$2,380</b>	<b>\$2,135</b>	<b>\$1,820</b>	<b>\$1,470</b>	<b>\$1,225</b>
36	\$3,960	\$3,672	\$3,384	\$3,096	\$2,772	\$2,448	\$2,196	\$1,872	\$1,512	\$1,260
37	\$4,070	\$3,774	\$3,478	\$3,182	\$2,849	\$2,516	\$2,257	\$1,924	\$1,554	\$1,295
38	\$4,180	\$3,876	\$3,572	\$3,268	\$2,926	\$2,584	\$2,318	\$1,976	\$1,596	\$1,330
39	\$4,290	\$3,978	\$3,666	\$3,354	\$3,003	\$2,652	\$2,379	\$2,028	\$1,638	\$1,365
<b>40</b>	<b>\$4,400</b>	<b>\$4,080</b>	<b>\$3,760</b>	<b>\$3,440</b>	<b>\$3,080</b>	<b>\$2,720</b>	<b>\$2,440</b>	<b>\$2,080</b>	<b>\$1,680</b>	<b>\$1,400</b>
41	\$4,510	\$4,182	\$3,854	\$3,526	\$3,157	\$2,788	\$2,501	\$2,132	\$1,722	\$1,435
42	\$4,620	\$4,284	\$3,948	\$3,612	\$3,234	\$2,856	\$2,562	\$2,184	\$1,764	\$1,470
43	\$4,730	\$4,386	\$4,042	\$3,698	\$3,311	\$2,924	\$2,623	\$2,236	\$1,806	\$1,505
44	\$4,840	\$4,488	\$4,136	\$3,784	\$3,388	\$2,992	\$2,684	\$2,288	\$1,848	\$1,540
<b>45</b>	<b>\$4,950</b>	<b>\$4,590</b>	<b>\$4,230</b>	<b>\$3,870</b>	<b>\$3,465</b>	<b>\$3,060</b>	<b>\$2,745</b>	<b>\$2,340</b>	<b>\$1,890</b>	<b>\$1,575</b>
46	\$5,060	\$4,692	\$4,324	\$3,956	\$3,542	\$3,128	\$2,806	\$2,392	\$1,932	\$1,610
47	\$5,170	\$4,794	\$4,418	\$4,042	\$3,619	\$3,196	\$2,867	\$2,444	\$1,974	\$1,645
48	\$5,280	\$4,896	\$4,512	\$4,128	\$3,696	\$3,264	\$2,928	\$2,496	\$2,016	\$1,680
49	\$5,390	\$4,998	\$4,606	\$4,214	\$3,773	\$3,332	\$2,989	\$2,548	\$2,058	\$1,715
<b>50</b>	<b>\$5,500</b>	<b>\$5,100</b>	<b>\$4,700</b>	<b>\$4,300</b>	<b>\$3,850</b>	<b>\$3,400</b>	<b>\$3,050</b>	<b>\$2,600</b>	<b>\$2,100</b>	<b>\$1,750</b>
51	\$5,610	\$5,202	\$4,794	\$4,386	\$3,927	\$3,468	\$3,111	\$2,652	\$2,142	\$1,785
52	\$5,720	\$5,304	\$4,888	\$4,472	\$4,004	\$3,536	\$3,172	\$2,704	\$2,184	\$1,820
53	\$5,830	\$5,406	\$4,982	\$4,558	\$4,081	\$3,604	\$3,233	\$2,756	\$2,226	\$1,855
54	\$5,940	\$5,508	\$5,076	\$4,644	\$4,158	\$3,672	\$3,294	\$2,808	\$2,268	\$1,890
<b>55</b>	<b>\$6,050</b>	<b>\$5,610</b>	<b>\$5,170</b>	<b>\$4,730</b>	<b>\$4,235</b>	<b>\$3,740</b>	<b>\$3,355</b>	<b>\$2,860</b>	<b>\$2,310</b>	<b>\$1,925</b>
56	\$6,160	\$5,712	\$5,264	\$4,816	\$4,312	\$3,808	\$3,416	\$2,912	\$2,352	\$1,960
57	\$6,270	\$5,814	\$5,358	\$4,902	\$4,389	\$3,876	\$3,477	\$2,964	\$2,394	\$1,995
58	\$6,380	\$5,916	\$5,452	\$4,988	\$4,466	\$3,944	\$3,538	\$3,016	\$2,436	\$2,030
59	\$6,490	\$6,018	\$5,546	\$5,074	\$4,543	\$4,012	\$3,599	\$3,068	\$2,478	\$2,065
<b>60</b>	<b>\$6,600</b>	<b>\$6,120</b>	<b>\$5,640</b>	<b>\$5,160</b>	<b>\$4,620</b>	<b>\$4,080</b>	<b>\$3,660</b>	<b>\$3,120</b>	<b>\$2,520</b>	<b>\$2,100</b>
Over 60 ft	\$110/ft	\$102/ft	\$94/ft	\$86/ft	\$77/ft	\$68/ft	\$61/ft	\$52/ft	\$42/ft	\$35/ft



US Army Corps  
of Engineers  
Detroit District



DETROIT DISTRICT  
U.S. ARMY CORPS OF ENGINEERS  
CELRE-EHW  
477 MICHIGAN AVENUE  
DETROIT, MICHIGAN 48226

## SEPTEMBER 2021 GREAT LAKES WATER LEVEL SUMMARY

### LAKE SUPERIOR

Lake Superior's water level declined 1 inch from August to September to a level of 602.07 feet. The September mean level was 1 inch below the September long-term average (LTA) level and was below average for the first time since early 2014. The September level was also 11 inches below its September 2020 mean level and 14 inches below its record high September level from 2019. Water supplies were below average in September likely due to near average precipitation and above average evaporation. The 6-month forecast indicates that Lake Superior will continue its seasonal decline into March. From October to March, the water level is forecast to be 1 to 2 inches below its LTA levels and 8 to 11 inches below levels from last year.

### LAKE MICHIGAN-HURON

After experiencing a rise in level during the summer, Lake Michigan-Huron declined from August to September by about 4 inches. The September mean level of 580.48 feet was 16 inches above the LTA level, but 16 inches below its level from last year. Also, the September mean level was 18 inches below the record high September level. The Lake Michigan-Huron basin received below average water supplies in September, which was likely a result of slightly below average precipitation and above average evaporation. The 6-month forecast predicts Lake Michigan-Huron will continue its seasonal decline through the winter. Water levels are forecast to be 12 to 15 inches above LTA levels over the next 6 months. However, water levels are forecast to be 13 to 18 inches below levels from last year during the next 6 months. Also, Lake Michigan-Huron is forecast to be 22 to 26 inches below record high levels from October to March.

### LAKE ST. CLAIR

Lake St. Clair continued its decline from August to September, to a level of 576.25 feet. The September monthly mean level was 21 inches above its monthly LTA level and 9 inches below its record high September level set in 2020. The recent 6-month forecast indicates the lake will continue its seasonal decline into the winter. Over the next 6 months, water levels are forecast to be 7 to 12 inches below last year's levels and 19 to 20 inches below record high levels. Also, the lake is forecast to be 15 to 19 inches above its LTA levels from October to March.

### LAKE ERIE

Lake Erie also continued its decline from August to September and fell 5 inches to a level of 573.06 feet. The September monthly mean level was 19 inches above its LTA September level, 8 inches below the record high level from 2019, and 6 inches below the level from last year. Despite above average precipitation, water supplies were below average in September, likely due to above average evaporation. The recent 6-month forecast indicates Lake Erie will continue its seasonal decline into the winter. Over the next 6 months, water levels are forecast to be 4 to 11 inches below last year's levels and 15 to 20 inches below record high levels. Additionally, water levels are forecast to remain 15 to 19 inches above LTA levels from October to March.

### LAKE ONTARIO

Lake Ontario declined about 2 inches from August to September, to a level of 245.37 feet. The September monthly mean level was 2 inches above the September LTA level and 2 inches below last year's level. Lake Ontario received above average water supplies likely due to above average precipitation and runoff. The recent 6-month forecast predicts that the lake will continue its seasonal decline over the coming months. Water levels are forecast to be 5 to 7 inches above LTA levels over the next 6 months. Also, water levels are forecast to be 2 to 4 inches above last year's levels from October to January, and 9 to 15 inches above levels of a year ago from February to March.

# ARMY CORPS OF ENGINEERS WEEKLY GREAT LAKES WATER LEVEL UPDATE

Oct 29, 2021

## WEATHER CONDITIONS

Temperatures were average to slightly below average last week throughout most of the Great Lakes region. The Great Lakes Basin as a whole received average precipitation this past week, with Lake Superior and Lake Michigan slightly below average and Lake Erie and Lake Ontario slightly above average. Month-to-date precipitation for the Great Lakes Basin is about 3 inches so far. Heading into the weekend, expect some precipitation throughout the region, with highest amounts in the Lakes Erie and Ontario basins (about 0.75 to 1.5 inches) and lower amounts in the Lake Superior and upper Lake Michigan and Lake Huron basins (about 0.25 to 0.75 inches). Temperature projections indicate slightly below average temperatures through the weekend and heading into next week.

## LAKE LEVEL CONDITIONS

Forecasted October 29th levels are lower than a year ago on all lakes except Lake Ontario, which is 5 inches above its level from last year. These levels are also above their long-term average October levels on all lakes, with the exception of Lake Superior, which is 3 inches below its long-term October average level. Over the next month, all lakes are forecast to continue their seasonal declines and fall by 2 to 9 inches. See our [Daily Levels](#) web page for more water level information.

## FORECASTED MONTHLY OUTFLOWS/CHANNEL CONDITIONS

Predictions indicate Lake Superior's outflow through the St. Marys River will be below average in October. Forecasts show Lake Michigan-Huron's outflow through St. Clair River and Lake St. Clair's outflow into Detroit River will be above average for October. Predictions show Lake Erie's outflow into Niagara River will be above average for October and forecasts say Lake Ontario's outflow through St. Lawrence River will be above average in October.

## ALERTS

Water levels shown are still-water surface elevations over the entire lake surface. Water levels at specific locations may differ substantially due to meteorological influences. Official records are based on monthly average water levels and not daily water levels. Great Lakes, connecting channels and St. Lawrence River users should keep informed of current conditions before undertaking any activities affected by changing water levels. Mariners should utilize navigation charts and refer to current water level readings.

	SUPERIOR	MICH-HURON	ST. CLAIR	ERIE	ONTARIO
Forecasted Water Level for Oct 29, 2021 (feet)	601.84	580.25	576.31	573.13	245.37
Chart Datum (feet)	601.10	577.50	572.30	569.20	243.30
Difference from chart datum (inches)	+9	+33	+48	+47	+25
Difference from average water level for Sep 29, 2021 (inches*)	-2	-1	0	+2	+1
Difference from average water level for Oct 29, 2020 (inches*)	-12	-15	-3	-1	+5
Difference from long-term monthly average of Oct (inches)	-3	+16	+25	+24	+7
Difference from highest monthly average of record for Oct (inches)	-19	-25	-12	-10	-17
Year of highest recorded monthly mean	1985	1986	1986	1986	1945
Difference from lowest monthly average of record for Oct (inches)	+13	+46	+55	+55	+38
Year of lowest recorded monthly mean	1925	1964	1934	1934	1934
Projected net change in levels by Nov 29, 2021 (inches)	-2	-2	-9	-5	-2

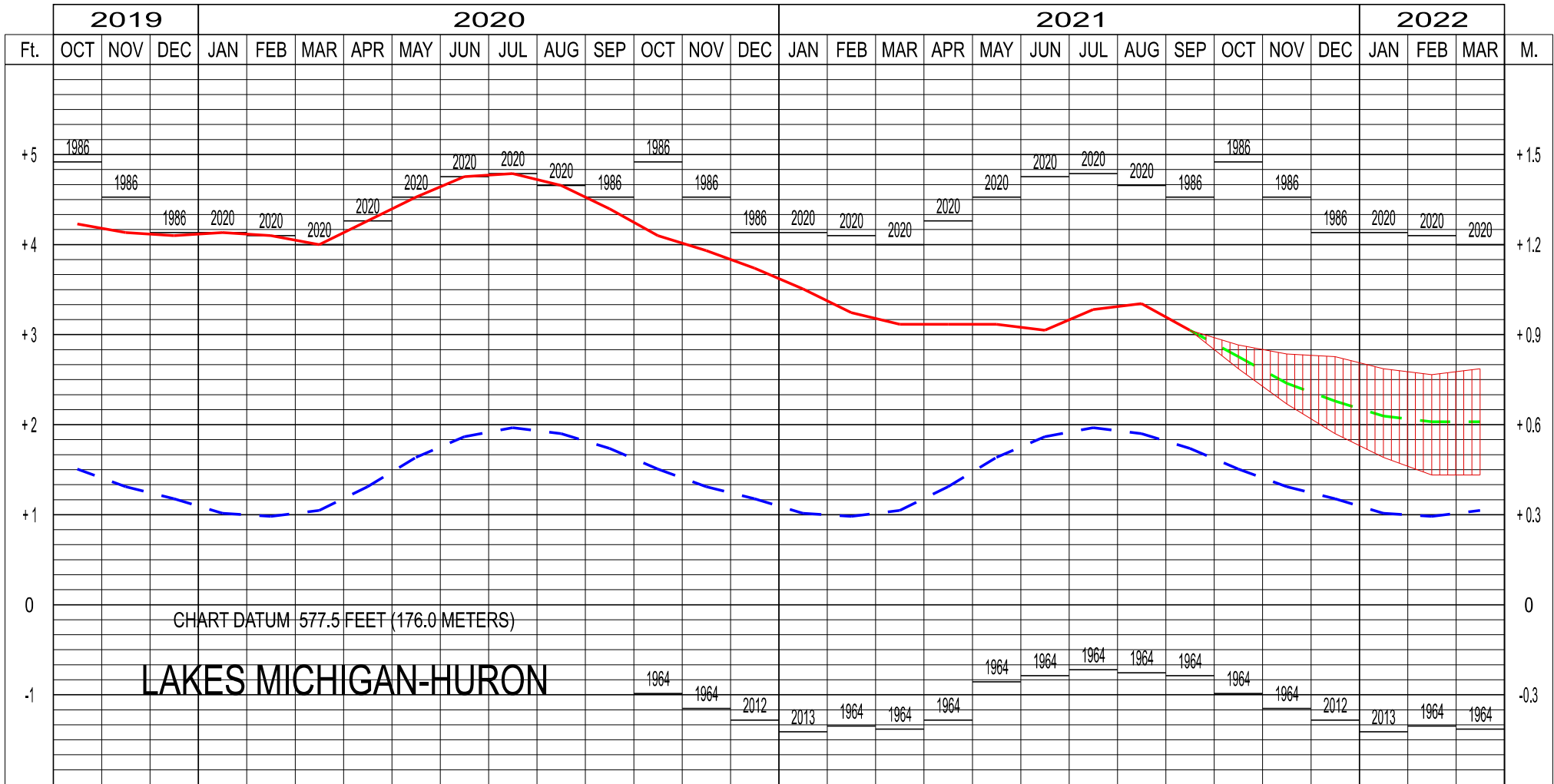
ALL DATA SHOWN IN THIS SUMMARY ARE REFERENCED TO IGLD 1985  
 \*VALUES FOR SPECIFIC DAY ARE BASED ON 3-DAY DAILY AVERAGE AROUND SPECIFIED DATE  
 LONG TERM AVERAGE PERIOD OF RECORD, 1918-2020

FORECASTED INFORMATION PROVIDED BY  
 Department of the Army  
 Detroit District, Corps of Engineers  
[Detroit District Home](#)  
 1-888-694-8313 ext. 1

RECORDED DATA (1918 – present)  
 provided by  
[NOAA Center for Operational Oceanic Products  
 and Services](#)

FOR MORE INFORMATION VISIT  
[Detroit District Great Lakes Homepage](#)  
[International Joint Commission](#)  
[Great Lakes Information Network](#)

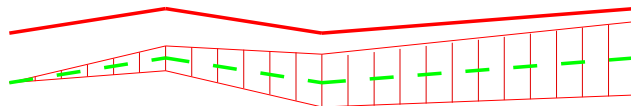
# LAKES MICHIGAN-HURON WATER LEVELS - OCTOBER 2021



## LEGEND

LAKE LEVELS

RECORDED

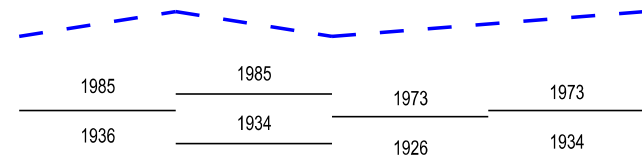


PROJECTED

AVERAGE \*\*

MAXIMUM \*\*

MINIMUM \*\*



\*\* Average, Maximum and Minimum for period 1918-2020