

**Seasonal Outlook
Great Lakes
Winter 2019-2020**



Issued by the North American Ice Service

3 December 2019

Lake Superior

Winter temperature and ice forecasts.

Near normal temperatures are forecast from December 2019 to February 2020. Normal ice coverage is expected.

Thunder Bay.

Outlook for December...

December 10-20: 1-3 tenths of new and thin lake ice along the western and northeastern shores.

December 21-31: 4-6 tenths of new and thin lake ice along the western shore.

Outlook for January...

January 1-15: 7-8 tenths of new and thin lake. Ice becoming consolidated lake ice along the western and northeastern shores.

January 16-31: 9-9 plus tenths of thin and medium lake ice except consolidated medium lake ice along the western and northeastern shores.

Outlook for February...

February 1-29: 9-9 plus tenths of medium and thick lake ice except consolidated thick lake ice along the shores.

Nipigon and Black Bays.

Outlook for December...

December 3-10: 9-10 tenths of new and thin lake ice over Black Bay and 4-6 tenths of new and thin lake ice over western Nipigon Bay.

December 11-20: Consolidated thin and medium lake ice over Black Bay. 9-10 tenths of thin and medium lake ice over Black Bay and western Nipigon Bay.

December 21-31: Consolidated thin and medium lake ice in Black Bay and western Nipigon Bay. 9 tenths thin and medium lake ice elsewhere.

Outlook for January...

January 1-15: Consolidated medium lake and thick lake ice over Black Bay and western

Nipigon Bay. 7-8 tenths of new and thin lake ice over eastern Nipigon Bay.

January 16-31: Consolidated thick lake ice over Black Bay and western Nipigon Bay. 7-8 tenths of thin and medium lake ice over eastern Nipigon Bay.

Outlook for February...

February 1-29: Consolidated with thick lake ice.

From Grand Marais Minnesota to the entrance to Nipigon Bay.

Outlook for December...

December 3-31: Open water.

Outlook for January...

January 1-5: open water.

January 6-15: 1-3 tenths of new and thin lake ice.

January 16-31: 7-8 tenths of thin lake ice along the shore. 1-3 tenths new and think lake ice extending to Isle Royale.

Outlook for February...

February 1-29: 7-8 tenths of thin and medium lake ice along the shore. Up to 1-3 tenths thin and medium lake ice extending to the northern shore of Isle Royale.

From Grand Marais to Duluth.

Outlook for December...

December 10-31: Open water.

Outlook for January...

January 1-5: open water.

January 6-15: Open water except 4-6 tenths of new and thin lake ice near Duluth.

January 16-21: Open water except 4-6 tenths of new and thin lake ice near Duluth.

January 22-31: Open water except 9 tenths thin and medium lake ice near Duluth.

Outlook for February...

February 1-29: Open water except 7-8 tenths of thin and medium lake ice near Duluth. Consolidate medium lake ice along the shore near Duluth.

Southern Lake Superior west of Keweenaw Peninsula.

Outlook for December...

December 3-20: Open water except 7-8 tenths of new and thin lake ice in Chequamegon Bay.

December 21-31: Open water except 9-10 tenths of thin lake ice in Chequamegon Bay.

Outlook for January...

January 1-7: 1-3 tenths new and thin lake ice along the shore except consolidated medium lake ice in Chequamegon Bay. 1-3 tenths new and thin lake ice near the Apostle islands.

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

January 22-31: 9-10 tenths of thin lake ice along the shore except consolidated thick lake ice in Chequamegon Bay and near the Apostle islands.

Outlook for February...

February 1-29: 9-10 tenths of medium lake ice along the shore except consolidated thick lake ice in Chequamegon Bay and the Apostle Islands.

Southern Lake Superior east of the Keweenaw Peninsula.

Outlook for December...

December 3-31: Open water.

Outlook for January...

January 1-7: Open water.

January 8-21: open water except 1-3 tenths new and thin lake ice along parts of the shore.

January 23-31: 9-10 tenths of thin and medium lake ice along the shore.

Outlook for February...

February 1-14: 9-10 tenths of thin and medium lake ice along the southern shore and east of the Keweenaw Peninsula. Consolidated medium lake ice in sheltered bays.

February 15-29: 9-10 tenths of thin and medium lake ice within 20 nautical miles of the southern shore and east of the Keweenaw Peninsula. Consolidated thick lake ice in sheltered bays.

Whitefish Bay.

Outlook for December...

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

Outlook for January...

January 1-10: Open water except 4-6 tenths of new and thin lake ice along the shore. Consolidated thin lake ice in sheltered bays.

January 11-22: 7-8 tenths of thin lake ice except consolidated medium lake ice in sheltered bays.

January 23-31: 9 tenths of thin and medium lake ice except consolidated medium lake ice over the southeastern section.

Outlook for February...

February 1-29: 7-8 tenths of thin and medium lake ice except consolidated medium lake ice in the extreme southeastern section.

From Whitefish Bay northwards to Michipicoten Bay.

Outlook for December...

December 3-31: Open water.

Outlook for January...

January 1-23: Open water except isolated patches of new and thin lake ice along the shore.

January 24-31: Open water except 1-3 tenths of new and thin lake ice along the shore south of Michipicoten Bay.

Outlook for February...

February 1-14: Open water except 4-6 tenths of new and thin lake ice along the shore south of Michipicoten Bay.

February 15-29: Open water except 7-8 tenths of thin and medium lake ice along the shore south of Michipicoten Bay.

From Michipicoten Bay to the entrance to Nipigon Bay.

Outlook for December...

December 3-31: open water.

Outlook for January...

January 1-31: Open water except 1-3 tenths of new lake ice along parts of the shore near Nipigon Bay.

Outlook for February...

February 1-29: Open water except 4-6 tenths of new and thin lake ice along the Shore near Nipigon Bay.

Elsewhere in Lake Superior.

Outlook for December...

December 3-31: Ice free.

Outlook for January...

January 1-31: Ice free to open water.

Outlook for February...

February 1-29: Ice free to open water. Up to 1-3 tenths of new and thin lake ice in patches.

Lake Michigan.

Winter temperature and ice forecasts.

Seasonal Outlook - Great Lakes - Winter 2019-2020

Near normal temperatures are expected from December to February. Near normal ice conditions are forecast.

Green Bay.

Outlook for December...

December 3-15: Open water except 1-3 tenths of new and thin lake ice over the southern section and in the Bays de Noc.

December 16-31: Open water except 7-8 tenths of thin lake ice over the southern section. Consolidated thin lake ice in the Bays de Noc.

Outlook for January...

January 1-7: 7-8 tenths of thin and medium lake ice. Consolidated medium and thin lake ice in the Bays de Noc and in the extreme southern section.

January 8-21: 4-6 tenths of new and thin lake ice except 9-10 tenths of thin and medium lake ice over the southern and northern sections. Consolidated medium lake ice over the extreme southern section and in the Bays de Noc.

January 22-31: 9-10 tenths of thin and medium lake ice except consolidated medium lake ice over the southern and northern sections.

Outlook for February...

February 1-15: 9-10 tenths of thin and medium lake ice except consolidated medium and thick lake ice over the southern and northern sections.

February 16-29: 9-10 tenths of thin and medium lake ice except consolidated thick lake ice over the southern and northern sections.

Northeastern Lake Michigan.

Outlook for December...

December 3-31: Open water.

Outlook for January...

January 1-10: Open water except 9 tenths of new and thin lake ice along the northern shore. 7-8 tenths of new and thin lake ice in the straits of Mackinac.

January 11-24: Open water except 9-10 tenths of thin and medium lake ice from north and east of Beaver Island.

January 25-31: open water except 9-10 tenths of thin and medium lake ice north and northeast of Beaver Island. Consolidated medium lake ice in the Straits of Mackinac.

Outlook for February...

February 1-29: 4-6 tenths new and thin lake ice except 9-10 tenths of medium lake ice north and east of Beaver Island. Consolidated medium and thick lake ice along the northeastern shore and in the Straits of Mackinac.

Elsewhere in Lake Michigan.

Outlook for December...

December 3-31: Ice free to open water.

Outlook for January...

January 1-31: Open water except isolated areas of 1-3 tenths of new and thin lake ice along the southern and western shores.

Outlook for February...

February 1-29: Open water except isolated areas of 4-6 tenths of new and thin lake ice along shore.

Lake Huron and Georgian Bay.

Winter temperature and ice forecasts.

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

North Channel.

Outlook for December...

December 3-22: Open water except isolated patches of new and thin lake ice in sheltered bays.

December 23-31: Open water except areas of 4-6 tenths new and thin lake ice in the eastern section and along the north shore.

Outlook for January...

January 1-7: 4-6 tenths of new and thin lake ice.

January 8-20: 7-8 tenths of new and thin lake ice except consolidated thin and medium lake ice in the eastern and western sections.

January 21-31: Consolidated medium and thick lake ice.

Outlook for February...

February 1-29: Consolidated medium and thick lake ice.

St Mary's River.

Outlook for December...

December 3-9: 4-6 tenths of new and thin lake ice.

December 10-21: 9-10 tenths of new and thin lake ice.

December 21-31: 9-10 tenths of thin lake ice except consolidated thin and medium lake ice in northern sections.

Outlook for January...

January 1-24: Consolidated medium lake ice.

January 25-31: Consolidated medium and thick lake ice.

Outlook for February...

February 1-29: Consolidated thick lake ice.

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

Outlook for December...

December 3-25: Open water.

December 26-31: Open water except 1-3 tenths of thin and medium lake ice in the northwestern section.

Outlook for January...

January 1-15: Open water except 4-6 tenths of new and thin lake ice in the northwestern section.

January 16-31: Open water except 7-8 tenths of thin and medium lake ice in the northwestern section. 1-3 tenths of new lake ice south of Manitoulin Island. Consolidated thin and medium lake ice along the northwestern shore.

Outlook for February...

February 1-14: Open water except 7-8 tenths of thin lake ice in the northwestern section. 1-3 tenths of new and thin lake ice south of Manitoulin Island. Consolidated thin lake ice along the northwestern shore.

February 15-29: 1-3 tenths of new and thin lake ice except 7-8 tenths of medium lake ice in the northwestern section. Consolidated medium lake ice along the northwestern shore.

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North-western Lake Huron near the Straits of Mackinac.

Outlook for December...

December 3-31: Open water.

Outlook for January...

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

January 11-25: 9-10 tenths of thin and medium lake ice except consolidated thin and medium lake ice south of Bois Blanc Island.

January 26-31: 9-10 tenths of thin and medium lake ice except consolidated medium lake ice in the western section.

Outlook for February...

February 1-14: 9-10 tenths of thin and medium lake ice except consolidated medium lake ice in the western section.

February 15-29: 9-10 tenths of thin and medium lake ice except consolidated medium and thick lake ice south in the western section.

From north-western Lake Huron to Saginaw Bay.

Outlook for December...

December 3-31: Open water.

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

January 11-20: Patches of new and thin lake ice except 4-6 tenths of thin lake ice near and south of Alpena.

January 21-31: 4-6 tenths of new and thin lake ice except 7-8 tenths thin lake ice near and south of Alpena.

Outlook for February...

February 1-14: 7-8 tenths thin and medium lake ice except 9 tenths thin and medium lake ice along the shore.

February 15-29: 7-8 tenths of new and thin lake ice except 9-10 tenths of medium lake ice from Alpena and southward.

Saginaw Bay.

Outlook for December...

December 3-10: open water except 1-3 tenths of new and thin lake ice along parts of the shore.

December 11-20: 1-3 tenths of new and thin lake ice.

December 21-31: 9-10 tenths of new and thin lake ice.

Outlook for January...

January 1-7: 9-10 tenths of thin and medium lake ice.

January 8-15: 9-10 tenths of medium lake ice except consolidated medium lake ice along the shores.

January 16-31: Consolidate medium lake ice.

Outlook for February...

February 1-29: Consolidated medium and thick lake ice.

The southern and eastern shore of Lake Huron.

Outlook for December...

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

Outlook for January...

January 1-15: Open water except 4-6 tenths of new and thin lake ice along the shore.

January 16-31: 7-8 tenths of thin lake ice along the shore except 9-10 tenths of thin and medium lake ice along the Bruce Peninsula.

Outlook for February...

February 1-29: 7-8 tenths of thin and medium lake ice along the shore except 9-10 tenths thin and medium lake ice along the southern shore. Consolidated medium lake ice along the Bruce Peninsula.

Georgian Bay.

Outlook for December...

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

Outlook for January...

January 1-15: Open water except 4-6 tenths of new and thin lake ice along the northeastern shore. Consolidated thin lake ice in sheltered bays.

January 15-24: Open water except 9-10 tenths of thin and medium lake ice extending up to 30 nautical miles from the northeastern shore. Consolidated medium lake ice in sheltered bays.

January 25-31: 4-6 tenths thin lake ice except 9-10 tenths thin and medium lake ice in the northern section. Consolidated medium lake ice along the shore.

Outlook for February...

February 1-29: 4-6 tenths thin lake ice except 9-10 tenths thin and medium lake ice in the northern section. Consolidated medium and thick lake ice along the shore.

Elsewhere in Lake Huron.

Outlook for December...

December 3-31: Ice free.

Outlook for January...

January 1-31: Open water to ice free.

Outlook for February...

February 1-29: Open water except 1-3 tenths of new and thin lake ice in central portions of the lake.

Lake Erie and Lake St. Clair

Winter temperature and ice forecasts.

Near normal temperatures are expected from December to February. Near normal to ice conditions are forecast.

Lake St Clair and the Western Basin.

Outlook for December...

December 3-9: Open water except occasional patches of 1-3 tenths of new lake ice.

December 10-21: 1-3 tenths of new and thin lake ice.

December 22-31: 7-8 tenths of new and thin lake ice.

Outlook for January...

January 1-10: 7-8 tenths of new and thin lake ice except 9-10 tenths new and thin lake ice in the Western Basin.

January 11-31: 9-10 tenths of thin and medium lake ice except consolidated medium lake ice in Lake St. Clair.

Outlook for February...

February 1-10: 9-10 tenths of thin and medium lake ice except consolidated thin and medium lake ice in Lake St. Clair.

February 11-29: 9-10 tenths of medium lake ice except consolidated medium and thick lake ice in Lake St. Clair.

The rest of Lake Erie.

Outlook for December...

December 3-31: Open water except 1-3 tenths of new and thin lake ice in Long Point Bay.

Outlook for January...

January 1-10: Open water except 1-3 tenths of new and thin lake ice in the western section and along parts of the north shore. 7-8 tenths of new and thin lake ice in Long Point Bay.

January 11-22: Open water 7-8 tenths new and thin lake ice in the western section and along the north shore.

January 23-31: 4-6 tenths new and thin lake ice except 9-10 tenths thin and medium lake ice in the western and northern sections.

Outlook for February...

February 1-20: 9 tenths of medium lake ice

February 21-29: 4-6 tenths medium lake ice in the western section except 9 tenths of medium lake ice in the northern and eastern sections.

Lake Ontario.

Winter temperature and ice forecasts.

Near normal temperatures are expected from December to February. Near normal ice conditions are forecast.

Northeastern Lake Ontario.

Outlook for December...

December 3-31: Open water.

Outlook for January...

January 1-7: Open water.

January 8-15: Open water except 7-8 tenths of new and thin lake ice in sheltered bays.

January 16-24: open water except 7-8 tenths new and thin lake in in the northeastern section.

January 25-31: Open water except 1-3 tenths of new and thin lake ice in the northeastern section. 9 -10 tenths thin lake ice near the shore. Consolidated thin lake ice in sheltered bays.

Outlook for February...

North American Ice Service

February 1-20: Open water except 4-6 tenths of thin and medium lake ice over the northeastern section. 9-10 tenths thin and medium lake ice near the shore. Consolidated medium lake ice in sheltered bays.

February 21-29: Open water except 7-8 tenths medium lake ice in the northeastern section. Consolidated medium lake ice in bays and along the shore.

Bay of Quinte.

Outlook for December...

December 3-9: open water except patches of 1-3 tenths new lake ice.

December 10-20: 9-10 tenths new and thin lake ice.

December 21-31: Consolidated thin lake ice.

Outlook for January...

January 1-20: Consolidated thin and medium lake ice.

January 21-31: Consolidated medium lake ice.

Outlook for February...

February 1-29: Consolidated medium and thick lake ice.

Elsewhere in Lake Ontario.

Outlook for December...

December 3-31: Ice free to open water.

Outlook for January...

January 1-31: Open water except isolated patches of new and thin lake ice along the south shore.

Outlook for February...

February 1-29: Open water except 1-3 tenths of new and thin lake ice along the eastern and southern shores.

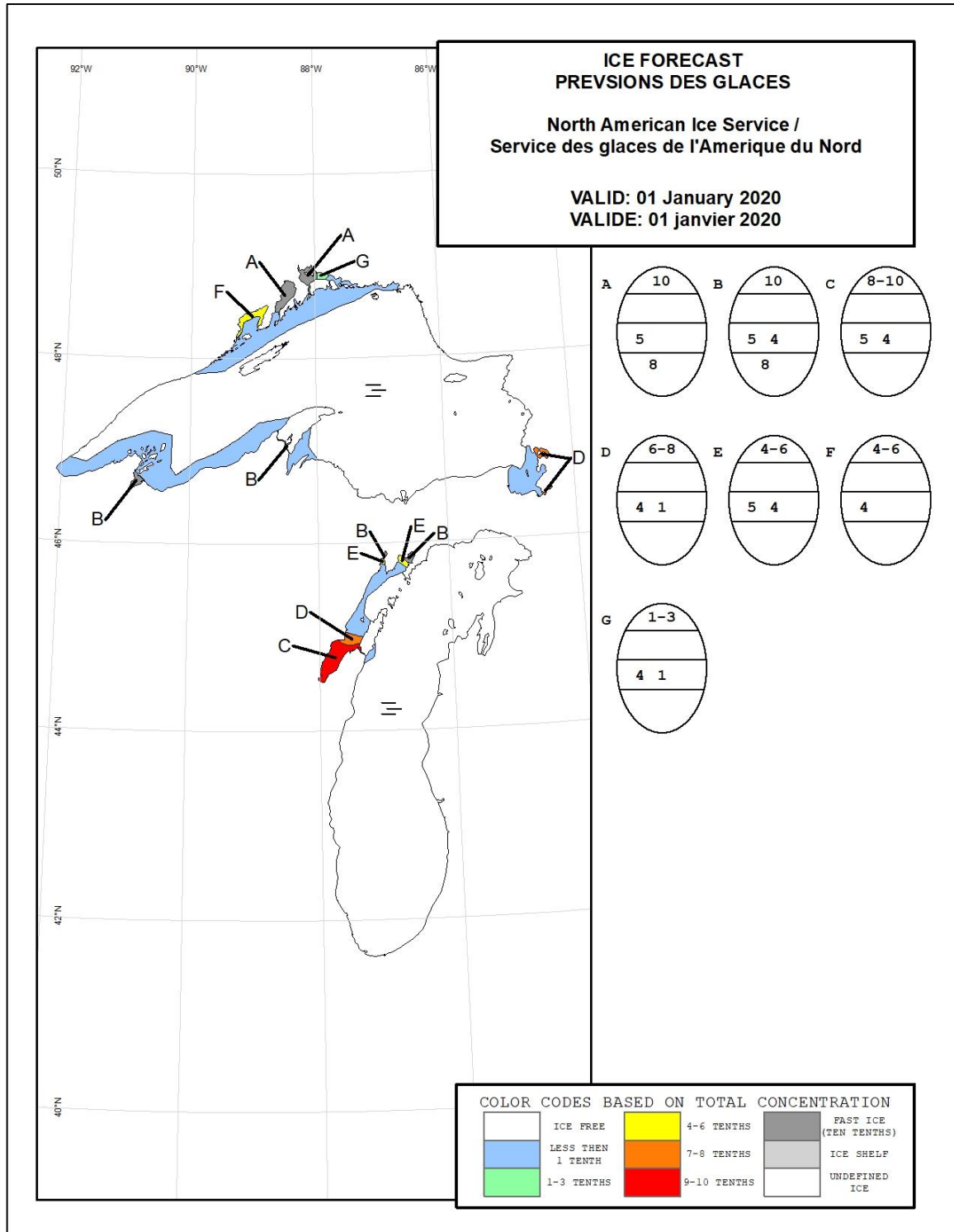


Figure 1: Expected ice conditions – western Great Lakes – 1 January 2020

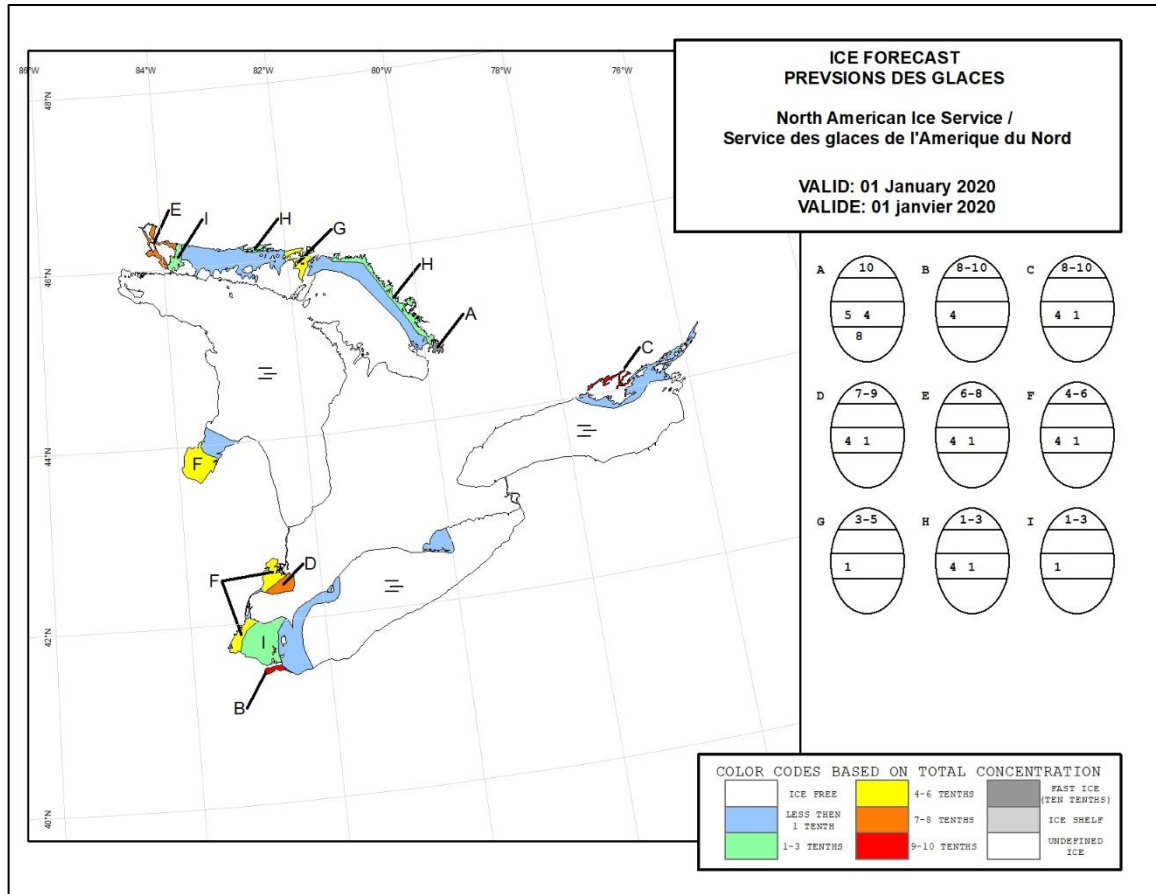


Figure 2: Expected ice conditions – eastern Great Lakes – 1 January 2020

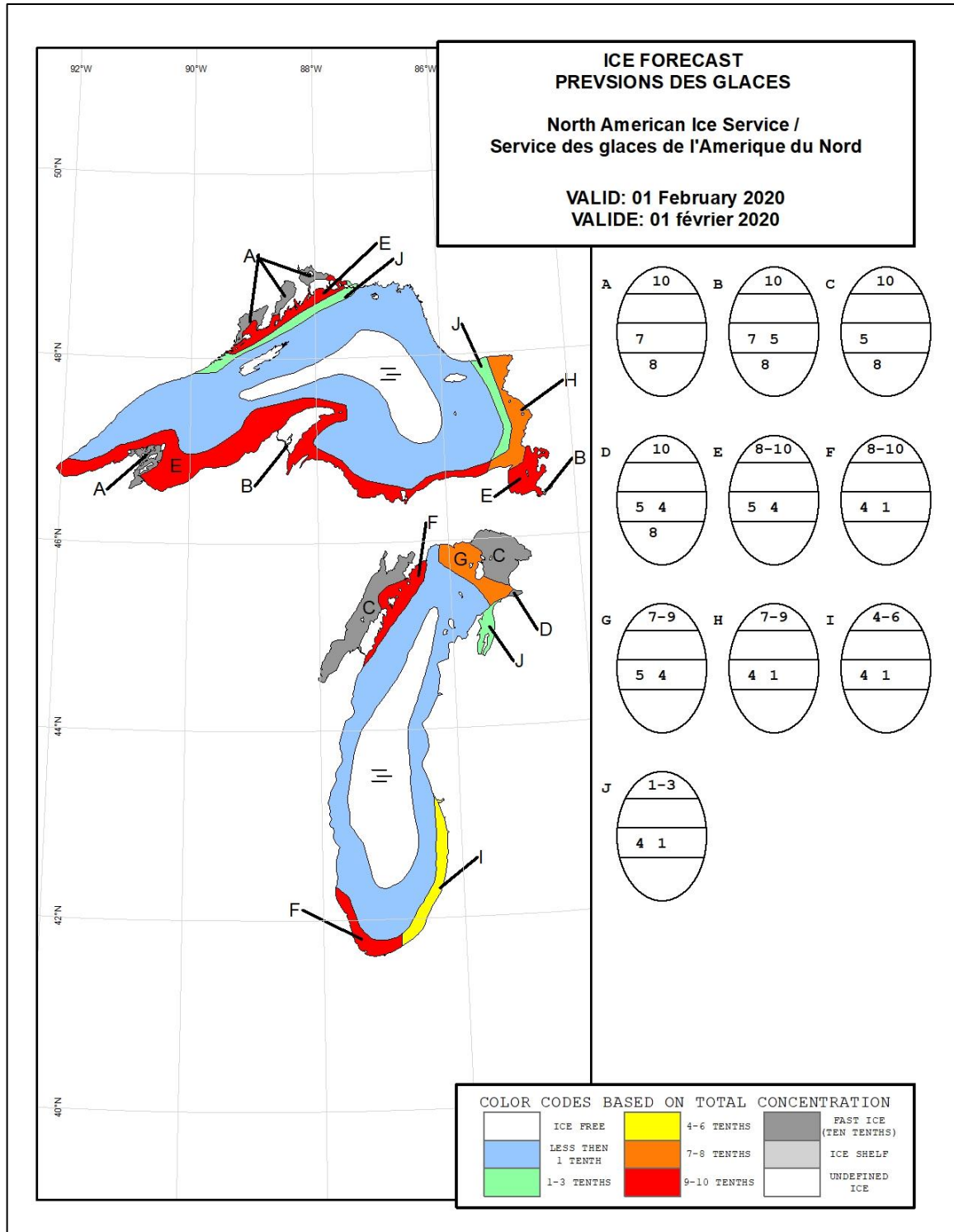


Figure 3: Expected ice conditions – western Great Lakes – 1 February 2020

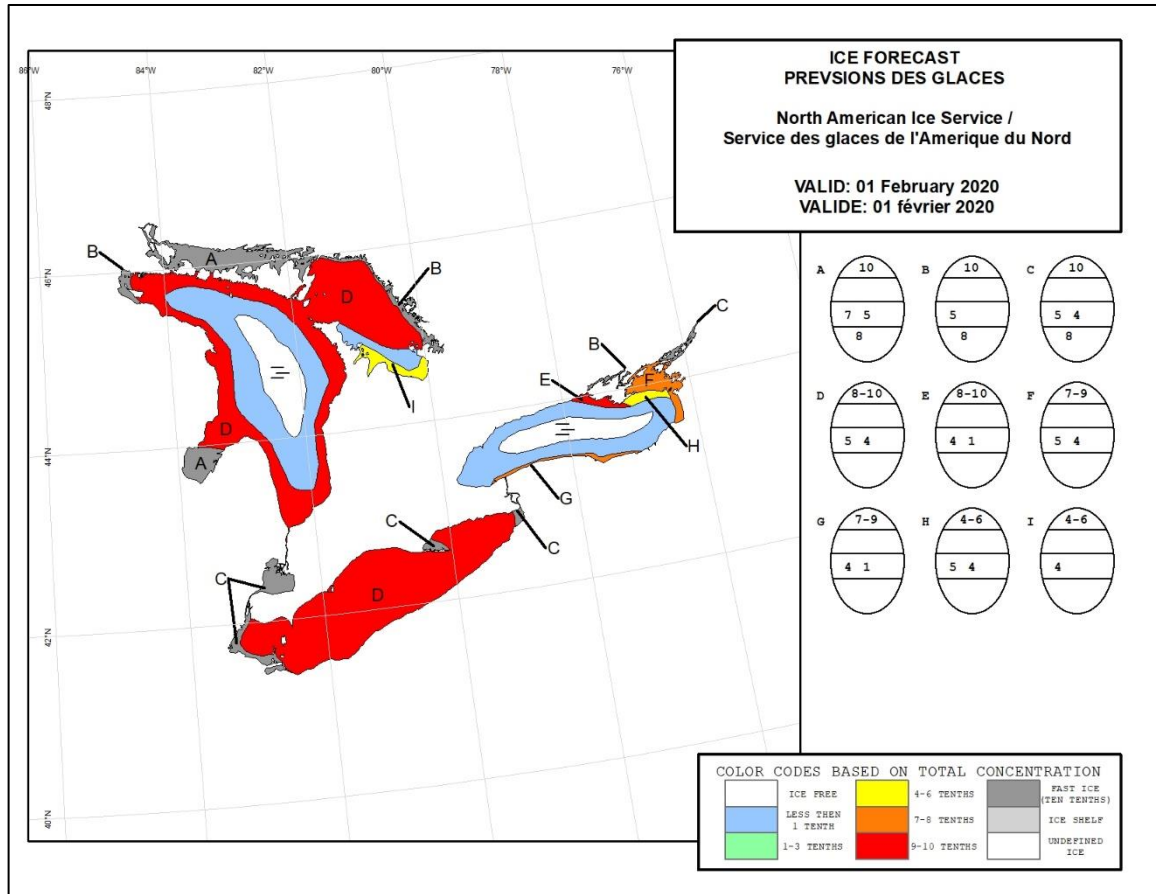


Figure 4: Expected ice conditions – eastern Great Lakes – 1 February 2020

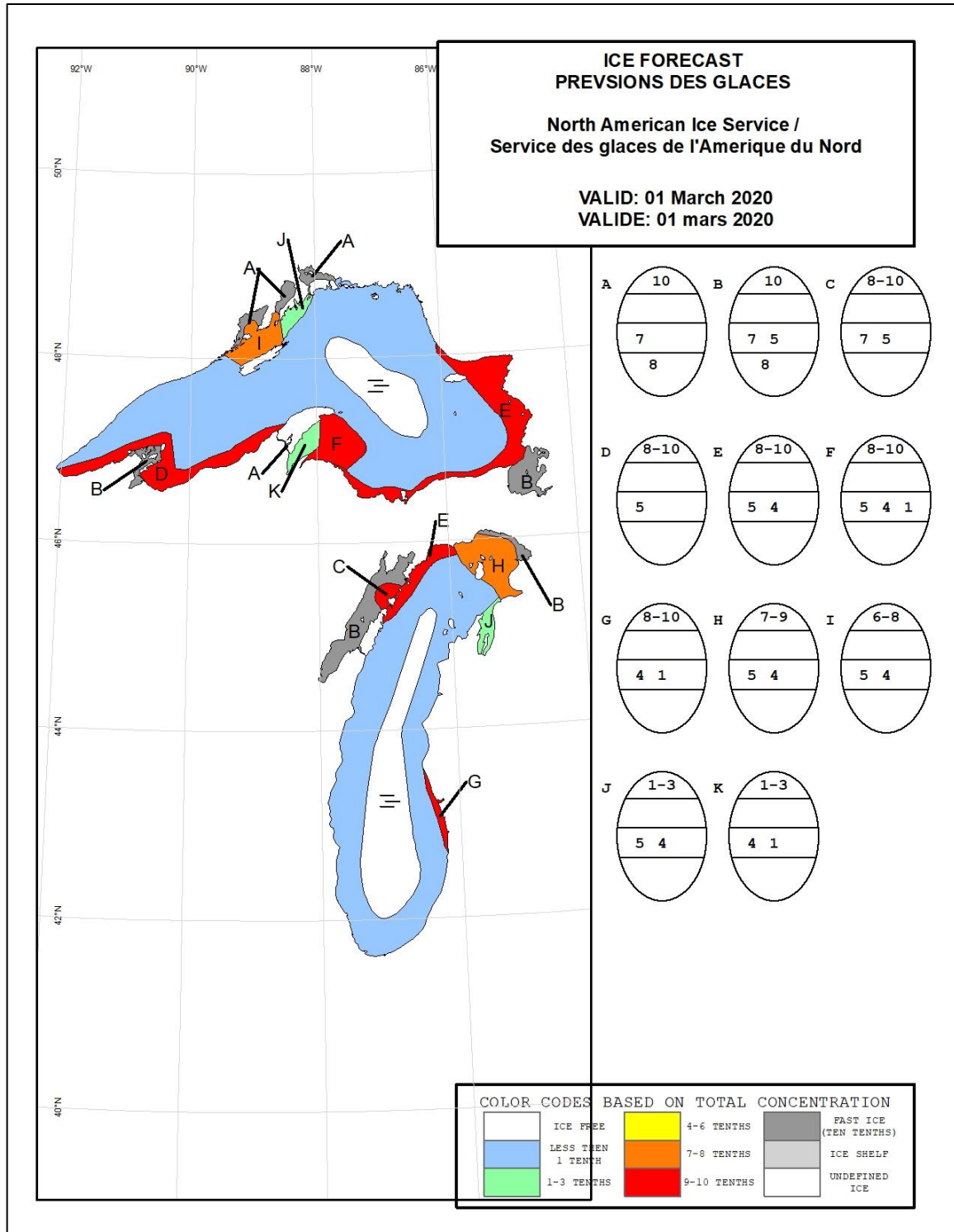


Figure 5: Expected ice conditions – western Great Lakes – 1 March 2020

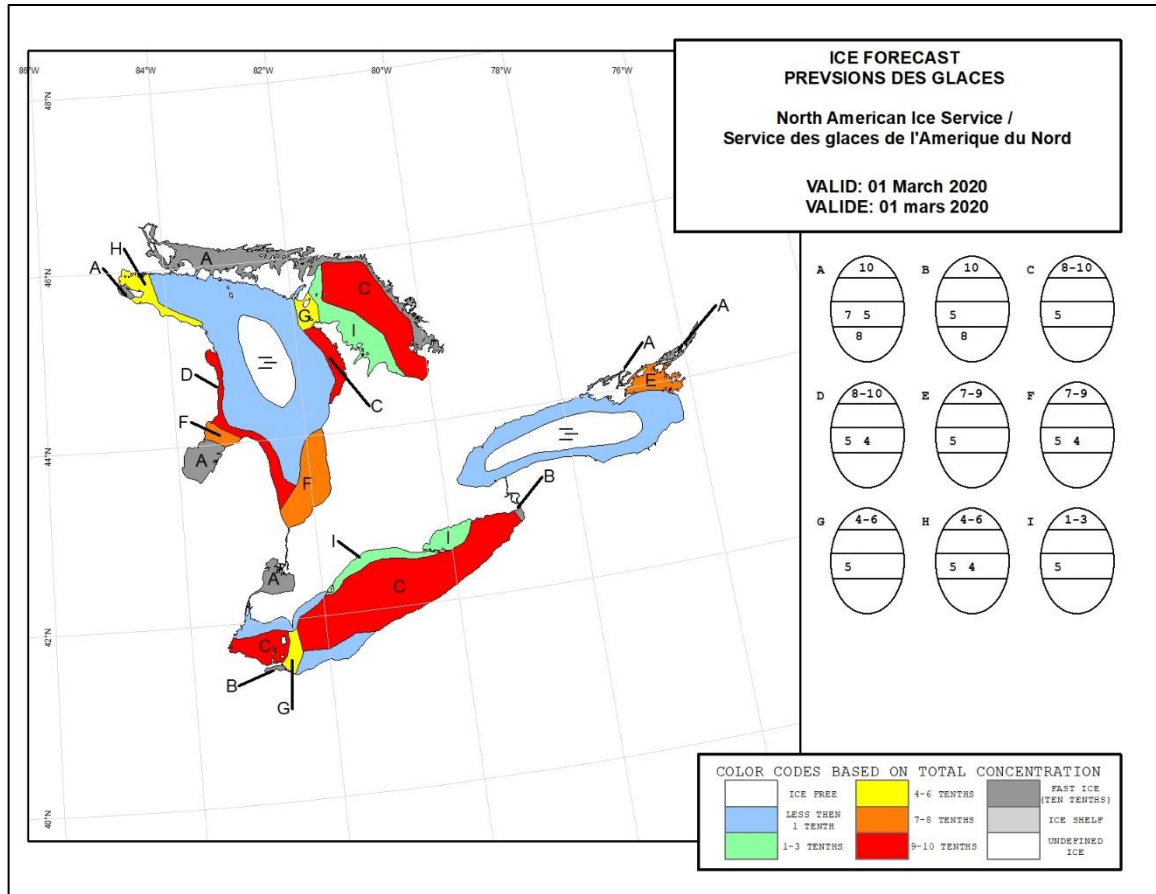


Figure 6: Expected ice conditions – eastern Great Lakes – 1 March 2020