

HARBOR COMMISSION AGENDA
Meeting Monday, August 10th, 2020
Begins at 7 pm
THIS WILL BE AN ELECTRONIC MEETING

1. CALL TO ORDER

2. APPROVAL OF MINUTES

- a. Harbor Commission meeting held July 13th, 2020

3. REPORTS

- a. Staff – Harbormaster
- b. Council – Doug Bronkema
- c. Treasurer’s Report presented

4. CITIZENS COMMENTS

5. OLD BUSINESS

- a. Slip 90, Kelly Jo Bowman, 50% refund request
- b. Harbor Days donation \$500 request to help with Harbor Marshal ceremony, food and event location
- c. Shift funding from harbor pickup truck 407-544-981-350 to purchase new gator work vehicle
- d. Green Infrastructure rain garden/bioswale project bid out to Inhabitec, starting work no earlier than 9/8/2020
- e. Installed two new SolaMax LED lantern break wall lights on aid #7 and #8, range of 3 Nautical Miles, removed 155mm lanterns, batteries, and 30w sopans
- f. Continued working with Andy Smits, GEI engineering indexing blueprints and preparing plans for rehabilitation of the western shoreline upland instability areas
- g. New placards placed on every power pedestal to document work and any types of electrical failures. Additionally, a new e-chart has been made of every location of transformer, junction box and power pedestal at the marina
- h. Installed new Transformer behind e-building
- i. 45th Parallel Marine Inc came to the harbor to inspect and plan an operation to raise broken docks with divers
- j. Schedule zoom interview with Clean Marina and MBIA program
- k. 1 incident report and insurance claim submitted for an allision into a vertical post and power pedestal at slip #1

6. NEW BUSINESS

- a. Slip 134, Tom Sliwa, 50% refund request
- b. Work and Play John Deere Gator @ \$6900.00
- c. Awarded Zach VanCompernelle the scholarship for dock attendant of the year
- d. Staff from Bio-swale and rain garden came in to establish timelines for excavation

- e. Installing infrared heaters in the gazebo
- f. Interview with Great Lakes Scuttlebutt regarding the Harbor, the Clean Marina Program and MBIA, posted on village website, Facebook, YouTube, and Great Lakes Scuttlebutt magazine
- g. New check valve, 3 new floats and two pumps installed in the sewage holding tank
- h. New electronic chart made by Windemuller of all the power pedestals
- i. Installed UHF/VHF radio in Ford van
- j. Worked with Harbor Days to host luncheon, proclamation, historical society display, coast guard fly over, blessing of the harbor, display area of local artist work.

7. CORRESPONDENCE

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

8. ADJOURNMENT

See website for Zoom Link

You are invited to a Zoom webinar.

When: Aug 10, 2020 07:00 PM Eastern Time (US and Canada)

Topic: Harbor Commission - August 10, 2020

Please click the link below to join the webinar:

<https://us02web.zoom.us/j/89079151978?pwd=bklrRlZaTFJ5UUM2dFcwdE1WSFFqQT09>

Passcode: 908221

Or iPhone one-tap :

US: +16465588656,,89079151978# or +13017158592,,89079151978#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 646 558 8656 or +1 301 715 8592 or +1 312 626 6799 or +1 669 900 9128 or +1 253 215 8782 or +1 346 248 7799

Webinar ID: 890 7915 1978

International numbers available: <https://us02web.zoom.us/j/89079151978>

DRAFT

HARBOR COMMISSION MINUTES:

July 13th, 2020

PRESENT: Fisher, Hansen Bronkema, Wiltse, Blesma, Orschel, Berck

ABSENT: None

CALL TO ORDER: Meeting called to order at 7:00 P.M.

APPROVAL OF MINUTES:

- a. Regular Harbor Commission meeting held June 8th, 2020: Commissioner Blesma motioned and Commissioner Bronkema seconded to approve minutes from the regular meeting June 8th, 2020. All members present voting yes. Motion carried.

REPORTS:

- a. Harbormaster Singleton presented the monthly report to the Commission.
- b. Council: Trustee Bronkema provided a council report to the Harbor Commission.
- c. Treasurer: Harbormaster Singleton provided up to date FY2020-2021 revenue and expenditure report.

CITIZENS COMMENT: 1 citizen comment

OLD BUSINESS:

- a. Harbor docks, raising fuel dock and current water levels
- b. PPE for all employees
- c. Installed Covid signage and resolution posted to entrances of all buildings
- d. Safe distancing and requirement of masks while occupying indoor facilities, general PPE for the public
- e. Cataloged harbor dock and facility prints and digitized
- f. Continue work with GEI on infrastructure plan
- g. Vinyl floor project completed
- h. EGLE inspection of UST and fuel dispenser system

NEW BUSINESS:

- a. Slip 90, Ms Kelli Jo Bowman, 50% refund request. Motion made by Commissioner Berck to refund 50% of the annual slip fee to Ms Bowman. Motion second by Commissioner Hansen. All Commissioners voting yes. Motion carried to refund Ms Bowman 50% of her slip fee.
- b. Dock adjustments continuing and 45th Parallel Marine on sight with Harbormaster observing effected docks. Plan has been established to bring in barge, a diver, and associated lifting rigging to adjust height of fuel dock and 5 other finger slips throughout the harbor
- c. Summer concerts still scheduled, harbor staff and police enforcing Governors EO and Village resolution for safe distancing and proper PPE
- d. Covid-19 signage purchased and placed throughout the harbor facility
- e. Harbor Days donation of \$500 requested by Harbormaster. Motion by Commissioner Blesma to donate \$500 to the Harbor Days committee for ceremony and luncheon to be held on August 8th, 2020. Motion second by Commissioner Orschel. All Commissioners voting yes. Motion carried to donate \$500 to Harbor Days Committee.
- f. Harbormaster requested to change approved FY2020 funding of \$4500.00 Harbor Pickup Truck (GL 407-544-981-350) to a harbor utility vehicle in lieu of the current mechanical and structural failures. Motion made by Commissioner Wiltse to purchase new utility vehicle and increase funding up to \$7000.00. Motion was second by Commissioner Bronkema. All commissioners present voting yes. Motion carried by Harbor Commission to increase funding and purchase new utility vehicle.
- g. Commissioner Wiltse and Commissioner Berck requested information at the next Harbor Commission meeting regarding the current state of the two harbor work trucks including physical condition and mileage.

CORRESPONDENCE:

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

ADJOURNMENT: Meeting adjourned at 7:42 P.M.

User: LORI

PERIOD ENDING 08/31/2020

DB: Elk Rapids

GL NUMBER	DESCRIPTION	2020-21 AMENDED BUDGET	YTD BALANCE 08/31/2020	ACTIVITY FOR MONTH 08/31/2020	AVAILABLE BALANCE	% BDGT USED
Fund 407 - HARBOR CAPITAL						
Dept 000						
407-000-672-000	INTEREST	200.00	200.25	0.00	(0.25)	100.13
407-000-699-000	PRIOR YR/ENDING CASH BALANCE	227,000.00	0.00	0.00	227,000.00	0.00
Net - Dept 000		227,200.00	200.25	0.00	226,999.75	
Dept 544 - HARBOR						
407-544-755-100	FUEL HOSE/NOZZLE REPLACEMENT	3,000.00	0.00	0.00	3,000.00	0.00
407-544-756-100	PURCHASE BUOYS	2,000.00	1,721.01	0.00	278.99	86.05
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	8,000.00	899.09	0.00	7,100.91	11.24
407-544-975-700	PURCHASE LOCKS	10,000.00	0.00	0.00	10,000.00	0.00
407-544-975-803	CREDIT CARD SOFTWARE/EQUIP	1,000.00	0.00	0.00	1,000.00	0.00
407-544-975-804	WI-FI ACCESS POINTS	2,500.00	0.00	0.00	2,500.00	0.00
407-544-975-806	BATH HOUSE UPGRADES	15,000.00	0.00	0.00	15,000.00	0.00
407-544-975-807	WEBCAM	1,000.00	429.40	0.00	570.60	42.94
407-544-975-810	RE-SET PAVERS	1,500.00	0.00	0.00	1,500.00	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	2,000.00	199.99	0.00	1,800.01	10.00
407-544-975-815	TRANSFORMERS	20,000.00	3,819.75	0.00	16,180.25	19.10
407-544-975-816	PAVILION IMPROVEMENTS	9,500.00	0.00	0.00	9,500.00	0.00
407-544-975-817	FLOATING DOCKS - UPPER HARBOR	27,870.00	0.00	0.00	27,870.00	0.00
407-544-975-818	RADIOS	3,000.00	1,350.00	0.00	1,650.00	45.00
407-544-975-819	SEWAGE PUMP	13,000.00	1,437.50	0.00	11,562.50	11.06
407-544-975-820	BARGE IMPROVEMENTS	6,500.00	0.00	0.00	6,500.00	0.00
407-544-975-821	DAY ROOM FLOORING	4,000.00	3,651.62	0.00	348.38	91.29
407-544-975-822	WASHER/DRYER - COIN OPERATED	5,000.00	4,200.00	0.00	800.00	84.00
407-544-980-000	TO/794/BREAKWATER RESERVE	25,000.00	0.00	0.00	25,000.00	0.00
407-544-981-350	HARBOR PICK UP TRUCKS	4,500.00	0.00	0.00	4,500.00	0.00
Net - Dept 544 - HARBOR		(167,870.00)	(17,708.36)	0.00	(150,161.64)	
Fund 407 - HARBOR CAPITAL :						
TOTAL REVENUES		227,200.00	200.25	0.00	226,999.75	0.09
TOTAL EXPENDITURES		167,870.00	17,708.36	0.00	150,161.64	10.55
NET OF REVENUES & EXPENDITURES		59,330.00	(17,508.11)	0.00	76,838.11	29.51

User: LORI

DB: Elk Rapids

GL NUMBER	DESCRIPTION	2020-21 AMENDED BUDGET	YTD BALANCE 08/31/2020	ACTIVITY FOR MONTH 08/31/2020	AVAILABLE BALANCE	% BDGT USED
Fund 594 - HARBOR						
Dept 000						
594-000-454-000	CONTRACTUAL/SEASONAL UPPER HA	26,000.00	23,731.00	0.00	2,269.00	91.27
594-000-454-500	CONTRACTUAL/SEASONAL/NEW/UPPE	38,000.00	33,180.00	0.00	4,820.00	87.32
594-000-455-000	CONTRACTUAL/SEASONAL LOWER HA	500,000.00	414,503.75	0.00	85,496.25	82.90
594-000-456-000	SALES/GAS	195,000.00	124,479.62	11,610.74	70,520.38	63.84
594-000-457-000	FEES/DIESEL	65,000.00	35,952.53	4,793.67	29,047.47	55.31
594-000-458-000	FEES/SEASONAL RAMP PASSES	8,000.00	7,829.00	80.00	171.00	97.86
594-000-458-100	FEES/DAILY RAMP PASSES/LOWER HA	6,500.00	4,073.00	49.00	2,427.00	62.66
594-000-458-200	FEES/DAILY RAMP PASSES/UPPER HA	5,000.00	40.00	0.00	4,960.00	0.80
594-000-459-000	FEES/TRAILER STORAGE	0.00	140.00	0.00	(140.00)	100.00
594-000-500-000	FEES/PUMP-OUT	6,000.00	2,820.00	140.00	3,180.00	47.00
594-000-500-100	FEES/OIL	0.00	87.00	0.00	(87.00)	100.00
594-000-500-200	FEES/ICE	4,000.00	2,328.00	82.00	1,672.00	58.20
594-000-500-300	FEES/POP	250.00	54.00	0.00	196.00	21.60
594-000-501-000	MERCHANDISE	250.00	584.00	20.00	(334.00)	233.60
594-000-504-000	FEES/PAVILION RENTAL	5,000.00	200.00	0.00	4,800.00	4.00
594-000-505-000	FEES/COMMERCIAL RAMP PASS	2,500.00	1,300.00	0.00	1,200.00	52.00
594-000-600-000	FEES/TRANSIENT	150,000.00	105,565.00	15,051.00	44,435.00	70.38
594-000-672-000	INTEREST	500.00	423.73	0.00	76.27	84.75
594-000-693-100	INSURANCE REIMBURSEMENT	0.00	521.86	0.00	(521.86)	100.00
594-000-693-250	REIMBURSEMENT/LIBRARY UTILITIES	1,500.00	958.68	0.00	541.32	63.91
594-000-694-000	MISC REVENUE	600.00	255.80	0.00	344.20	42.63
594-000-694-250	FEES/HARBOR WAITING LIST	2,300.00	1,060.00	60.00	1,240.00	46.09
594-000-695-100	LAUNDRY	1,000.00	47.00	0.00	953.00	4.70
594-000-695-200	UPPER HARBOR RAMP FEES	0.00	2,833.15	0.00	(2,833.15)	100.00
594-000-699-000	PRIOR YR/ENDING CASH BALANCE	240,000.00	0.00	0.00	240,000.00	0.00
Net - Dept 000		1,257,400.00	762,967.12	31,886.41	494,432.88	
Dept 544 - HARBOR						
594-544-700-000	SALARY & WAGES	216,594.00	86,340.67	0.00	130,253.33	39.86
594-544-701-000	OVERTIME	3,860.00	1,843.15	0.00	2,016.85	47.75
594-544-705-000	WAGE/HARBORMASTER	54,415.00	21,798.41	0.00	32,616.59	40.06
594-544-706-000	TO/GEN/101/POLICE WAGES	15,000.00	0.00	0.00	15,000.00	0.00
594-544-715-000	SOCIAL SECURITY	20,732.00	8,413.72	0.00	12,318.28	40.58
594-544-716-000	HEALTH INSURANCE	8,172.00	3,095.91	0.00	5,076.09	37.88
594-544-718-000	RETIREMENT	8,950.00	3,706.06	0.00	5,243.94	41.41
594-544-719-000	SICK & ACCIDENT	1,474.00	683.60	0.00	790.40	46.38
594-544-720-000	WORKER'S COMPENSATION	5,051.00	970.00	0.00	4,081.00	19.20
594-544-724-000	UNIFORM REPLACEMENT	3,000.00	3,363.00	0.00	(363.00)	112.10
594-544-741-000	OFFICE/COMPUTER EQUIPMENT	4,000.00	0.00	0.00	4,000.00	0.00
594-544-751-000	FUEL	170,000.00	34,873.17	0.00	135,126.83	20.51
594-544-752-000	DIESEL GAS	60,000.00	5,763.71	0.00	54,236.29	9.61
594-544-754-000	MERCHANDISE	1,000.00	0.00	0.00	1,000.00	0.00
594-544-756-000	DUMPSTER	2,000.00	1,180.00	0.00	820.00	59.00

User: LORI

DB: Elk Rapids

GL NUMBER	DESCRIPTION	2020-21 AMENDED BUDGET	YTD BALANCE 08/31/2020	ACTIVITY FOR MONTH 08/31/2020	AVAILABLE BALANCE	% BDGT USED
Fund 594 - HARBOR						
594-544-757-000	SUPPLIES	26,000.00	7,449.22	0.00	18,550.78	28.65
594-544-757-010	PAVILION SUPPLIES	2,000.00	0.00	0.00	2,000.00	0.00
594-544-758-000	DUES & FEES	1,250.00	0.00	0.00	1,250.00	0.00
594-544-758-700	ICE MAKERS	2,500.00	886.00	0.00	1,614.00	35.44
594-544-759-500	POP PURCHASE	400.00	64.40	0.00	335.60	16.10
594-544-760-300	PROPANE	1,200.00	668.93	0.00	531.07	55.74
594-544-803-000	AUDITOR	1,300.00	0.00	0.00	1,300.00	0.00
594-544-818-000	CONTRACTUAL FEES	19,500.00	9,222.23	0.00	10,277.77	47.29
594-544-818-500	SOFTWARE SUPPORT	1,000.00	977.15	0.00	22.85	97.72
594-544-853-000	PHONE/CELL/LONG DISTANCE	5,000.00	2,988.98	0.00	2,011.02	59.78
594-544-854-000	TV/CABLE/INTERNET FEES	13,000.00	12,961.66	0.00	38.34	99.71
594-544-855-000	CREDIT CARD PROCESSING FEES	12,000.00	494.76	0.00	11,505.24	4.12
594-544-864-000	TRAINING/CONFERENCES	2,000.00	394.99	0.00	1,605.01	19.75
594-544-880-000	COMMUNITY PROMOTION	4,000.00	4,800.00	0.00	(800.00)	120.00
594-544-900-000	PRINTING/PUBLICATION	3,000.00	2,748.93	0.00	251.07	91.63
594-544-910-000	INSURANCE/LIABILITY	10,000.00	9,719.12	0.00	280.88	97.19
594-544-920-000	UTILITIES	70,000.00	25,789.91	0.00	44,210.09	36.84
594-544-930-000	REPAIRS AND MAINTENANCE	34,000.00	15,897.49	0.00	18,102.51	46.76
594-544-930-150	PAVILION MAINTENANCE/REPAIRS	500.00	0.00	0.00	500.00	0.00
594-544-932-200	PURCHASE LUMBER	2,500.00	1,944.66	0.00	555.34	77.79
594-544-941-000	RENT/BLDG/HARBOR/SUPPLIES	4,000.00	0.00	0.00	4,000.00	0.00
594-544-956-000	MISCELLANEOUS	1,000.00	1,104.39	0.00	(104.39)	110.44
594-544-965-200	TO/GEN/101/ADMIN	2,800.00	0.00	0.00	2,800.00	0.00
594-544-965-450	TR/TO/MOTOR VEHICLE/661	10,000.00	0.00	0.00	10,000.00	0.00
594-544-967-500	HARBOR CONTRACT REFUNDS	6,500.00	2,862.50	0.00	3,637.50	44.04
594-544-972-400	SMALL EQUIPMENT	2,500.00	1,406.59	0.00	1,093.41	56.26
594-544-992-000	BOND PRINCIPAL	70,000.00	70,000.00	0.00	0.00	100.00
594-544-996-100	BOND INTEREST	18,175.00	9,542.50	0.00	8,632.50	52.50
594-544-999-000	TO/794/HARBOR BREAKWATER	25,000.00	0.00	0.00	25,000.00	0.00
Net - Dept 544 - HARBOR		(925,373.00)	(353,955.81)	0.00	(571,417.19)	
Fund 594 - HARBOR :						
TOTAL REVENUES		1,257,400.00	762,967.12	31,886.41	494,432.88	60.68
TOTAL EXPENDITURES		925,373.00	353,955.81	0.00	571,417.19	38.25
NET OF REVENUES & EXPENDITURES		332,027.00	409,011.31	31,886.41	(76,984.31)	123.19

ACTIVITY FOR

GL NUMBER	DESCRIPTION	2020-21 AMENDED BUDGET				%
Fund 794 - HARBOR BREAKWATER RESERVE						
Dept 000						
794-000-672-000	INTEREST	500.00				
794-000-695-000	FR/594/HARBOR OPERATIONS	25,000.00				
794-000-696-550	FR/407/HARBOR CAPITAL	25,000.00				
794-000-699-000	PRIOR YR/ENDING CASH BALANCE	458,000.00				
Net - Dept 000		508,500.00	370.43	0.00	508,129.57	
Fund 794 - HARBOR BREAKWATER RESERVE:						
TOTAL REVENUES		508,500.00	370.43	0.00	508,129.57	0.07
TOTAL EXPENDITURES		0.00	0.00	0.00	0.00	0.00
NET OF REVENUES & EXPENDITURES		508,500.00	370.43	0.00	508,129.57	0.07
TOTAL REVENUES - ALL FUNDS		1,993,100.00	763,537.80	31,886.41	1,229,562.20	38.31
TOTAL EXPENDITURES - ALL FUNDS		1,093,243.00	371,664.17	0.00	721,578.83	34.00
NET OF REVENUES & EXPENDITURES		899,857.00	391,873.63	31,886.41	507,983.37	43.55

**Village of Elk Rapids
Harbor Monthly Statistics**

	May Harbor Stats-COVID		June Harbor Stats		July Harbor Stats	
	No numbers to report					
	Revenue	Number/ Gallons Sold	Revenue	Number/ Gallons Sold	Revenue	Number/ Gallons Sold
Gas			\$32,894.71	10384	\$79,344.86	25,173
Diesel			\$12,565.00	3775	\$18,593.86	8,321
Transient			\$27,798.00	145	\$62,586.00	507
Waiting List			\$380.00	19	\$580.00	29
Daily Ramp Passes			\$2,716.00	388	\$3,408.80	487
Seasonal Ramp Passes			\$5,630.00	141	\$2,119.00	53

	August Harbor Stats		September Harbor Stats		Total as of 11/01/20	
	Revenue	Number/ Gallons Sold	Revenue	Number/ Gallons Sold	Revenue	Number/ Gallons Sold
Gas						
Diesel						
Transient						
Waiting List						
Daily Ramp Passes						
Seasonal Ramp Passes						



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: William Cooper, Village Manager
From: Mike Singleton, Harbormaster
Date: August 3rd, 2020
Re: July 2020 Monthly Staff Report

1. Regular Harbor Commission meeting July 13th via zoom meeting
2. Green Infrastructure rain garden/bioswale team brought in contractors to have on site visit of bio-swale location and rain garden
3. Putting infrastructure plan together with Andy Smits, GEI engineering.
4. Harbor infrastructure plan and study session work group planning for fall or early winter months
5. Installed additional Covid-19 distancing signage throughout the harbor facilities
6. 45th Parallel Maine Inc came in to inspect and develop plan for lifting broken docks
7. Electronic chart received of every location of transformer, junction box and power pedestal at the marina
8. Installed wire runs for 4 new security cameras
9. Installed new mother board for washer/dryer
10. Replaced malfunctioning floats and check valve in sewer holding tank for pump out and pavilion bathroom
11. Conducted interview with Great Lakes Scuttlebutt regarding the Clean Marina and MBIA program
12. Infrared heaters at the e-building picnic area overhead near completion for late summer/early fall use
13. Repaired multiple 2" x 6" dock boards around various slip in the lower harbor
14. Consumers installed new transformer behind e-building and one at the Isle of Pines Parking lot at the Harbor
15. Multiple musical bands played at the Harbor
16. Replaced on diesel fuel nozzle due to minor leak
17. Reset multiple pavers throughout the BBQ area
18. Purchase 3 new handheld UHF two-way radios
19. Installed a stand-alone UHF/VHF radio in the shuttle van
20. Insurance for fuel UST completed and renewed
21. Planned and organized with Harbor Days Chair Sherry, Doreen, and Karen Syzmanski to put together a luncheon, ceremony, historical pictures and activities for harbor
22. Refunded two seasonal boaters 50% of their slip fees
23. Windemueller finished examining the pedestals and completed inspection on switchgear, transformers, breakers, and began the ground boxes inspections due to high water

ARMY CORPS OF ENGINEERS WEEKLY GREAT LAKES WATER LEVEL UPDATE

Jul 31, 2020

WEATHER CONDITIONS

Over the past week temperatures persisted above average for this time of year across the Great Lakes Basin. As July comes to an end, and August begins, the weekend temperatures are forecasted to fall in many regions across the basin, such as Duluth, MN, Detroit, MI, and Fort Wayne, IN, and remain steady or rise in regions such as Sault Ste. Marie, MI, Syracuse, NY, and Buffalo, NY. In the final weekend of July, Lake Superior received 3/4 inches of precipitation, and in the final week of July, Lakes Ontario, Erie and Michigan-Huron received about a quarter to half an inch of precipitation. Generally, after a warm and wet July, the first work week of August in the Great Lakes basin region is forecasted to be cooler than Jul , with a slight chance of precipitation.

LAKE LEVEL CONDITIONS

The July 31st projected levels remain well above chart datum. With the exception of Lake Michigan-Huron, levels are lower than their levels from July 31st 2019. Lakes Superior, St. Clair, Erie, and Ontario are 3, 2, 4 and 22 inches lower than July 31st 2019. On the contrary, Lake Michigan-Huron is 3 inches above its 2019 level. Over the past month, levels for lakes Superior and Michigan-Huron have rose or stayed the same, whereas St. Clair, Erie and Ontario levels dropped 2, 3 and 3 inches, respectively. In one month, levels are forecasted to decrease, with the exception of Lake Superior which is forecasted to be at the same level it is now. Lakes Michigan-Huron, St. Clair, Erie and Ontario are forecasted to see levels fall between 2 to 4 inches over the next month. Michigan-Huron is projected to drop 2 inches; St. Clair will drop 3 inches; Erie will drop 4 inches, and Ontario will drop 3 inches. See our Daily Levels webpage for more water level information.

FORECASTED MONTHLY OUTFLOW

LEVEL CONDITIONS

Lake Superior's outflow into the St. Mary's River and Lake Michigan-Huron's outflow into the St. Clair River are predicted to be above average in July. Lake St. Clair's outflow through the Detroit River and Lake Erie's outflow into the Niagara River are forecasted to be above average in July. Moreover, the outflow of Lake Ontario into the St. Lawrence River are projected to be above average for July.

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. Users of the Great Lakes, connecting channels and St. Lawrence River should keep informed of current conditions before undertaking any activities that could be affected by changing water levels. Mariners should utilize navigation charts and refer to current water level readings. High water levels and potentially record high water levels are expected to persist for at least the next six months, so flood prone areas are expected to remain vulnerable.

	SUPERIOR	MICH-HURON	ST. CLAIR	ERIE	ONTARIO
Forecasted Water Level for Jul 31, 2020 (feet)	603.02	582.19	577.36	574.15	246.52
Chart Datum (feet)	601.10	577.50	572.30	569.20	243.30
Difference from chart datum (inches)	+23	+56	+61	+59	+39
Difference from average water level for Jul 1, 2020 (inches*)	+3	0	-2	-3	-3
Difference from average water level for Jul 31, 2019 (inches*)	-3	+3	-2	-4	-22
Difference from long-term monthly average of Jul (inches)	+11	+34	+30	+26	+5
Difference from highest monthly average of record for Jul (inches)	-2	+2	-2	-5	-26
Year of highest recorded monthly mean	2019	1986	2019	2019	2019
Difference from lowest monthly average of record for Jul (inches)	+33	+66	+58	+61	+39
Year of lowest recorded monthly mean	1926	1964	1934	1934	1934
Projected net change in levels by Aug 31, 2020 (inches)	0	-2	-3	-4	-3

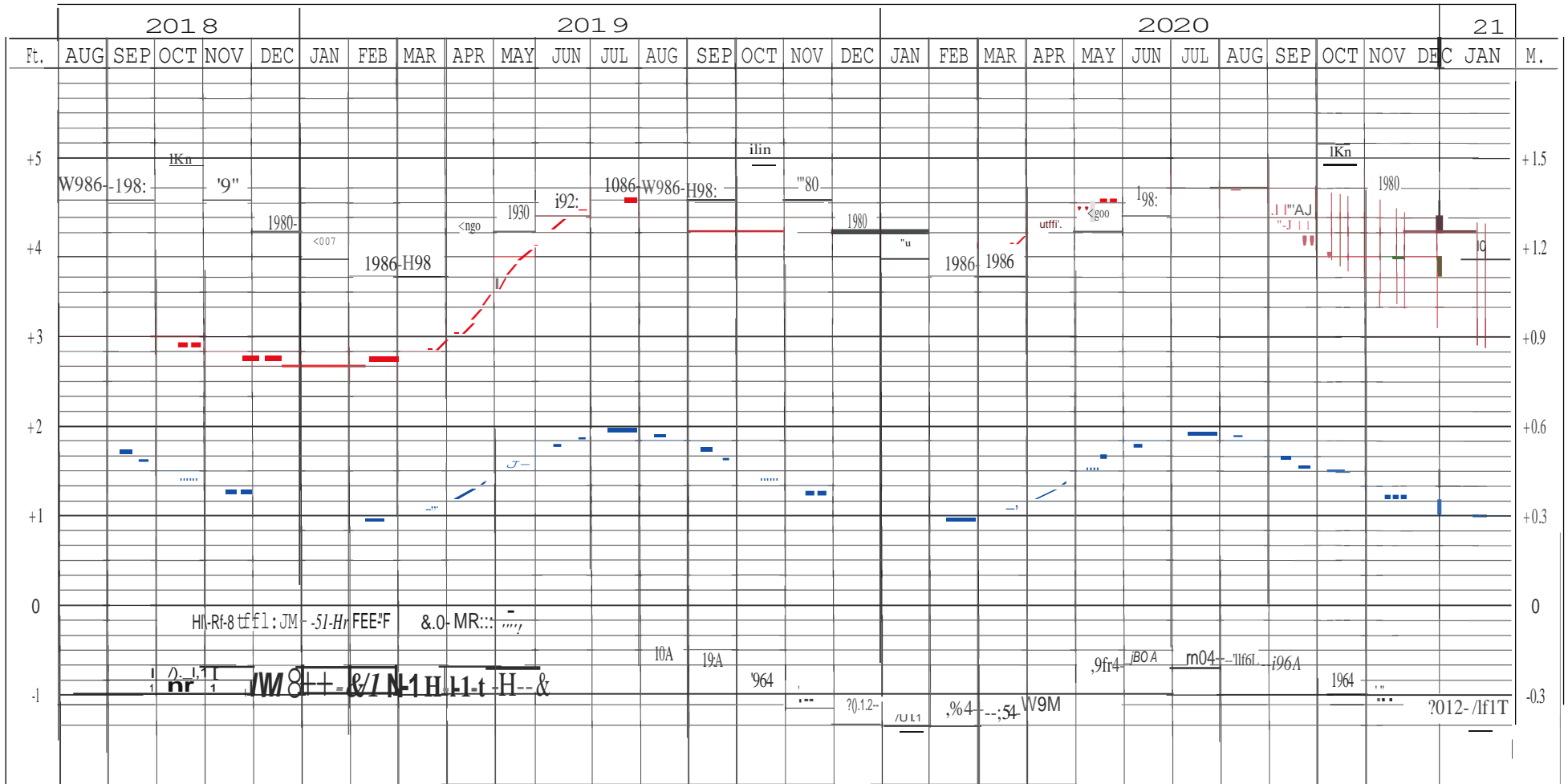
ALL DATA SHOWN IN THIS SUMMARY ARE REFERENCED TO IGLD 1985
 *VALUES FOR SPECIFIC DAY ARE BASED ON 3-DAY DAILY AVERAGE AROUND SPECIFIED DATE
 LONG TERM AVERAGE PERIOD OF RECORD, 1918-2019

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 - AUGUST 2020



LEGEND

LAKE LEVELS

RECORDED

PROJECTED

AVERAGE "

MAXIMUM "

MINIMUM "

1985	1985	1973	1973
------	------	------	------

1936	1934	1926	1934
------	------	------	------

"Average, Maximum and Minimum for period 1918-2019

Edward C. Grace Memorial Harbor Boater Satisfaction Survey

- 1. How was your overall stay?
 - Excellent
 - Good
 - Fair
 - Poor

- 2. *vya'*j the staff friendly and helpful?
 - Excellent
 - Good
 - Fair
 - Poor

- 3. Were the facilities clean?
 - Excellent
 - Good
 - Fair
 - Poor

- 4. Would you recommend us to family and friends?
 - Yes
 - No
 - Maybe

All comments are welcomed and appreciated .
Please use other side.

Edward C. Grace Memorial Harbor
Boater Satisfaction Survey

1. How would you rate your overall stay?

- Excellent
- D Good
- D Fair
- D Poor

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All comments are welcomed and appreciated.
Please use other side.

The young professional hardworking

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D Poor

4. Would you recommend us to family and friends?

Yes

D No

D Maybe

Thank you so much for wonderful staff
21. 11. 10

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great job. loved their stay.

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Stay! cant wait to
come back

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4. Would you recommend us to family and friends?

Yes

No

Maybe

All comments are welcomed and appreciated.

Please use other side.

We had such a blast in
the Rapids! Our new fav.
Manna