

**Seasonal Outlook
Great Lakes
Winter 2018-2019**



Issued by the North American Ice Service

3 December 2018

Lake Superior

Winter temperature and ice forecasts.

Above average air temperatures are forecast from December 2018 to February 2019.
Below 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 1-28: 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 10-15: 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 16-31: 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.

Outlook for January...

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

Nipigon Bay. 4-6 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 1-28: Consolidated with thick lake ice.

From Grand Marais Minnesota to the entrance to Nipigon Bay.

Outlook for December...

December 10-31: Open water.

Outlook for January...

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

January 16-31: 4-6 tenths of new and thin lake ice along the shore. 1-2 tenths new and thin lake ice extending to the northern shore of Isle Royale.

Outlook for February...

February 1-28: 7-8 tenths of thin lake ice along the shore and 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 1-31: Open water except 1-3 tenths of new and thin lake ice near Duluth near the end of the month.

Outlook for February...

February 1-15: Open water except 1-3 tenths of new and thin lake ice near Duluth.

February 16-28: Open water except 4-6 tenths of thin and medium lake ice near Duluth.

Southern Lake Superior west of Keweenaw Peninsula.

Outlook for December...

December 10-20: 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 tenths of new and thin lake ice along the shore except consolidated medium lake ice in Chequamegon Bay.

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

Outlook for February...

February 1-14: 9-10 tenths of thin lake ice along the shore except consolidated thick lake ice in Chequamegon Bay and the Apostle Islands.

February 15-28: 9-10 tenths of thin and medium lake ice within 30 nautical miles of 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 10-31: Open water.

Outlook for January...

January 1-10: Open water.

January 11-22: open water except 1-3 tenths new and thin lake ice along the shore.

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

Outlook for February...

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

February 15-28: 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 10-31: 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: 7-8 tenths of new and thin lake ice except 9-10 tenths of medium lake ice over the southeastern section. Consolidated medium lake ice in sheltered bays

Outlook for February...

February 1-14: 7-8 tenths of thin lake ice except 9-10 tenths of medium and thick lake ice over the southeastern section. Consolidated medium lake ice in sheltered bays and in the extreme southeastern section.

February 15-28: 7-8 tenths of thin and medium lake ice except consolidated medium and thick lake ice over the southeastern section.

From Whitefish Bay northwards to Michipicoten Bay.

Outlook for December...

December 10-31: Open water.

Outlook for January...

January 1-22: Open water except isolated patches of new and thin lake ice along the shore.

January 23-31: 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 15-28: 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 15-31: 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 1-28: Open water except 4-6 tenths of new and thin lake ice along the shore.

Elsewhere in Lake Superior.

Outlook for December...

December 15-31: Ice free.

Outlook for January...

January 1-31: Ice free to open water.

Outlook for February...

February 1-28: Ice free to open water.

Lake Michigan.

Winter temperature and ice forecasts.

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

Green Bay.

Outlook for December...

December 7-15: 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: Open water except 9-10 tenths of thin and medium lake ice over the southern section. Consolidated medium and thin lake ice in the Bays de Noc.

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 16-28: 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 15-31: Open water except patches of new and thin lake ice along the northern shore.

Outlook for January...

January 1-10: Open water except 7-8 tenths of new and thin lake ice along the northern shore. 1-3 tenths of new and thin lake ice in the straits of Mackinac.

January 11-31: Open water except 9-10 tenths of thin and medium lake ice from north and east of Beaver Island.

Outlook for February...

February 1-14: 1-3 tenths of new and thin lake ice except 9-10 tenths of thin and medium lake ice north and east of Beaver Island. Consolidated thin and medium lake ice along the northeastern shore and in the Straits of Mackinac.

February 15-28: 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 10-31: 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 1-28: Open water except isolated areas of 4-6 tenths of new and thin lake ice along the southern and western.

Lake Huron and Georgian Bay.

Winter temperature and ice forecasts.

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

North Channel.

Outlook for December...

December 10-22: Open water except isolated patches of new and thin lake ice in sheltered bays.

December 23-31: Open water except 1-3 tenths new and thin lake ice in the eastern section and along the north shore.

Outlook for January...

January 1-10: 4-6 tenths of new and thin lake ice.

January 11-22: 7-8 tenths of new and thin lake ice except consolidated thin and medium lake ice in the eastern and western sections.

January 23-31: Consolidated medium and thick lake ice.

Outlook for February...

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

St Mary's River.

Outlook for December...

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 1-10: Consolidated thin and medium lake ice.

January 10-31: Consolidated medium lake ice.

Outlook for February...

February 1-10: Consolidated medium and thick lake ice.

February 11-28: Consolidated thick lake ice.

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

Outlook for December...

December 10-31: Open water.

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 new and thin lake ice in the northwestern section. 1-3 tenths of new lake ice south of Manitoulin Island. Consolidated thin 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 lake ice south of Manitoulin Island. Consolidated thin lake ice along the northwestern shore.

February 15-28: 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.

North-western Lake Huron near the Straits of Mackinac.

Outlook for December...

December 10-31: Open water.

Outlook for January...

January 1-15: 4-6 tenths of new and thin lake ice.

January 16-31: 9-10 tenths of thin and medium lake ice except consolidated thin and medium lake ice south of Bois Blanc Island.

Outlook for February...

February 1-14: 9-10 tenths of thin and medium lake ice except consolidated medium lake ice south of Bois Blanc Island.

February 15-28: Consolidated medium and thick lake ice.

From north-western Lake Huron to Saginaw Bay.

Outlook for December...

December 15-31: Open water.

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

January 11-22: Patches of new and thin lake ice except 4-6 tenths of thin lake ice near and south of Alpena.

January 23-31: 1-3 tenths of new and thin lake ice except 7-8 tenths near and south of Alpena.

Outlook for February...

February 1-7: 4-6 tenths of thin lake.

February 8-28: 4-6 tenths of new and thin lake ice except 9-10 tenths of thin and medium lake ice from Alpena and southward.

Saginaw Bay.

Outlook for December...

December 10-20: 4-6 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 1-28: Consolidated medium and thick lake ice.

The southern and eastern shore of Lake Huron.

Outlook for December...

December 10-31: Open water.

Outlook for January...

January 1-15: Open water except 1-3 tenths of new and thin lake ice along the southern shore. 4-6 tenths of new and thin lake ice along the Bruce Peninsula.

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 1-28: 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 10-31: Open water except 1-3 tenths of new and thin lake ice 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 15-31: 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.

Outlook for February...

February 1-14: 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.

February 15-28: 1-3 tenths new and thin lake ice except 9-10 tenths of medium lake ice extending up to 30 nautical miles from the northeastern shore. Consolidated medium and thick lake ice in sheltered bays.

Elsewhere in Lake Huron.

Outlook for December...

December 15-31: Ice free.

Outlook for January...

January 1-31: Open water to ice free.

Outlook for February...

February 1-28: Open water to ice free.

Lake Erie and Lake St. Clair

Winter temperature and ice forecasts.

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

Lake St Clair and the Western Basin.

Outlook for December...

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

December 22-31: 4-6 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 over southeastern 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 11-28: 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 10-31: 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 along the northern shore. 7-8 tenths of new and thin lake ice in Long Point Bay.

January 8-22: Open water except 4-6 tenths of new and thin lake ice along sections of the shore. 9-10 tenths of thin lake ice in Long Point Bay.

January 23-31: 1-3 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 1-14: 7-8 tenths of new and thin lake ice along the north shore except 9-10 tenths of medium lake ice elsewhere.

February 15-28: 9 tenths of medium lake ice.

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 10-31: Open water.

Outlook for January...

January 1-15: Open water except 7-8 tenths of new and thin lake ice in sheltered bays.

January 16-31: Open water except 1-3 tenths of new and thin lake ice over the northeastern section. Consolidated thin lake ice in sheltered bays.

Outlook for February...

February 1-28: Open water except 4-6 tenths of thin and medium lake ice over the northeastern section. Consolidated medium lake ice in sheltered bays.

Bay of Quinte.

Outlook for December...

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 1-28: Consolidated medium and thick lake ice.

Elsewhere in Lake Ontario.

Outlook for December...

North American Ice Service

- December 15-31: Ice free to open water.
- Outlook for January...
 - January 1-31: Open water except isolated patches of new and thin lake ice along the shores.
- Outlook for February...
 - February 1-28: Open water except 1-3 tenths of new and thin lake ice along the eastern and southern shores.

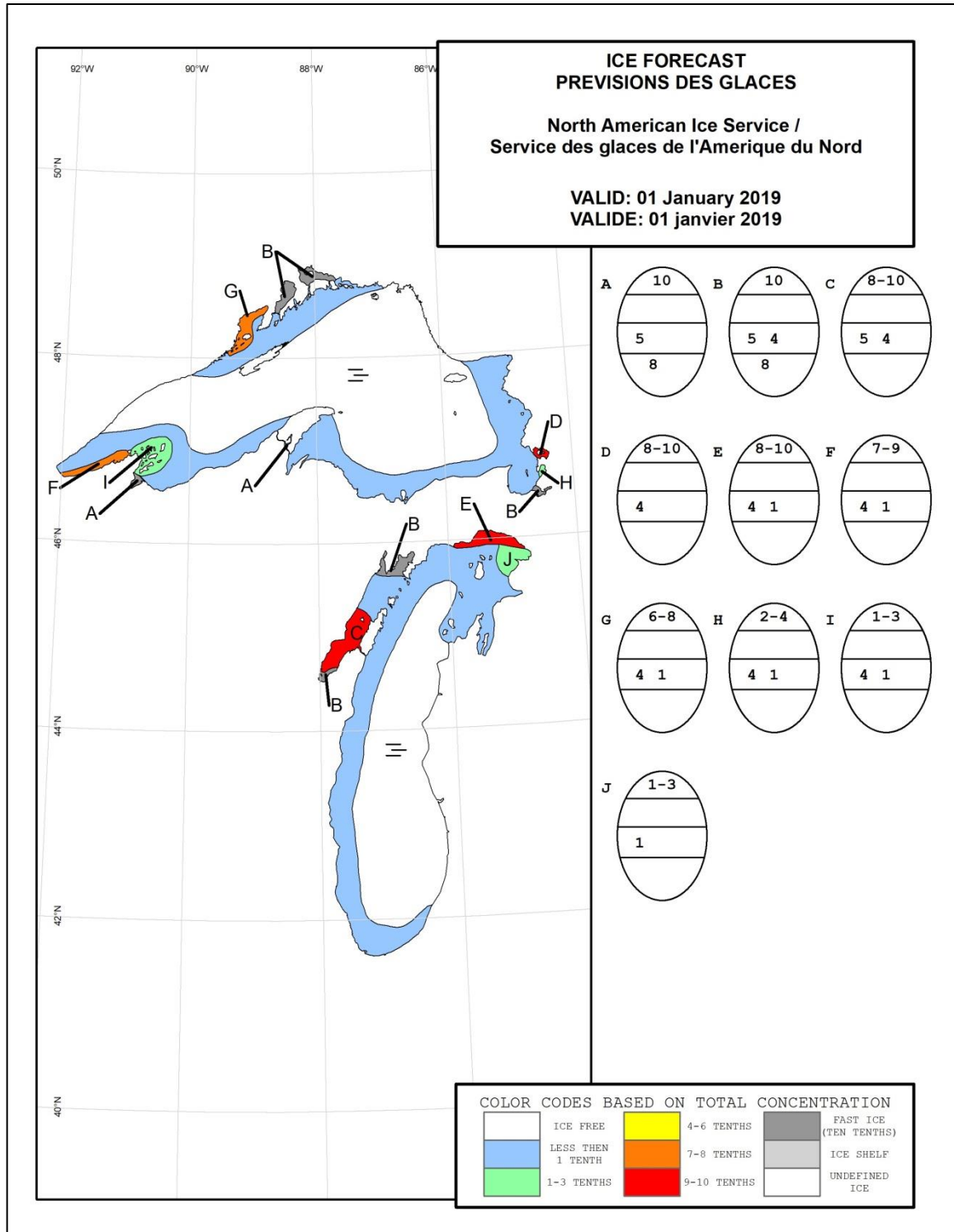


Figure 1: Expected ice conditions – western Great Lakes – 1 January 2019

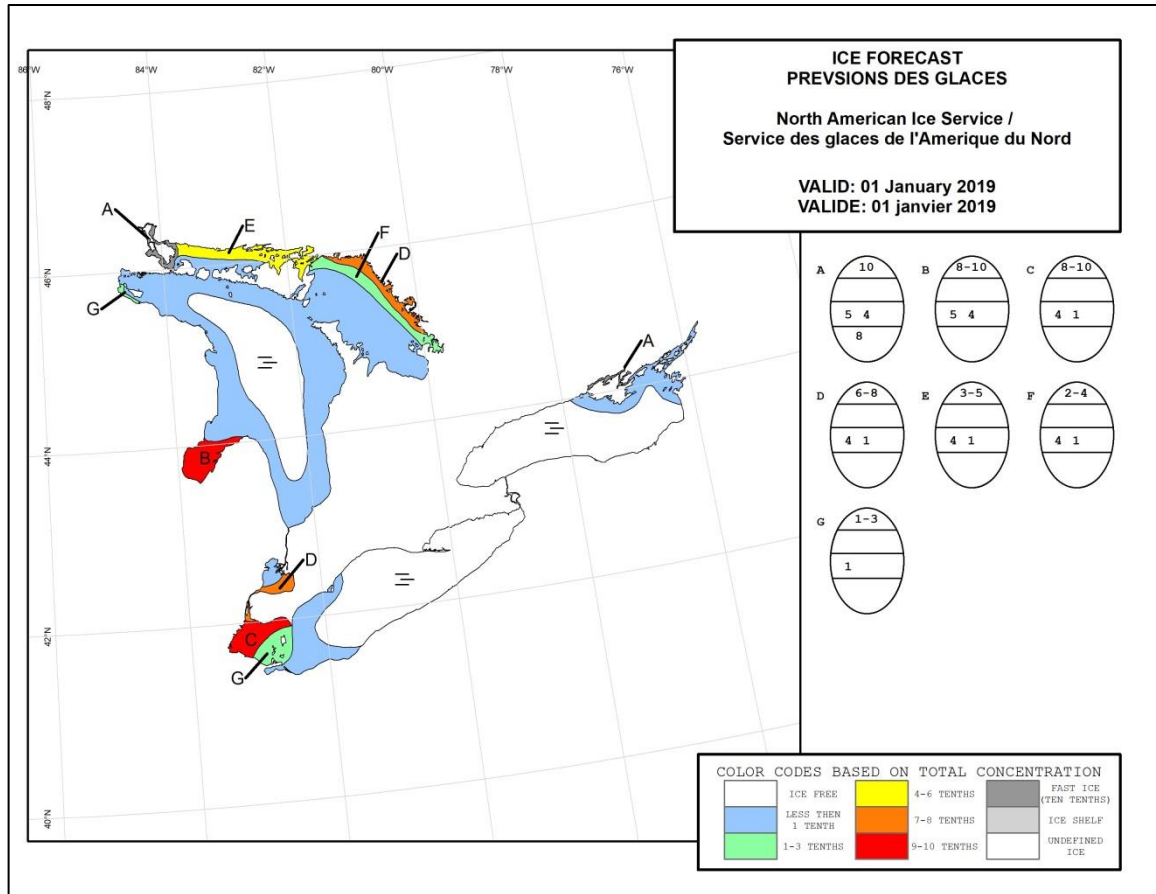


Figure 2: Expected ice conditions – eastern Great Lakes – 1 January 2019

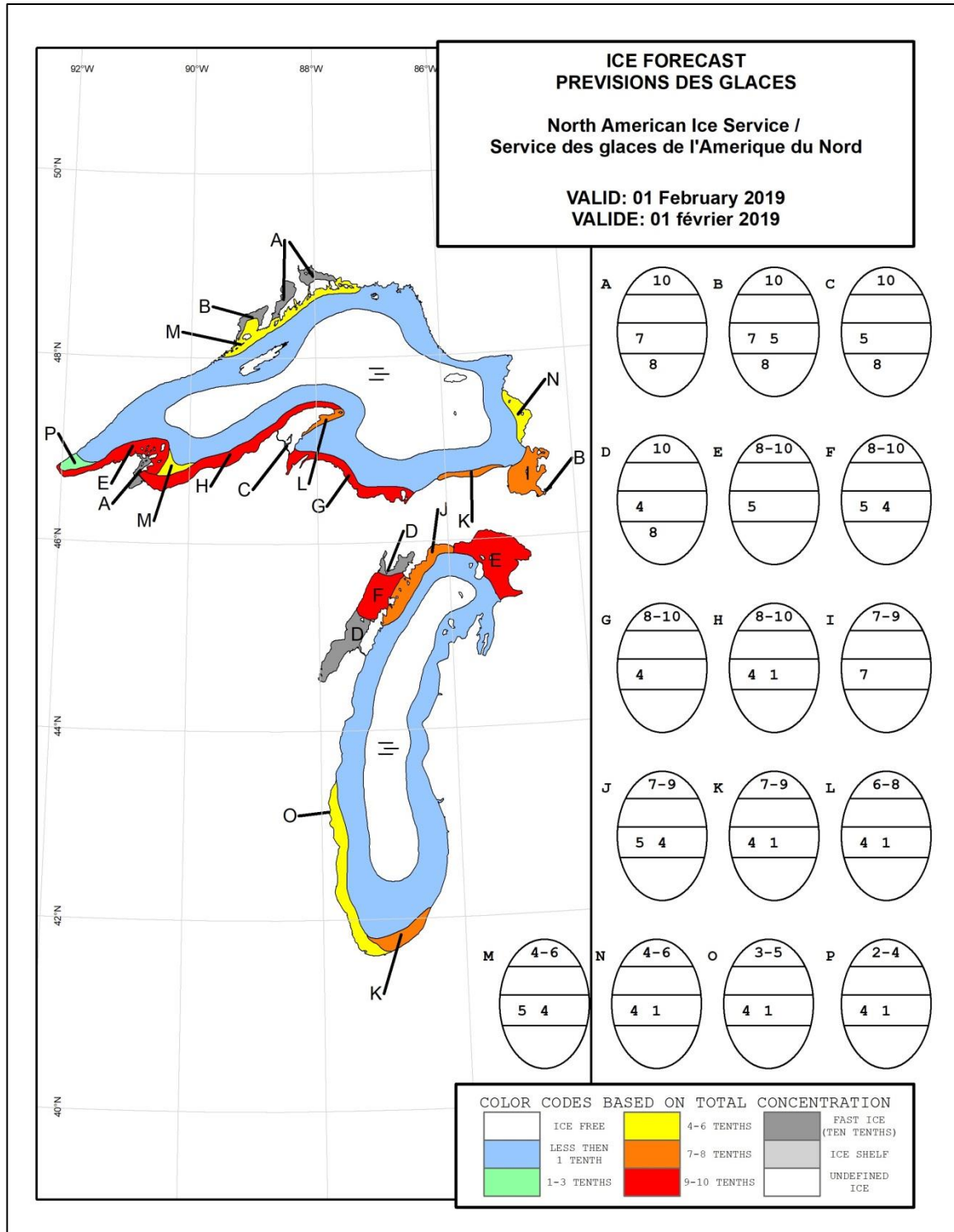


Figure 3: Expected ice conditions – western Great Lakes – 1 February 2019

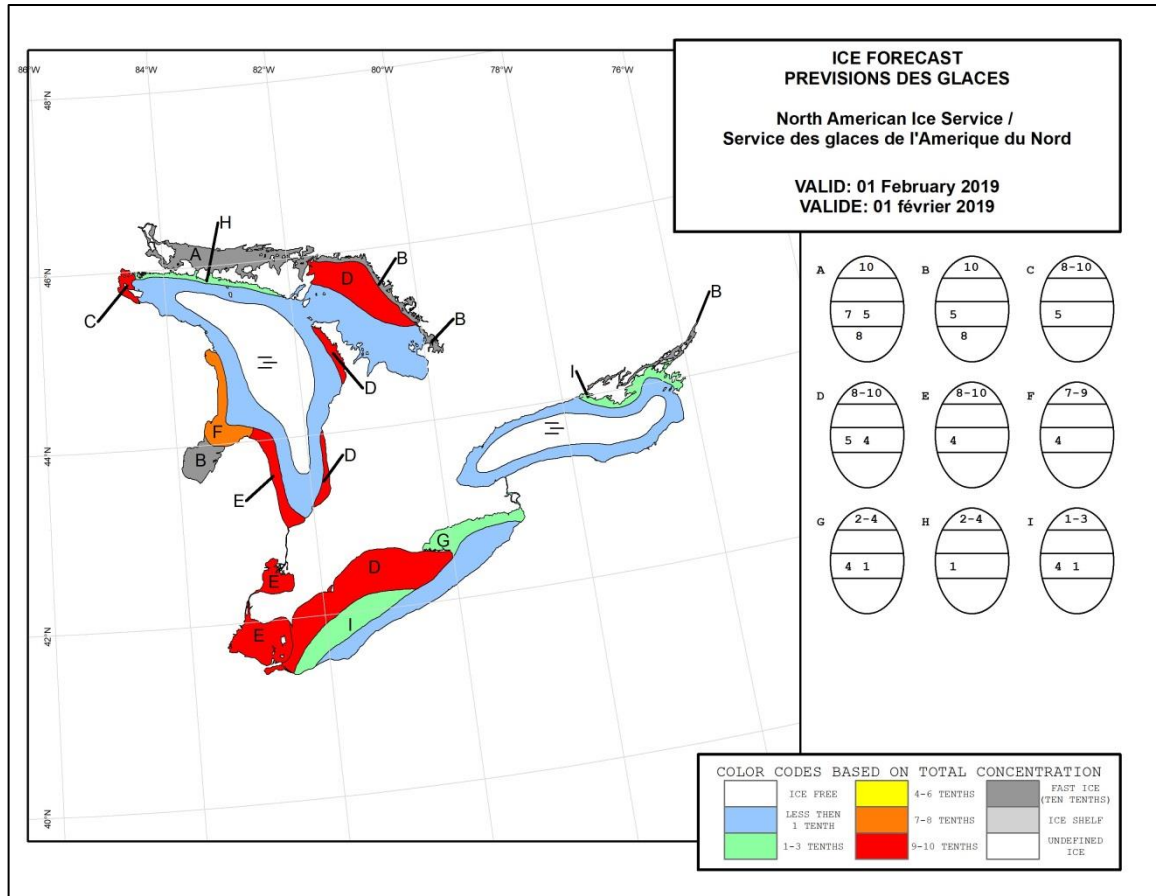


Figure 4: Expected ice conditions – eastern Great Lakes – 1 February 2019

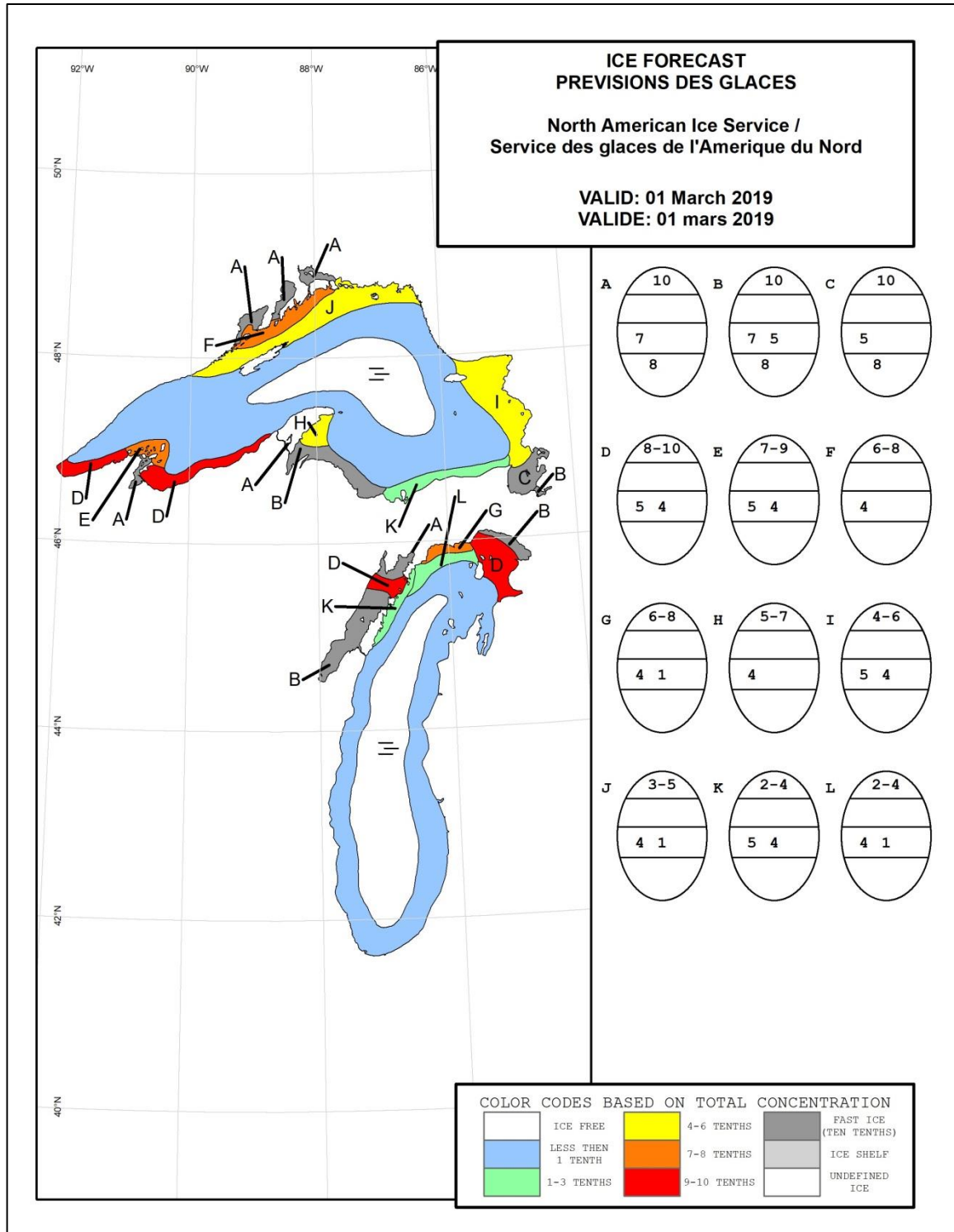


Figure 5: Expected ice conditions – western Great Lakes – 1 March 2019

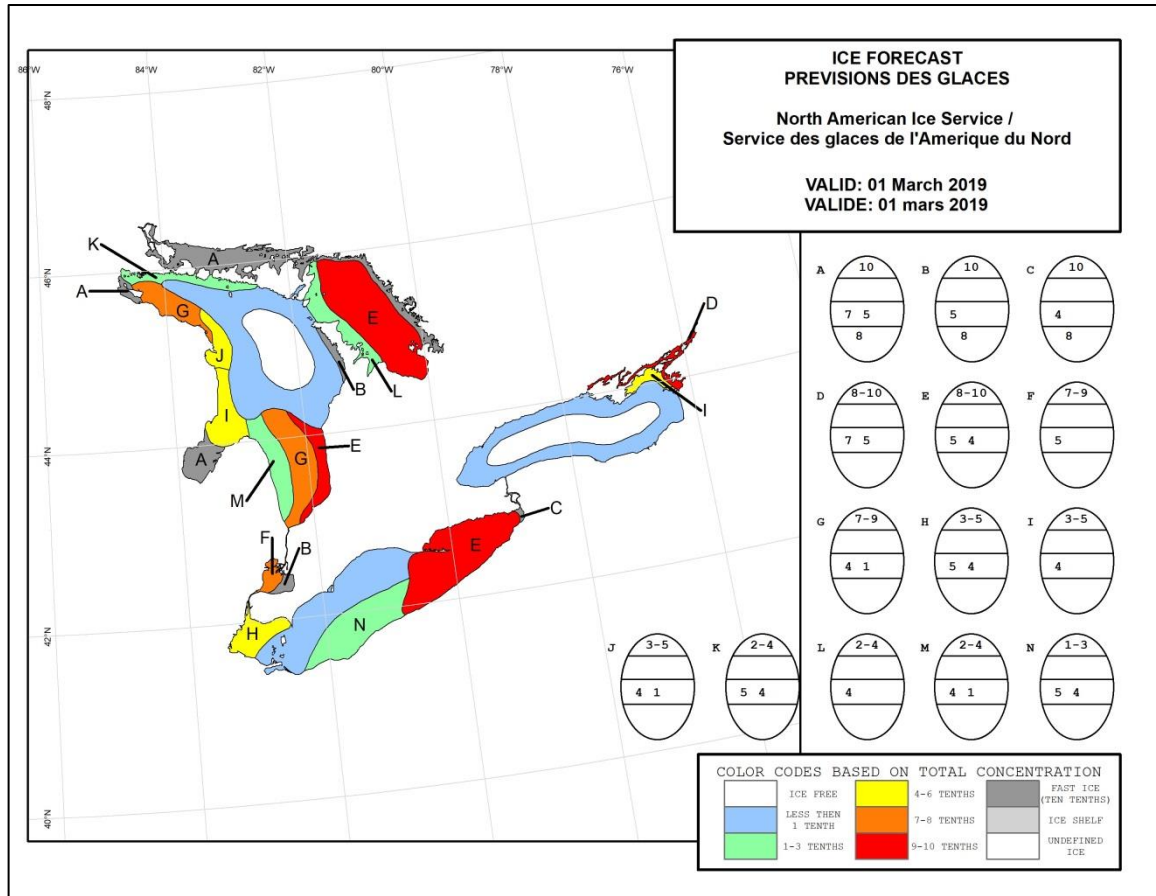


Figure 6: Expected ice conditions – eastern Great Lakes – 1 March 2019