Seasonal Outlook
Great Lakes
Winter 2022-2023

Issued by the North American Ice Service

1 December 2022

Lake Superior

Winter temperature and ice forecasts.

Normal temperatures are forecast for December 2022. Below normal temperatures are forecast for January 2023 except for near to slightly above normal temperatures forecast for January over the eastern section. Near normal temperatures are expected over the southeast while below normal temperatures are expected in the west for February 2023. Above normal ice conditions are forecast for Lake Superior.

Thunder Bay.

Outlook for December…

December 1-10: Open water.
December 11-20: Open water with 1-3 tenths new ice along western shores.
December 21-31: 4-6 tenths new and thin lake ice along the western and the north-eastern shores.

Outlook for January…

January 1-10: 4-6 tenths new and thin lake ice.
January 11-20: 7-8 tenths thin lake ice.
January 21-31: 9-9+ tenths medium lake ice.

Outlook for February…

February 1-20: Consolidated medium lake ice with consolidated thick lake ice along shores.
February 21-28: Consolidated thick lake ice.

Nipigon and Black Bays.

Outlook for December…

December 1-10: 1-3 tenths new lake ice except 7-8 tenths thin lake ice in northern Black Bay and western Nipigon Bay.
December 11-20: 7-8 tenths new and thin lake ice except 9-9+ tenths thin and medium lake ice in Black Bay and western Nipigon Bay.
December 21-31: 7-8 tenths thin lake ice except 9-9+ tenths medium lake ice in Black Bay and western Nipigon Bay.

Outlook for January…

January 1-10: Consolidated medium lake ice.
January 11-31: Consolidated thick lake ice.

Outlook for February…

February 1-28: Consolidated thick lake ice.

From Grand Marais Minnesota to the entrance to Nipigon Bay.

Outlook for December…

December 1-31: Open water.

Outlook for January…

January 1-10: Open water except 1-3 tenths new lake ice along the shore.
January 11-31: 1-3 tenths new and thin lake ice.

Outlook for February…

February 1-10: 4-6 tenths new and thin lake ice except 7-8 tenths medium lake ice along the shore from Thunder Bay to Nipigon Bay.

February 11-20: 7-8 tenths new and thin lake ice except 7-8 tenths medium lake ice along the shore from Thunder Bay to Nipigon Bay and along the northern shore of Isle Royale.

February 21-28: 9-9+ tenths thin lake ice except 9-9+ medium lake ice along the shore from Thunder Bay to Nipigon Bay and along the northern shore of Isle Royale.

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From Grand Marais to Duluth.

Outlook for December…

December 1-31: Open water.

Outlook for January…

January 1-10: Open water except 4-6 tenths new lake ice near Duluth.

January 11-20: Open water except 7-8 tenths thin lake ice near Duluth.

January 21-31: Open water except 9-9+ tenths thin lake ice near Duluth.

Outlook for February…

February 1-10: Open water except 9-9+ tenths thin and medium lake ice near Duluth.

February 11-20: 4-6 tenths new and thin lake ice except 9-9+ tenths thin and medium lake ice near Duluth.

February 21-28: 7-8 tenths thin and medium lake ice except 9-9+ tenths thin and medium lake ice near Duluth.

Southern Lake Superior west of Keweenaw Peninsula.

Outlook for December…

December 1-10: Open water except 1-3 tenths new lake ice in Chequamegon Bay..

December 11-20: Open water except 7-8 tenths thin lake ice in Chequamegon Bay.

December 21-31: Open water except 9-9+ tenths thin lake ice in Chequamegon Bay.

Outlook for January…

January 1-10: 4-6 tenths new and thin lake ice along the shore and near the Apostle Islands except consolidated medium lake ice in Chequamegon Bay.

January 11-21: 7-8 tenths new and thin lake ice along the shore except consolidated medium lake ice in Chequamegon Bay.

January 22-31: 7-8 tenths thin lake ice near the shore except 9-9+ tenths medium lake ice along the shore. Consolidated medium lake ice in Chequamegon Bay and along the Apostle islands.

Outlook for February…

February 1-12: 1-3 tenths new lake ice except 9-9+ tenths thin lake ice along the shore. Consolidated thick lake ice in Chequamegon Bay and consolidated medium lake ice along the Apostle Islands.

February 13-28: 4-6 tenths new and thin lake ice except 9-9+ tenths thin and medium lake ice along the shore. Consolidated thick lake ice in Chequamegon Bay and consolidated medium lake ice along the Apostle Islands.

Southern Lake Superior east of the Keweenaw Peninsula.

Outlook for December…

December 1-31: Open water.

Outlook for January…

January 1-10: Open water.

January 11-21: Open water except 1-3 tenths new lake ice along parts of the shore.

January 22-31: Open water except 4-6 tenths new and thin lake ice along the shore.

Outlook for February…

February 1-14: Open water except 7-8 tenths thin lake ice along the shore.

February 15-28: Open water except 9-9+ tenths thin and medium lake ice along the shore. Consolidated medium lake ice in sheltered bays.

Whitefish Bay.

Outlook for December…

December 1-15: Open water.

December 16-31: Open water except 1-3 tenths new and thin lake ice in sheltered bays.

Outlook for January…

January 1-15: Open water except 4-6 tenths new and thin lake ice along the shore. 9-9+ tenths thin lake ice in Batchawa Bay.

January 16-22: 4-6 tenths new and thin lake ice except 9-9+ tenths thin and medium lake ice along the shores and in in sheltered bays.

January 23-31: 7-8 tenths thin lake ice except 9-9+ tenths medium lake ice along the shores.

Outlook for February…

February 1-10: 9-9+ tenths medium lake ice except consolidated thick lake ice along the shore in the eastern section.

February 11-20: 9-9+ tenths medium lake ice except consolidated thick lake ice in the eastern section.

February 21-28: 9-9+ tenths thick lake ice except consolidated thick lake ice in the eastern section.

From Whitefish Bay northwards to Michipicoten Bay.

Outlook for December…

December 1-31: Open water.

Outlook for January…

January 1-20: Open water.

January 21-31: Open water except 4-6 tenths new lake ice along the shore.

Outlook for February…

February 1-10: Open water except 4-6 tenths new and thin lake ice along the shore. 7-8 tenths thin lake ice south of Michipicoten Bay.

February 11-20: Open water except 7-8 tenths thin and medium lake ice along the shore. 9-9+ tenths thin lake ice south of Michipicoten Bay

February 21-28: 4-6 tenths new lake ice except 9-9+ tenths medium lake ice along the shore.

From Michipicoten Bay to the entrance to Nipigon Bay.

Outlook for December…

December 1-31: Open water.

Outlook for January…

January 1-20: Open water.

January 21-31: Open water except occasional patches of 1-3 tenths new lake ice along parts of the shore from Marathon to Nipigon Bay.

Outlook for February…

February 1-18: Open water except occasional patches of 4-6 tenths new and thin lake ice along the shore from Marathon to Nipigon Bay.

February 19-28: Open water except 7-8 tenths new and thin lake ice along the shore. 9-9+ tenths thin lake ice from Marathon to Nipigon Bay.

Elsewhere in Lake Superior.

Outlook for December…

December 1-31: Ice free.

Outlook for January…

January 1-31: Ice free to open water.

Outlook for February…

February 1-10: Ice free to open water.

February 11-28: Open water. Up to 1-3 tenths new and thin lake ice in patches especially in western section.

Lake Michigan.

Winter temperature and ice forecasts.

Above normal temperatures are expected from December to February except below normal temperatures are expected from January to February over the northwestern section. Below normal ice conditions are forecast except normal ice conditions are forecast in Green Bay and in Northeastern Lake Michigan.

Green Bay.

Outlook for December…

December 1-10: Open water except 4-6 tenths new ice near in the extreme southern section and in the Bays de Noc.

December 11-20: Open water except 4-6 tenths thin lake ice near Green Bay and in the Bays de Noc.

December 21-31: Open water except 7-8 tenths thin lake ice in the southern section and in the Bays de Noc.

Outlook for January…

January 1-10: 7-8 tenths new and thin lake ice except 9-9+ tenths thin lake ice in the southern section. Consolidated medium lake ice in the Bays de Noc.

January 11-20: 9-9+ tenths medium lake ice except consolidated thick lake ice in the southern section and in the Bays de Noc.
January 21-31: 9-9+ tenths medium lake ice except 9-9+ tenths consolidated medium lake ice in the southern section and in the Bays de Noc.

Outlook for February…

February 1-12: 9-9+ tenths thin and medium lake ice except consolidated thick lake ice in the Bays de Noc.
February 13-28: 9-9+ tenths medium lake ice except consolidated thick lake ice in the southern section and in the Bays de Noc.

Northeastern Lake Michigan.

Outlook for December…

December 1-25: Open water.
December 26-31: Open water except 1-3 tenths new ice along the northern shore and near the Straits of Mackinac

Outlook for January…

January 1-10: Open water except 7-8 tenths new and thin lake ice along parts of the northern shore and near the Straits of Mackinac.
January 11-20: Open water except 7-8 tenths new and thin lake ice northeast of Beaver Island. 9-9+ tenths thin ice along the northern shore and near the Straits of Mackinac.
January 21-31: 1-3 tenths new ice except 9-9+ tenths thin and medium lake ice north and east of Beaver Island.

Outlook for February…

February 1-12: 1-3 tenths new and thin lake ice except 9-9+ tenths thin and medium lake ice north and east of Beaver Island. 9-9+ tenths medium lake ice in the Straits of Mackinac.
February 13-28: 1-3 tenths new and thin lake ice except 9-9+ tenths thin and medium lake ice north and east of Beaver Island. Consolidated thick lake ice along the northeast shore and in the Straits of Mackinac.

Elsewhere in Lake Michigan.

Outlook for December…

December 1-31: Ice free except open water along parts of the shore.

Outlook for January…

January 1-20: Ice free except open water along parts of the shore.
January 21-31: Open water except 4-6 tenths new and thin lake ice along parts of the southern and western shores.

Outlook for February…

February 1-10: Open water except 4-6 tenths new and thin lake ice along parts of the shore.
February 11-20: Open water except 7-8 tenths new and thin lake ice along parts of the shore.
February 21-28: Open water except 7-8 tenths thin and medium lake ice along parts of the shore.

Lake Huron and Georgian Bay.

Winter temperature and ice forecasts.

Normal temperatures are expected over Lake Huron and Georgian Bay from December to February. Normal ice conditions are forecast.

North Channel.

Outlook for December...

December 1-10: Open water.

December 11-20: Open water except 1-3 tenths new and thin lake ice in sheltered bays.

December 21-31: Open water except 4-6 tenths thin lake ice along the shore. 7-8 tenths thin lake ice in sheltered bays.

Outlook for January…

January 1-11: 7-8 tenths new and thin lake ice. Consolidated thin lake ice in sheltered bays.

January 12-22: 7-8 tenths thin lake ice except consolidated medium lake ice in sheltered bays.

January 23-31: 9-9+ tenths medium lake ice except consolidated medium and thick lake ice in the eastern section and in sheltered bays.

Outlook for February…

February 1-7: 9-9+ tenths medium lake ice except consolidated thick lake ice in the eastern section and in sheltered bays.

February 8-28: Consolidated thick lake ice.

St Mary's River.

Outlook for December…

December 1-7: Open water except 1-3 tenths new lake ice in sheltered bays.

December 08-15: 4-6 tenths new and thin lake ice except 7-8 tenths thin lake ice in sheltered bays.

December 16-31: 7-8 tenths thin lake ice except consolidated thin and medium lake ice in sheltered bays.

Outlook for January…

January 1-15: 9-9+ tenths thin and medium lake ice except consolidated medium lake ice in sheltered bays.

January 16-31: Consolidated medium lake ice.

Outlook for February…

February 1-28: Consolidated thick lake ice.

South of Manitoulin Island westward to North-western Lake Huron.

Outlook for December…

December 1-31: Open water.

Outlook for January…

January 1-6: Open water.

January 7-19: Open water except 4-6 tenths new and thin lake ice along the shore west of Marquette Island.

January 20-31: Open water except 7-8 tenths new and thin lake ice along the shore.

Outlook for February…

February 1-7: Open water except 9-9+ tenths thin lake ice along the shore.

February 8-18: Open water except 7-8 tenths new and thin lake ice along the shore. 9-9+ tenths thin lake ice along the shore near Marquette Island.

February 19-28: 4-6 tenths new lake ice except 9-9+ tenths thin lake ice along the shores.

North-western Lake Huron near the Straits of Mackinac.

Outlook for December…

December 1-20: Open water.

December 21-31: Open water except 4-6 tenths new lake ice along the shores.

Outlook for January…

January 1-5: Open water except 7-8 tenths new and thin lake ice along the shores.

January 6-20: 4-6 tenths new ice except 7-8 tenths thin lake ice along the shores. 9-9+ tenths thin lake ice in the Straits of Mackinac and in sheltered bays.

January 21-31: 4-6 tenths new and thin lake ice except 7-8 tenths thin and medium lake ice in the southern section and in the Straits of Mackinac.

Outlook for February…

February 1-14: 9-9+ tenths thin and medium lake ice except 9-9+ tenths medium lake ice in the Straits of Mackinac. Consolidated medium lake ice along the shore in the northern section.

February 15-28: 9-9+ tenths thin and medium lake ice except consolidated thick lake ice in the western section.

From north-western Lake Huron to Saginaw Bay.

Outlook for December...

December 1-31: Open water.

Outlook for January…

January 1-10: Open water except patches of 1-3 tenths new and thin lake ice along the shore south of Alpena.

January 11-20: Open water except 4-6 tenths new and thin lake ice along parts of the shore.

January 21-31: Open water except 7-8 tenths new and thin lake ice near the shore. 9-9+ tenths thin lake ice along parts of the shore.

Outlook for February…

February 1-15: 1-3 tenths new lake ice except 7-8 tenths thin lake ice near the shore. 9-9+ tenths thin lake ice along parts of the shore.

February 16-21: 1-3 tenths new lake ice except 7-8 tenths thin lake ice near the shore. 9-9+ tenths thin lake ice along parts of the shore.

February 22-28: 1-3 tenths new lake ice except 7-8 tenths thin lake ice near the shore. 9-9+ tenths medium lake ice along parts of the shore.

Saginaw Bay.

Outlook for December...

December 1-7: Open water.

December 8-17: Open water except 4-6 tenths new ice in the western section. 7-8 tenths thin lake ice along the shore in the southern section.

December 18-24: 4-6 tenths new ice except 7-8 tenths new and thin lake ice along the shore.
December 25-31: 1-3 tenths new and thin lake ice except 7-8 tenths thin lake ice along the shore.

Outlook for January…

January 1-10: 7-8 tenths thin lake ice.
January 11-20: 7-8 tenths thin lake ice except 9-9+ tenths thin and medium lake ice in the southwestern section.
January 21-31: 9-9+ tenths thin and medium lake ice except consolidated medium lake ice in the southwestern section.

Outlook for February…

February 1-28: Consolidated medium and thick lake ice.

The southern and eastern shore of Lake Huron.

Outlook for December...

December 1-25: Open water.
December 26-31: Open water except occasional patches of 1-3 tenths new lake ice along the shore north of Goderich.

Outlook for January…

January 1-10: Open water except occasional patches of 1-3 tenths new and thin lake ice along the shore.
January 11-21: Open water except 4-6 tenths new and thin lake ice along parts of the shore.
January 22-31: Open water except 7-8 tenths thin lake ice along the shore.

Outlook for February…

February 1-10: Open water except 7-8 tenths thin and medium lake ice along the southern shore. 9-9+ tenths thin and medium lake ice along the eastern shore.
February 11-28: 7-8 tenths thin and medium lake ice except 9-9+ tenths thin and medium lake ice along the eastern shore. Consolidated medium lake ice along the Bruce Peninsula.

Georgian Bay.

Outlook for December...

December 1-15: Open water.
December 16-25: Open water except 4-6 tenths new and thin lake ice along parts of the northeastern shore.
December 26-31: Open water except 4-6 tenths new and thin lake ice along parts of the northeastern shore. 9-9+ tenths thin lake ice in sheltered bays along the northeastern shore.

Outlook for January…

January 1-10: Open water except 7-8 tenths new and thin lake ice along parts of the northeastern shore. Consolidated medium lake ice in sheltered bays.
January 11-22: Open water except 9-9+ tenths new and thin lake ice along the northeastern shore. Consolidated medium lake ice in sheltered bays.
January 23-31: Open water except 7-8 tenths new and thin lake ice in the northeastern section and along the southern shore. Consolidated medium lake ice along the northeastern shore.

Outlook for February…

February 1-7: open water except 9-9+ tenths thin and medium lake ice in the northeastern section and along the southern shore. Consolidated medium lake ice along the shore.

February 8-28: 4-6 tenths thin and medium lake ice except 9-9+ tenths medium lake ice in the northeastern section. Consolidated thick lake ice along the shore in the northeastern section.

Elsewhere in Lake Huron.

Outlook for December...

December 1-31: Ice free.

Outlook for January…

January 1-31: Open water to ice free.

Outlook for February…

February 1-28: Open water except ice free in central Lake Huron.

Lake Erie and Lake St. Clair

Winter temperature and ice forecasts.

Near normal temperatures are expected in December. Above normal temperatures are expected in January and in February. Below normal ice conditions are forecast.

Lake St Clair and the Western Basin.

Outlook for December…

December 1-17: Ice free except open water along the shore and in Lake St. Clair.

December 18-25: Open water except 1-3 tenths new and thin lake ice along parts of the shore.

December 26-31: Open water except 4-6 tenths new and thin lake ice.

Outlook for January…

January 1-10: 7-8 tenths new and thin lake ice.

January 11-24: Consolidated thin and medium lake ice.

January 25-31: Consolidated medium lake ice.

Outlook for February…

February 1-19: Consolidated medium lake ice except consolidated thick lake ice along parts of the shore and in the eastern half of Lake St. Clair.

February 20-28: 9-9+ tenths medium lake ice except consolidated thick lake ice along the shore in Lake St. Clair.

The rest of Lake Erie.

Outlook for December…

December 1-22: Ice free except open water along the shore.

December 23-31: Open water except 1-3 tenths new and thin lake ice in Sandusky Bay.

Outlook for January…

January 1-10: Open water except 1-3 tenths new and thin lake ice in the western section. 9-9+ tenths thin lake ice along the eastern shore of Long Point and in Sandusky Bay.
January 11-20: 7-8 tenths new and thin lake ice except consolidated thin and medium lake ice in the western basin and along the eastern shore of Long Point.
January 21-31: 9-9+ tenths new and thin lake ice except consolidated thin and medium lake ice along parts of the shore.

Outlook for February…
February 1-28: 9-9+ tenths thin and medium lake ice except consolidated medium lake ice along parts of the shore.

Lake Ontario.

Winter temperature and ice forecasts.

Normal temperatures are expected in December. Above normal temperatures are expected in January and February. Below normal ice conditions are forecast.

Northeastern Lake Ontario.

Outlook for December...
December 1-31: Open water.
Outlook for January…
January 1-10: Open water except occasional patches of 4-6 tenths new and thin lake ice in sheltered bays.
January 11-20: Open water except 4-6 tenths new and thin lake ice in sheltered bays.
January 21-31: 4-6 tenths new and thin lake ice except 7-8 tenths thin lake ice along the shore. Consolidated medium lake ice in sheltered bays.
Outlook for February…
February 1-14: 4-6 tenths new and thin lake ice except 7-8 tenths thin lake ice along the shore. Consolidated medium lake ice in sheltered bays.
February 15-28: 7-8 tenths thin and medium lake ice except 9-9+ tenths thin and medium lake ice along the shore. Consolidated medium lake ice in bays.

Bay of Quinte.

Outlook for December…
December 1-14: Open water except 1-3 tenths along parts of the shore.
December 15-24: 7-8 tenths new and thin lake ice.
December 25-31: 9-9+ tenths new and thin lake ice.
Outlook for January…
January 1-8: 9-9+ tenths thin lake ice
January 9-20: Consolidated thin and medium lake ice.
January 21-31: Consolidated medium lake ice.
Outlook for February…
February 1-10: Consolidated medium and thick lake ice.
February 11-28: Consolidated thick lake ice

Elsewhere in Lake Ontario.

Outlook for December…

December 1-31: Ice free except open water along parts of the shore.

Outlook for January…

January 1-22: Open water.

January 23-31: Open water except 1-3 tenths new and thin lake ice along parts of the south shore.

Outlook for February...

February 1-28: Open water except occasional patches of 4-6 tenths new and thin lake ice along the south shore and the north shore east of Cobourg.

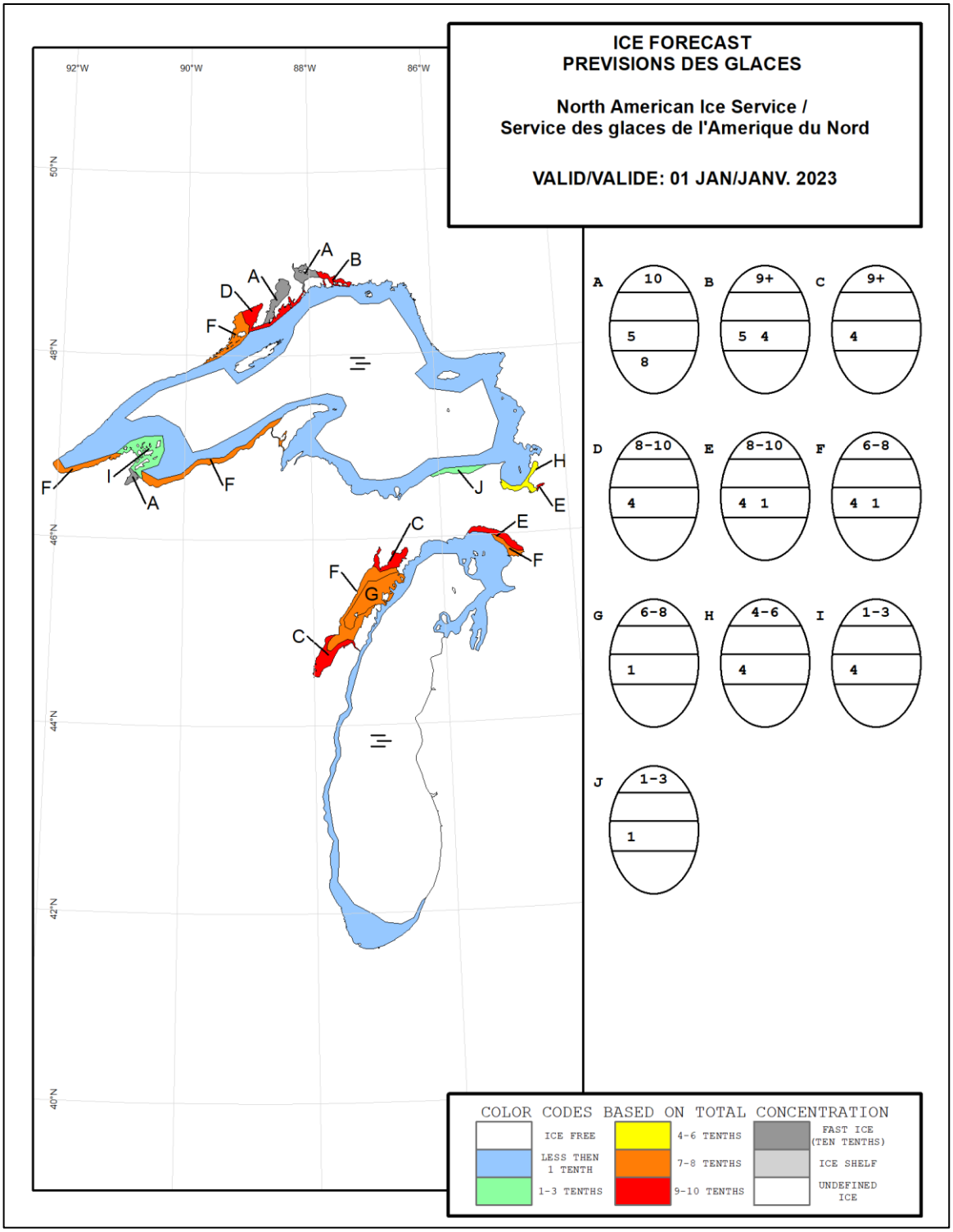

Figure 1: Expected ice conditions – western Great Lakes – 1 January 2023

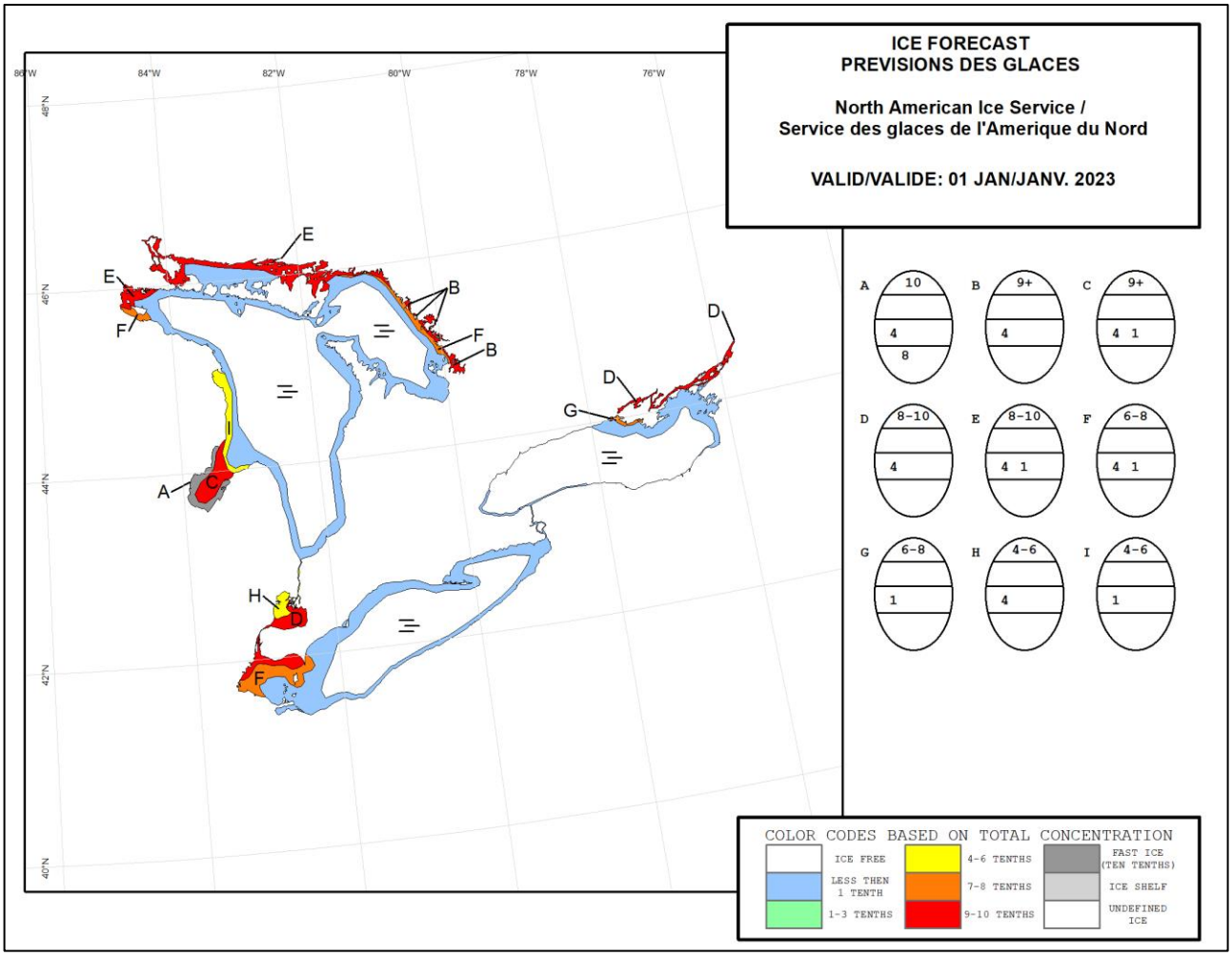

Figure 2: Expected ice conditions – eastern Great Lakes – 1 January 2023

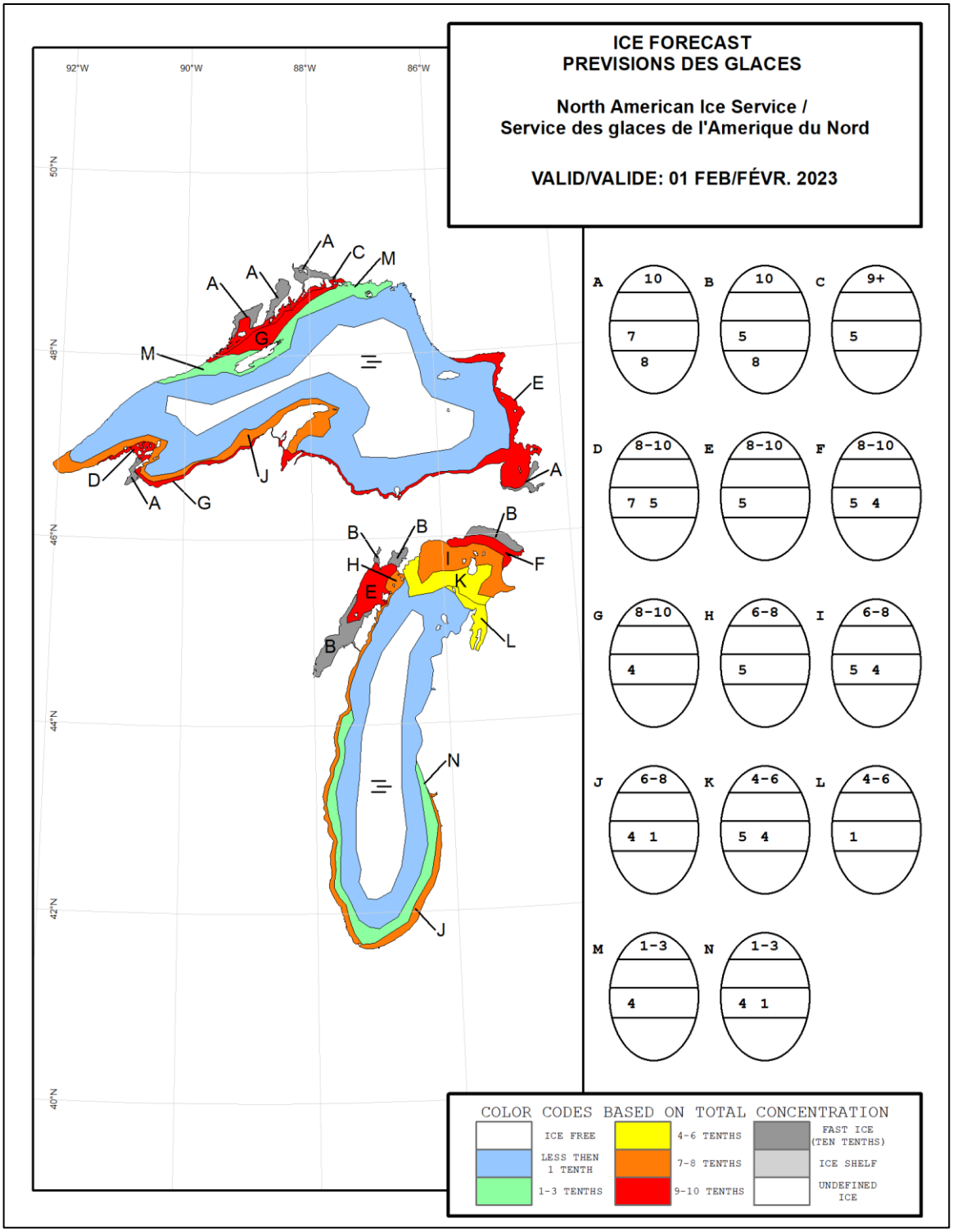

Figure 3: Expected ice conditions – western Great Lakes – 1 February 2023

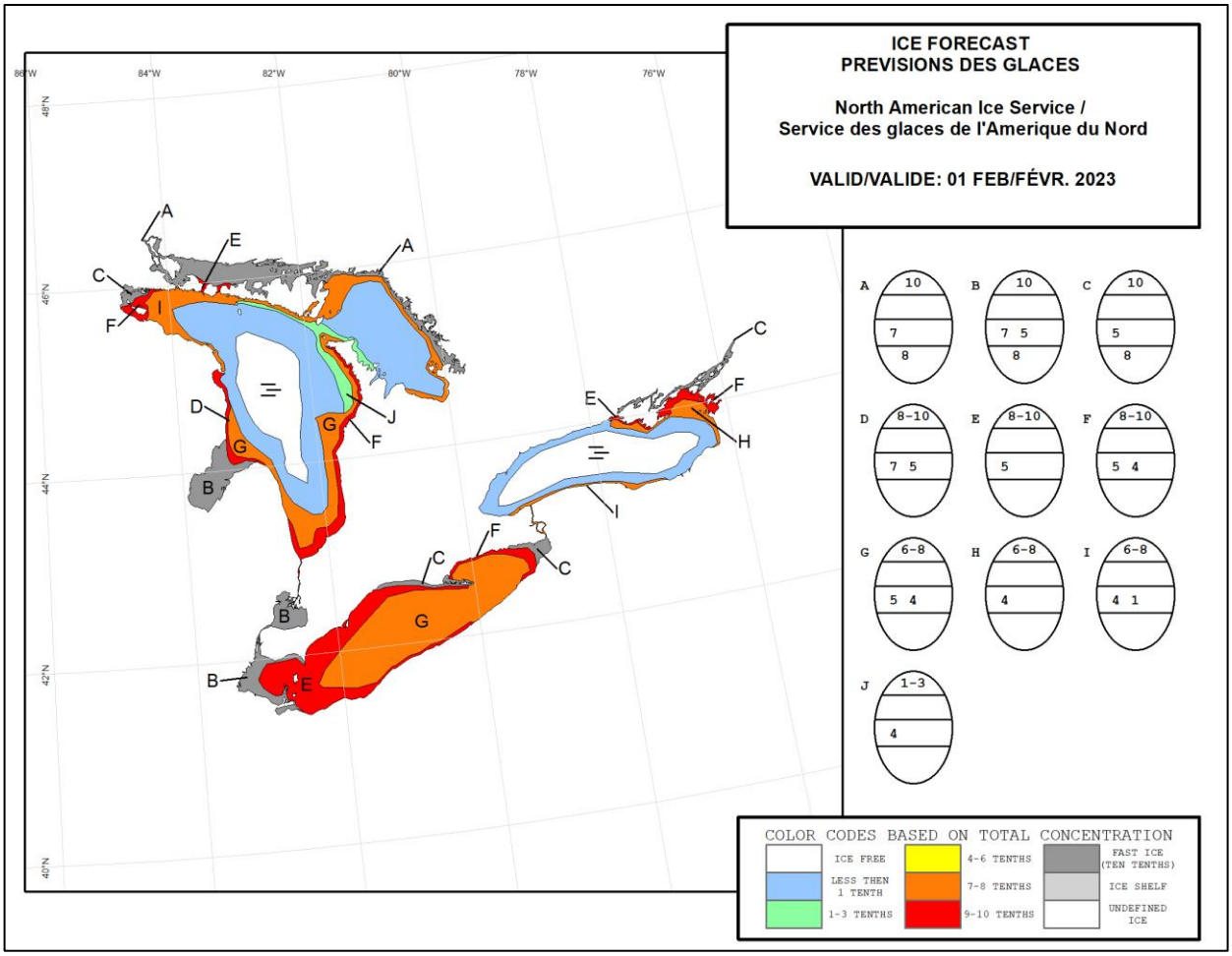

Figure 4: Expected ice conditions – eastern Great Lakes – 1 February 2023

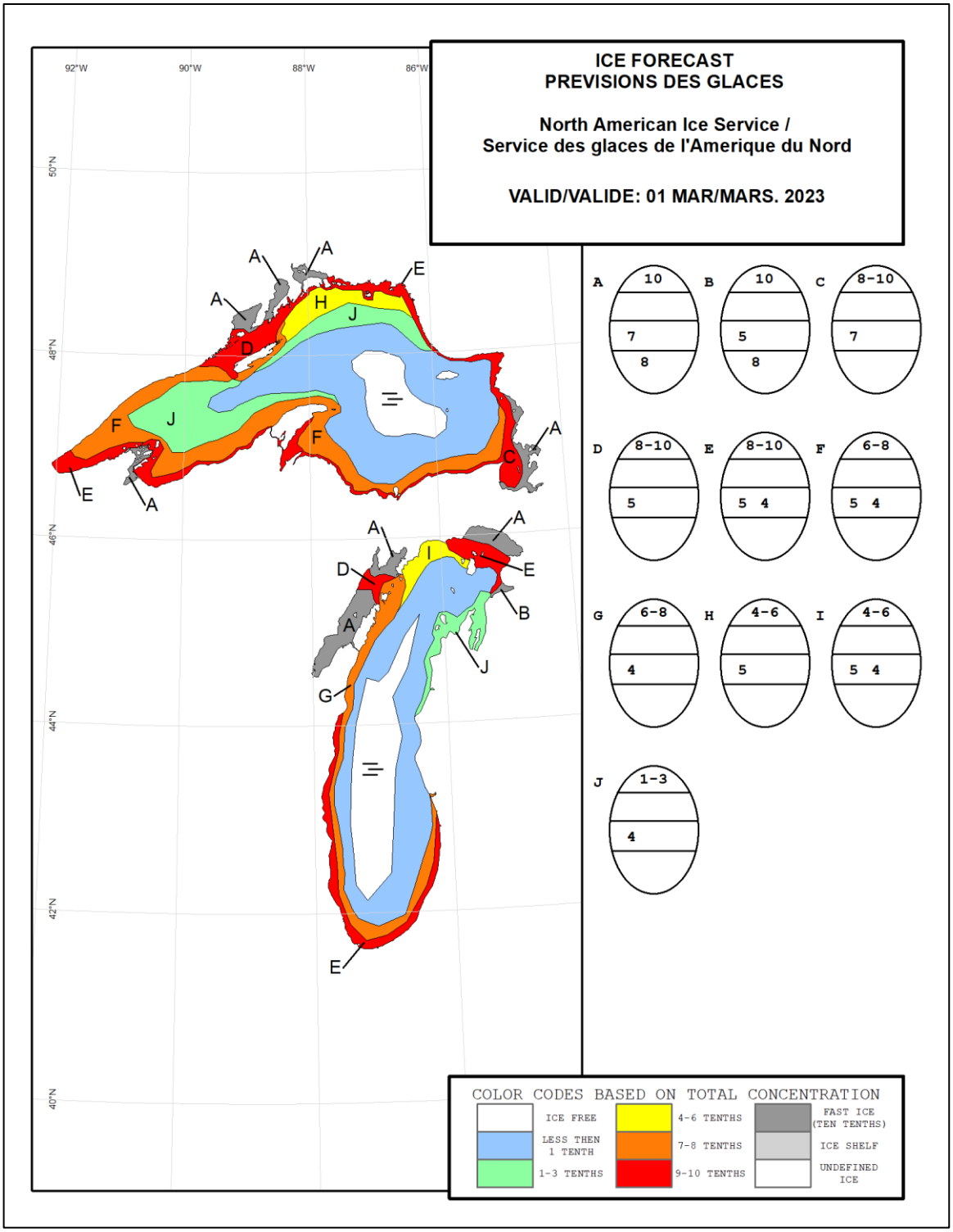

Figure 5: Expected ice conditions – western Great Lakes – 1 March 2023

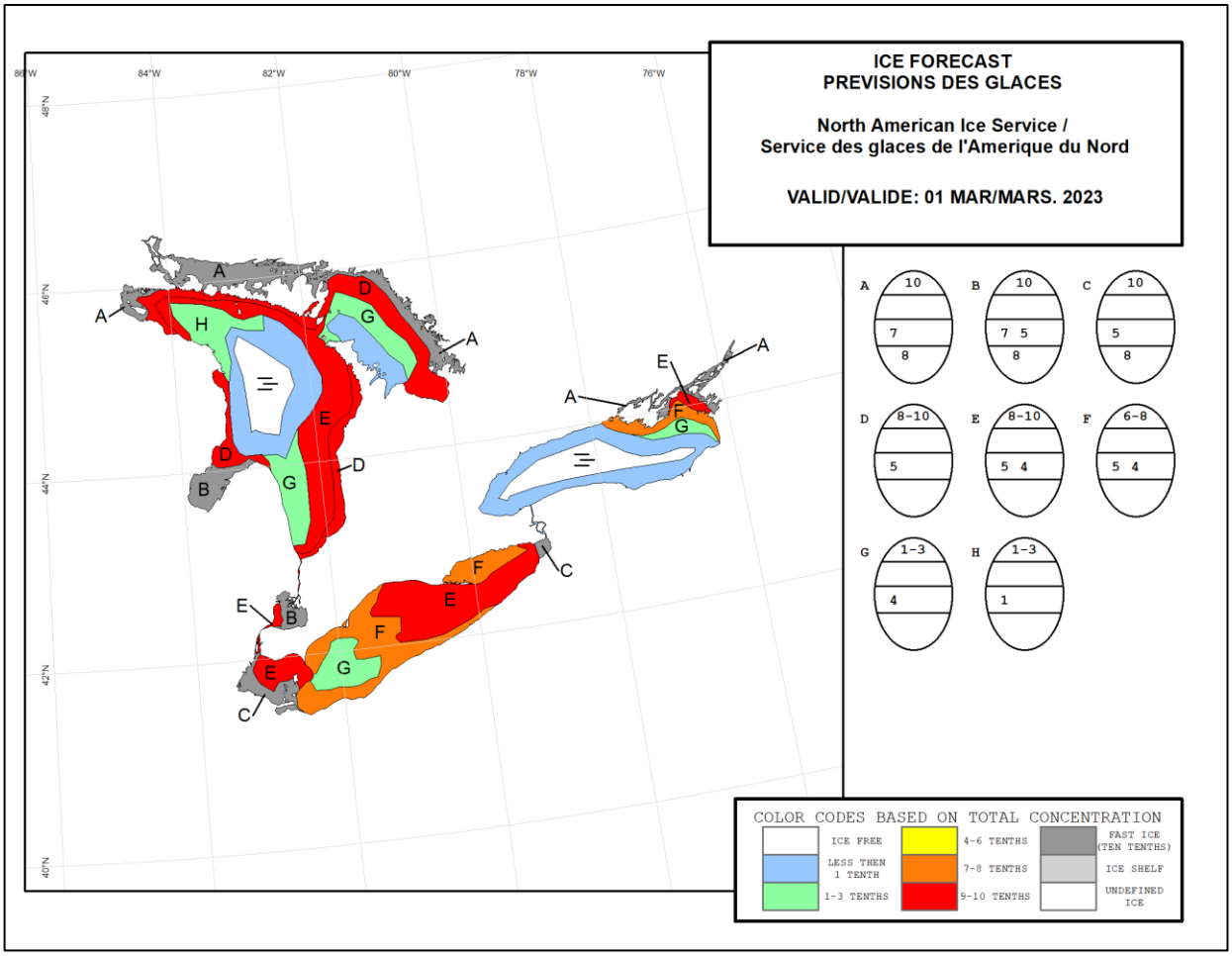

Figure 6: Expected ice conditions – eastern Great Lakes – 1 March 2023