CANADIAN COAST GUARD MARINE COMMUNICATIONS AND TRAFFIC CONTROL CENTRES

161.650 MHz (ch 21B)
161.775 MHz (ch 83B)

Marine Communications and Traffic Services (MCTS) Centres provide a continuous marine broadcasts for the Great Lakes region using Marine VHF channels 21B and 83B. A French language broadcast is available for the St. Lawrence River region on channels 23B and 28B. The continuous marine broadcast will be supplemented by live broadcasts of important weather information on receipt with initial call-up on channel 16.

M.C.T.S. Centres		LAWEB Weather Observations From:			Off-shore Marine Forecast and Weather Warnings
Prescott MCTS CMB EAST (English) (Cornwall) CH83B (Cardinal) CH21B (Kingston) CH83B	▲ VBR	Trenton Rochester Harbor Oswego Point Petre Grenadier Island	Alexandria Bay 45135 Prince Edward Pt. Bouy Superior Shoals Kingston Galloo Island	Thousand Island Bridge Ogdensburg Massena Beauhamois Montreal	St. Lawrence River Lake Ontario
Prescott MCTS CMB WEST (English) (Cobourg) CH21B (Fonthill) CH83B (Orillia)** CH21B	▲ VBR	Long Point Dunkirk 45142 E. Erie Bouy Buffalo Harbor Port Weller Burlington Piers	Toronto Island 45139 W. Ontario Buoy Cobourg Trenton Rochester Harbor Oswego	Point Petre 45135 Prince Edward Pt. Buoy Kingston Galloo Island *Barrie*** *Lagoon City***	Lake Ontario Lake Erie ***Georgian Bay*** ****Small Craft Warnings for Lake Simcoe***
Prescott MCTS CMB (French) (Cornwall) CH23B (Cardinal) CH28B (Kingston) CH23B	▲ VBR	Kingston Grenadier Island	Alexandria Bay Superior Shoals	Massena Montreal	St. Lawrence River
Sarnia MCTS CMB SOUTH (Port Burwell) CH21B (Leamington) CH83B	▲ VBE	Sarnia Airport Port Huron Mount Clemens St. Clair Shores Belle River Windsor Toledo Harbor Southeast Shoal	South Bass Island Marblehead 45005 W. Erie Buoy Pelee Island Belle Isle Lorain Harbor Light Erieau Cleveland Harbor	Fairport Harbor 45132 Port Stanley Buoy Ashtabula Light Erie harbor Long Point Dunkirk 45142 E. Erie Buoy	Lake Huron Lake St. Clair Lake Erie
Sarnia MCTS CMB NORTH (Sarnia) CH21B (Kincardine) CH83B	▲ VBE	Presque Isle Light 45003 N. Huron Bouy Sturgeon Point Light Alpena Tawas Point 45008 S. Huron Buoy	Cove Island Harbor Beach Goderich Sarnia Airport Port Huron	Mount Clemens St. Clair Shores Belle River Windsor Belle Isle	Lake Huron Lake St. Clair Lake Erie
Thunder Bay MCTS CMB EAST (Silver Water) CH83B (Tobermory) CH21B (Killarney) CH21B (Pointe au Baril) CH21B (Meaford) CH83B	▲ VBA	Sault Ste. Marie (ON) Detour Passage Presque Isle Light 45003 N. Huron Buoy Sturgeon Point Light Alpena Tawas Point	45008 S. Huron Buoy Cove Island Harbor Beach Goderich Sarnia Airport Port Huron Gore Bay	Killarney Britt 45137 Georgian Bay Buoy Western Island Beausoleil Island 45143 S. Georgian Bay Buoy Wiarton	Lake Superior Lake Huron Georgian Bay
Thunder Bay MCTS CMB WEST (Sault Ste. Marie) CH21B (Bald Head) CH83B (Horn) CH21B (Thunder Bay) CH83B	▲ VBA	Duluth Harbor Devil's Island 45006 W. Superior Buoy Ontonagon Copper Harbor Stannard Rock 45004 E. Superior Buoy Marquette CG Station Grand Marais (MI)	Whitefish Point Grand Marias (MN) Rock of Ages Passage Island Trowbridge 45001 Mid Superior Buoy Terrace Bay 45136 Slate Island Buoy Marathon	Pukaskwa Wawa Caribou Island Sault Ste. Marie (ON) Detour Passage Presque Isle Light Gore Bay Killarney	Lake Superior Lake Huron Georgian Bay

* United States Weather Service Buoys/Canadian Buoys ** Broadcast via Orillia only Note: Ship Observations retransmitted on Receipt

INTERNET ADDRESSES

National Weather Service
http://www.nws.noaa.gov

National Weather Service - MSC Charts
http://www.nws.noaa.gov/om/marine/pub.htm

National Weather Service - Marine Dissemination
http://www.nws.noaa.gov/om/marine/home.htm

National Data Buoy Center
http://seaboard.ndbc.noaa.gov

U.S. Coast Guard Navigation Center
http://www.navcen.uscg.mil

MARINE RADIOFACSIMILE CHARTS THROUGH E-MAIL

National Weather Service radiofax charts broadcast by the U.S. Coast Guard from Point Reyes, CA are available via E-mail. It is anticipated that the service will include marine text products in the near future. This allows Internet access for mariners who do not have direct access to the World Wide Web, but who are equipped with an E-mail system. Users can request files from NWS and have them automatically E-mailed back to them. To get started, send an E-mail to:

Address: ftpmail@weather.noaa.gov
Subject: (not required)
Body: help

Direct any questions to 301-713-1677, extension 128,
or 301-713-0882, extension 122.

OTHER MARINE WEATHER SERVICES CHARTS AVAILABLE

MSC-1	Eastport, ME to Montauk Point, NY	MSC-8	Mexican Border to Point Conception, CA
MSC-2	Montauk Point, NY to Manasquan, NJ	MSC-9	Point Conception, CA to Point St. George, CA
MSC-3	Manasquan, NJ to Cape Hatteras, NC	MSC-10	Point St. George, CA to Canadian Border
MSC-4	Cape Hatteras, NC to Savannah, GA	MSC-11/12	Great Lakes
MSC-5	Savannah, GA to Apalachicola, FL	MSC-13	Hawaiian Waters
MSC-6	Apalachicola, FL to Morgan City, LA	MSC-14	Puerto Rico and Virgin Islands
MSC-7	Morgan City, LA to Brownsville, TX	MSC-15	Alaskan Waters
		MSC-16	Guam and the Northern Mariana Islands

Copies of these charts are available for $1.25 each from:
National Ocean Service
Distribution Division (N/ACC33)
Riverdale, MD 20737
Telephone: 1-(800)-638-8972

All of these charts can be viewed on the internet at:
http://www.nws.noaa.gov/om/marine/pub.htm

CURRENT AREAS OF MARINE FORECAST RESPONSIBILITY FOR NWS GREAT LAKES OFFICES

Nearshore zones go out five nautical miles from the coast. Warnings are issued for areas out to mid lake.

NWS Office	Official Area of Responsibility	Warning and Forecast Headings
WFO Duluth MN	Lake Superior - US-Canadian border to WI/MI border	Grand Portage to Grand Marais MN Grand Marais to Taconite Harbor MN Taconite Harbor to Silver Bay Harbor MN Silver Bay Harbor to Two Harbors MN Two Harbors to Duluth MN Duluth MN to Port Wing WI Port Wing to Sand Island WI Sand Island to Bayfield WI Chequamegon Bay-Bayfield to Oak Point WI Oak Point to Saxon Harbor WI Lake Superior open waters from U.S.- Canadian border to WI/MI border
WFO Marquette MI	Lake Superior - WI/MI border to Whitefish Point MI	Saxon Harbor WI to Ontonagon MI Ontonagon to Upper Entrance of Portage Canal MI Upper Entrance of Portage Canal to Manitou Island MI Manitou Island to Lower Entrance Light to Portage Lake Keweenaw Bay and Huron Bay, from Lower Entrance Light to Portage Lake to Huron Islands MI Huron Islands to Marquette MI Marquette to Grand Marais MI Grand Marais to Whitefish Pt. MI Lake Superior MAFOR and Open Lake (U.S. Portion)
	Lake Michigan - Schoolcraft/Mackinac MI county line to Rock Island Passage, including northern quarter of Bay of Green Bay	Seul Choix Pt. to Pt. Detour MI Bay of Green Bay north of line from Cedar River to Rock Island Passage Lake Superior open waters from WI/MI border to Whitefish Pt. MI Lake Michigan open waters from Seul Choix Pt. to Rock Island Passage
WFO Gaylord MI	Lake Superior - Whitefish Bay (U.S.) St. Marys River and Potagannissing Bay	Whitefish Bay (U.S. Portion), Whitefish Pt. to Pt. Iroquois MI St. Marys River, Pt. Iroquois to Eastern Potagannissing Bay
	Lake Michigan- Mackinac Bridge to Schoolcraft/Mackinac county line and Mackinac Bridge to Manistee/Mason MI county line	Mackinac Bridge to Seul Choix Pt. MI Mackinac Bridge to Norwood Grand Traverse Bay, Norwood to Grand Traverse Lt MI Grand Traverse Lt. to Sleeping Bear Pt. MI Sleeping Bear Pt. to Manistee MI
	Lake Huron - Mackinac Bridge to False Detour Channel and Mackinac Bridge to Iosco/Arenac county line	Mackinac Bridge to False Detour Channel Mackinac Bridge to Presque Isle Lt. MI Presque Isle Lt. to Alabaster MI Lake Michigan Open Waters from Mackinac Bridge to Manistee MI Lake Huron Open Waters from Mackinac Bridge to Alabaster MI
WFO Detroit MI	Lake Huron	Lake Huron Open Lake (U.S. Portion) Lake Huron MAFOR
	Lake Huron - Iosco/Arenac MI county line to Port Huron	Saginaw Bay, Alabaster to Port Austin MI Port Austin to White Rock MI White Rock to Lakeport MI Lakeport to Port Huron MI
	St. Clair River	St. Clair River, Port Huron to Upper Entrance to Lake St. Clair
	Lake St. Clair	Lake St. Clair (U.S. Portion)
	Detroit River	Detroit River, Lower Entrance to Lake St. Clair to Detroit River Lt.
	Lake Erie - Detroit River to MI/OH border	Detroit River Lt. to North Cape MI Lake Huron Open Waters from Alabaster to Port Huron MI
WFO Green Bay WI	Lake Michigan-Rock Island Passage to Manitowoc/ Sheboygan WI county line including southern three-quarters of Bay of Green Bay	Bay of Green Bay south of a line from Cedar River MI to Rock Island Passage and north of a line from Marinette WI to Fish Creek WI Bay of Green Bay south of a line from Marinette WI to Fish Creek WI Lake Michigan from Rock Island Passage to Sturgeon Bay WI Lake Michigan from Sturgeon Bay WI to Two Rivers WI Lake Michigan from Two Rivers WI to Sheboygan WI Lake Michigan Open Waters from Rock Island Passage to Sheboygan WI
WFO Milwaukee WI	Lake Michigan - Manitowoc/Sheboygan WI county line to IL/WI border	Sheboygan to Port Washington WI Port Washington to North Pt. Lt. WI North Pt. Lt. to Wind Pt. WI Wind Pt. to Winthrop Harbor IL Lake Michigan Open Waters from Sheboygan WI to Winthrop Harbor IL
WFO Chicago IL	Lake Michigan	Lake Michigan Open Lake Lake Michigan MAFOR
	Lake Michigan - IL/WI border to MI/IN border	Winthrop Harbor to Wilmette Harbor IL Wilmette Harbor to Meigs Field IL Meigs Field to Calumet Harbor IL Calumet Harbor IL to Gary IN Gary to Burns Harbor IN Burns Harbor to Michigan City IN Michigan City IN to New Buffalo MI Lake Michigan open waters from Winthrop Harbor IL to new Buffalo MI
WFO Grand Rapids MI	Lake Michigan - MI/IN border to Manistee/ Mason MI county line	New Buffalo MI to South Haven MI South Haven to Muskegon MI Muskegon to Manistee MI Lake Michigan Open Waters from New Buffalo to Manistee MI
WFO Cleveland OH	Lake Erie	Lake Erie Open Lake (U.S. Portion) Lake Erie MAFOR
	Lake Erie - MI/OH border to NY/PA border	Maumee Bay to Reno Beach OH Reno Beach to The Islands OH The Islands to Vermilion OH Vermilion to Avon Point OH Avon Point to Willowick OH Willowick to Geneva-on-the Lake OH Geneva-on-the Lake to Conneaut OH Conneaut OH to Ripley NY Lake Erie Open Waters from Detroit River Lt. MI to Ripley NY
WFO Buffalo NY	Lake Erie - NY/PA border to Buffalo Harbor	Ripley to Dunkirk NY Dunkirk to Buffalo NY
	Buffalo Harbor and Niagara River	Buffalo Harbor and the Upper Niagara River
	Lake Ontario	Lake Ontario Open Lake (U.S. Portion) Lake Ontario MAFOR
	Lake Ontario - U.S./Canadian border near Niagara River to U.S./ Canadian border at St. Lawrence River	Niagara River to Thirty-Mile Point NY Thirty Mile Point to Sodus Bay NY Sodus Bay to Mexico Bay NY Mexico Bay NY to the St. Lawrence River
	St. Lawrence River - Lake Ontario to St. Regis	St. Lawrence River above Ogdensburg NY St. Lawrence River from Ogdensburg to St. Regis NY Lake Erie Open Waters from Ripley NY to Buffalo NY Lake Ontario Open Waters

WEATHER SERVICE FOR GREAT LAKES SHIPPING
DECODE FOR LAKE AND SEAWAY MARINE FORECASTS (MAFOR)

MAFOR YYG1G1 (Name of Lake) 1GDFmW1

Keyword (Indicating Marine Forecast)	Day of Month UTC	Time UTC Forecast Period Begins	Solidus	Name of Lake or Seaway	@	Forecast Period	Wind Direction	Wind Speed	Forecast Weather	Height of Waves in Feet at End of Message for Each Lake for the Entire Period
	YY	G_1G_1				G	D	Fm	W_1	
MAFOR	06	10	/	Superior*	1	6	8	3	0	Waves 5 to 10 Feet

@ Group Indicator

G - Forecast Period

0 - Conditions at the beginning of the forecast period.
1 - Valid for 3 hours
2 - Valid for 6 hours
3 - Valid for 9 hours
4 - Valid for 12 hours
5 - Valid for 18 hours
6 - Valid for 24 hours

9 - Occasional

D - Direction

0 - Calm
1 - Northeast
2 - East
3 - Southeast
4 - South
5 - Southwest
6 - West
7 - Northwest
8 - North
9 - Variable

Fm - Wind Speed

0 - 0 to 10 knots
1 - 11 to 16 knots
2 - 17 to 21 knots
3 - 22 to 27 knots
4 - 28 to 33 knots
5 - 34 to 40 knots
6 - 41 to 47 knots
7 - 48 to 55 knots
8 - 56 to 63 knots
9 - over 63 knots

W1 - Forecast Weather

0 - Moderate or Good Visibility, more than 3 nautical miles
1 - Risk of accumulation of ice on superstructure (Temp 23 to 32 degrees F.)
2 - Strong risk, accumulation of ice on superstructure (temp below 23 degrees F.)
3 - Mist (visibility 5/8 to 3 nautical miles)
4 - Fog (visibility less than 5/8 nautical mile)
5 - Drizzle
6 - Rain
7 - Snow or Rain and snow
8 - Squally weather with or without showers
9 - Thunderstorms

*Statement in plain language of Gale or Storm warnings, if any, will follow name of lake or seaway. Time of warnings are in Eastern Standard Time (EST). Small Craft Advisories are not included in MAFOR broadcasts.

The forecast $1GDF_mW_1$ may be repeated as many times as necessary to describe the changes in wind and weather expected in a given area during the 24-hour forecast period. The forecast $1GDF_mW_1$ in which G=1-8, refers to the forecast weather commencing at the time given in the group YYG_1G_1/ and continuing through the period indicated by G. Subsequent $1GDF_mW_1$ (G=1-8) indicate the period of time that the described weather is forecast to persist, commencing at the end of the period specified in the preceding group $1GDF_mW_1$ (G=1-8). Any forecast $1GDF_mW_1$ (G=1-8) may be followed by $1GDF_mW1$ (G=1-9); in such cases, G=9 indicates a phenomenon forecast to occur occasionally in the forecast period. On occasion, plain language words are used to describe weather conditions not easily described by the code tables; times are stated in EST.

Wave forecast indicates the expected wave heights at the downwind end or side of the lake; this being the area where the wave height buildup is greatest. Times in EST. Wave heights are usually specified as a range for the 24-hour period, but significant changes (generally variations of more than 5 feet) will be stated. The MAFOR code is not an exact duplicate of the plain language forecast issued for each lake which should be checked for more detail. When daylight savings time is observed, forecasts begin at 03z, 09z, 15z, and 21z. When standard time is observed, forecasts begin at 04z, 10z, 16z, and 22z. These times are equivalent to 5:00 a.m. & p.m. and 11:00 a.m. & p.m. year around.

GREAT LAKES U.S. COAST GUARD WEATHER BROADCAST

GROUP	BROADCAST TIMES (ALL TIMES IN UTC)
Sault Ste. Marie	0005, 0305, 0605, 0905 1205, 1505, 1805, 2105

Transmitter Sites: North Superior, MN; Duluth, MN; Bayfield, WI; Beaver Island, MI; Goetzville, MI; Sault Ste. Marie, MI; Grand Marais, MI; Marquette, MI; Houghton, MI; Munising, MI; Calumet, MI

Milwaukee	0255, 1455

Tranmitter Sites: Sturgeon Bay, WI; Manitowoc, WI; Milwaukee, WI; Chicago, IL; Kenosha, WI; Escanaba, MI

Grand Haven	0235, 1435

Tranmitter Sites: Holland, MI; Ludington, MI; Frankfort, MI.

Detroit	0135, 1335

Transmitter Sites: Cleveland, OH; Marblehead, OH; Toledo, OH; Belle Isle, MI; Port Huron, MI; Port Austin, MI; Alpena, MI.

Buffalo	0255, 0555, 0855, 1155 1455, 1755, 2055, 2355

Transmitter Sites: Ashtabula, OH; Dunkirk, NY; Lewiston, NY; Thirtymile Point, NY; Rochester, NY; Oswego, NY; Alexandria Bay, NY.

ACAB, APRIL 1999

MSC-11/12—GREAT LAKES

USCOMM-NOAA-DC-A5741
NOAA-PA-96064