

A photograph of two hockey players on an ice rink. The player on the left is in a low, ready stance, wearing a dark blue jersey and a black CCM helmet. The player on the right is also in a low stance, wearing a grey jersey with 'GO' visible and a black CCM helmet. A small, scruffy, grey and white dog stands between them on the ice. The background shows a snowy field and a line of trees under a cloudy sky. The image is framed by blue and white geometric shapes.

2021-2022 RINKWATCH *Report*

www.rinkwatch.org

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IF YOU'RE SKATING ON THIN ICE,
YOU MIGHT AS WELL DANCE.

- Anita Shreve”



/RinkWatch



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ABOUT

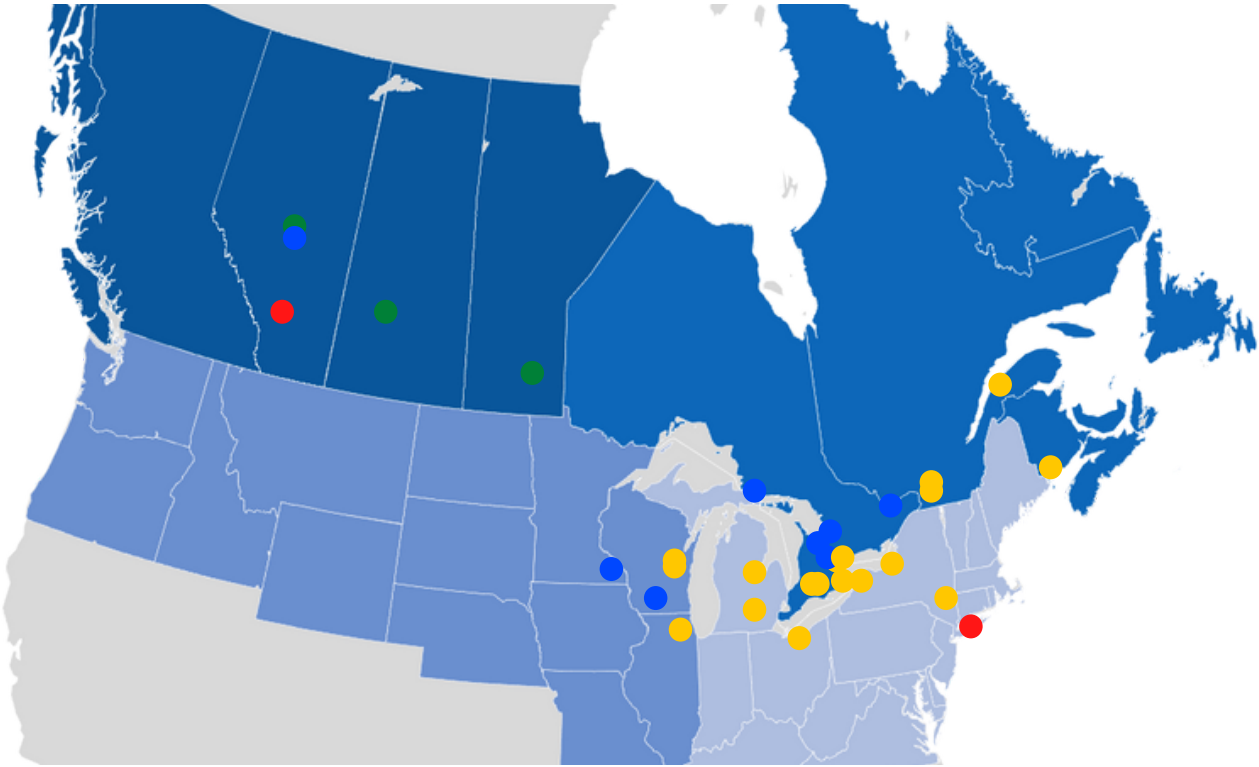
RinkWatch

January 2023 will mark the 10th anniversary of RinkWatch. We began in 2013 with a simple website that asked people with backyard skating rinks to visit our website, pin the location of their rink on our interactive map, and indicate on a daily basis whether their rink was skatable given the weather conditions. Over the years more than 1,500 different rinks have participated. Some people participated for only a few days or weeks in a single winter, while others have been participating for many years. In both cases, the data provided to us have been exceptionally valuable in understanding the relationship between winter temperatures and outdoor skating. We have used that data to reconstruct historical skating conditions in North America dating back to the 1940s, and projected future skating conditions to the end of this century. It has made RinkWatch one of Canada's most successful citizen science projects.

Three winters ago we launched the RinkWatch Sentinels program, inviting a select number of outdoor rinks from across North America to provide more detailed information about their rinks and how a range of weather factors affect their performance. This additional information will help us make more detailed long-range forecasts for outdoor skating in a changing climate. Each year, Sentinels receive a detailed report about their rink's performance and how it compares with others. If you're a Sentinel, thank you so much for supporting our science. If you're not a Sentinel but would like to be, please let us know.

Best wishes and happy skating to all in the winter of 2022-23.
The RinkWatch Team

Locations OF SENTINEL RINKS



Red = 30 days or less | Yellow = 31-60 days | Blue = 61-90 days | Green = 90+ days

Calgary, AB	London, ON	Waterloo, ON	Verona, WI
Edmonton, AB	Maple, ON	Laval, QC	East Lansing, MI
Edmonton, AB	Mono, ON	St-Calixte, QC	Midland, MI
Petersfield, MB	Navan, ON	Rimouski, QC	East Amherst, NY
Saskatoon, SK	Niagara Falls, ON	Saint Charles, IL	Nesconset, NY
Oak Bay, NB	Richards Landing, ON	Rochester, MN	Rhinebeck, NY
Holland Centre, ON	Thornhill, ON	Neenah, WI	Oswego, NY
London, ON	Wasaga Beach, ON	Oshkosh, WI	Berea, OH

WINTER 2021-22

Rink Summary

The winter of 2021-22 followed many of the same patterns we have grown used to in recent years: a long skating season in the Canadian Prairies/Great Plains region with relatively few interruptions, relatively good skating seasons in the upper Great Lakes region, and variable conditions in the lower Great Lakes, Quebec, northeastern US and Atlantic Canada. January was generally a good skating month in all regions, with February bringing some short bursts of warm temperatures to the east. Most rinks in all regions were packed up by mid-March this year. This having been the second consecutive “COVID winter” featuring periodic closures of schools and recreational facilities in many areas, it was especially good that outdoor rinks could take up some of the slack and give our kids safe places to play, socialize and exercise.

As is usually the case, the first outdoor rinks to open this past winter were in Saskatchewan, Alberta and Manitoba, starting in the third week of November – not nearly as early as the previous winter, when rinks were operable in late October on the Prairies, but consistent with timing we’ve come to expect. The community rink in

Saskatoon monitored by dedicated RinkWatch Sentinel Aric Dodd logged the most skating days of any participating rink, at 112 in total, with Sentinel rinks in Alberta and Manitoba also logging 95+ skating days. There weren’t many mid-season interruptions this year because of weather, with rinks in the region winding up mostly by mid-March, by which time the skates would need a good sharpening.



Photo provided by Aric Dodd of Saskatoon, SK

WINTER 2021-22

Rink Summary CONT'D

Skating in the upper Great Lakes area (i.e. northern Ontario, Minnesota, Wisconsin) got off to a start in the second half of December and was generally uninterrupted through February. Sentinels in the Ottawa Valley and Quebec reported similar seasons. But, as one travelled east or south, outdoor skating was spottier last winter. In southern Ontario, the northeastern US and Atlantic Canada, many rinks didn't open until the first week of January – too late for the kids to enjoy over the Christmas school holidays. January skating was mostly uninterrupted, but the second week of February saw the first of multiple thaw events that tested the quality of our rinks and the willingness of operators to get back outside and rebuild the ice surface. By the first week of March, most folks had packed it in for the year – fairly typical for the eastern part of the continent.

At RinkWatch we are especially worried for the future of rink-making in the northeastern US. This past winter the start date for many rinks in the region was January 10th or later – so late in the season, many would-be rink makers might get discouraged and not bother at all. It's part of a trend we've seen since we launched RinkWatch nine years

ago – only in winters that are generally colder than usual do we see good rink-making conditions in the northeastern US and Atlantic Canada. This is consistent with a wider pattern American scientists have observed, that average winter temperatures are rising more rapidly in the lower Great Lakes region than elsewhere in the US. We will have to keep a closer watch on those areas in coming years.

Here's hoping that the winter of 2022-23 is a cold one!

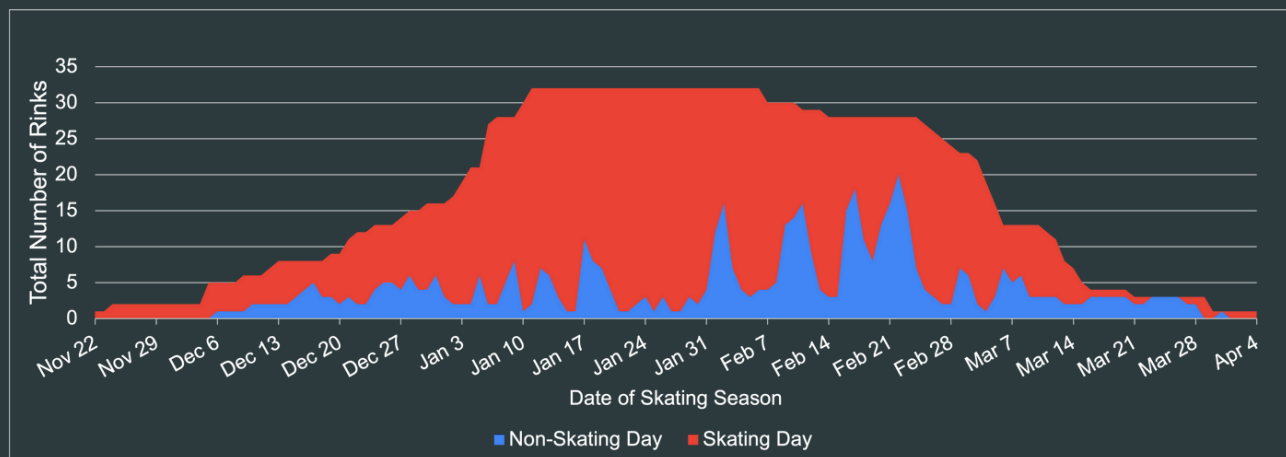


Photo provided by the Godbout family of Mono, ON

2021-2022

Skating Season Data

FIGURE 1: ALL RINKS



Figures 1-5 compare the number of skating days and non-skating days for all sentinel rinks and for sentinel rinks in specific regions in the winter of 2021-2022. The dates listed on the horizontal axis begin with the earliest reported skating day from our sentinel network (November 22, 2021) through to the final reported skating day (April 4, 2022). The number of sentinel rinks operating is seen on the vertical axis. The red area of the chart reflects the total number of rinks reporting skateable conditions on a given date, and the blue area reflects the number of rinks reporting unskateable conditions on that same date.

2021-2022 Skating Season Data

FIGURE 2: WEST CANADA REGION

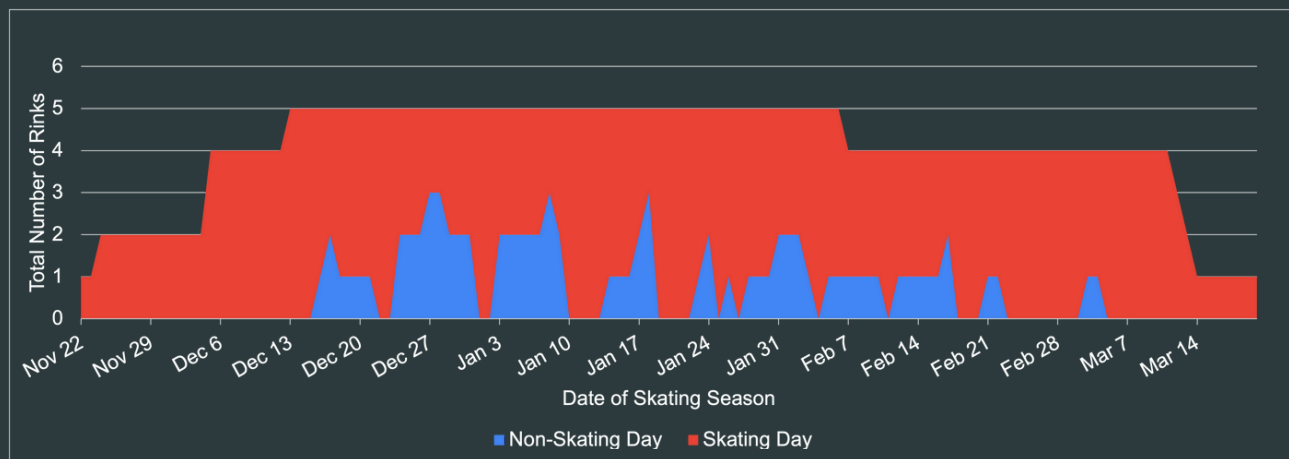
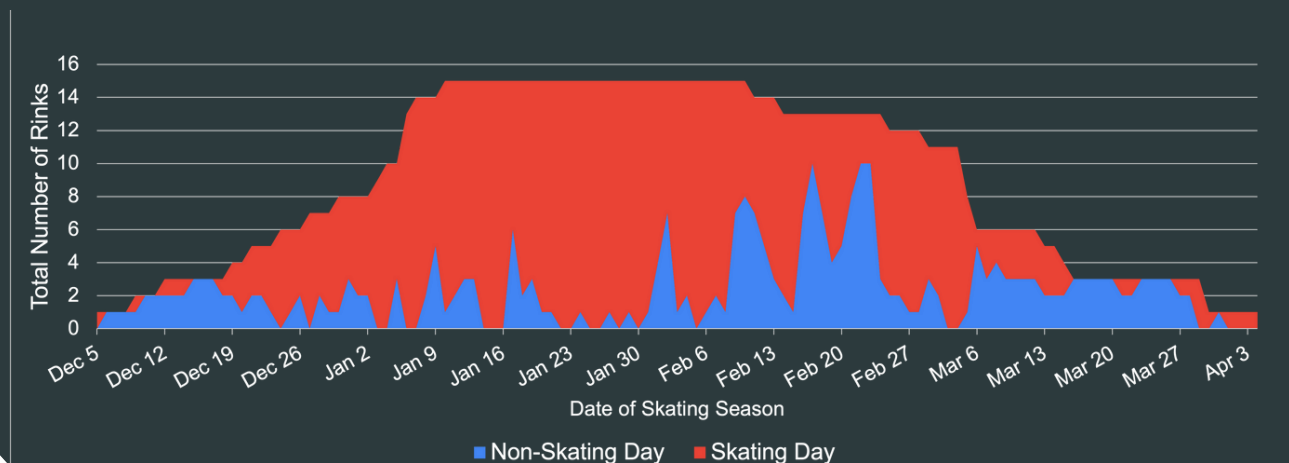


FIGURE 3: EAST CANADA REGION



2021-2022

Skating Season Data

FIGURE 4: NORTHWEST USA REGION

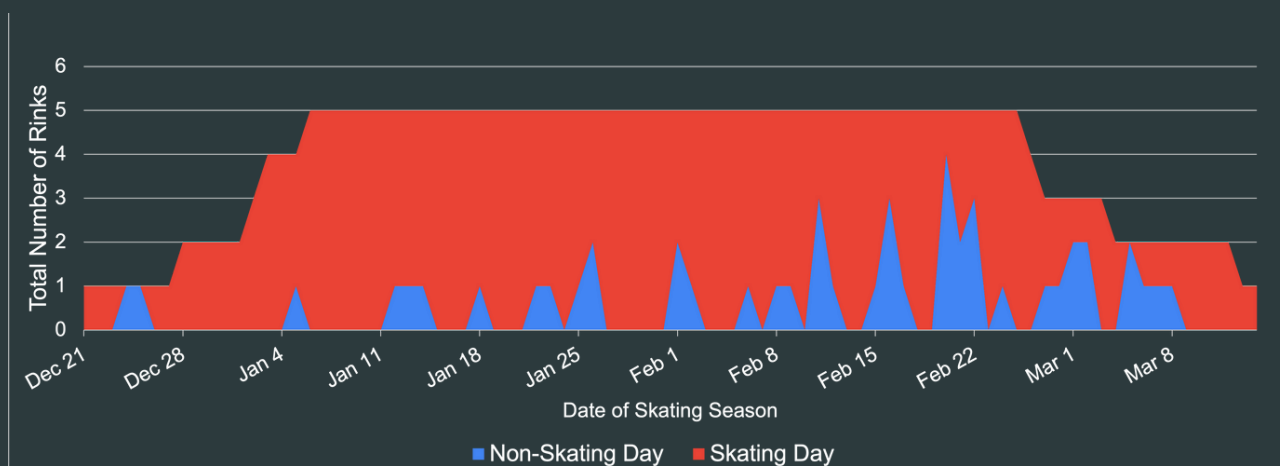
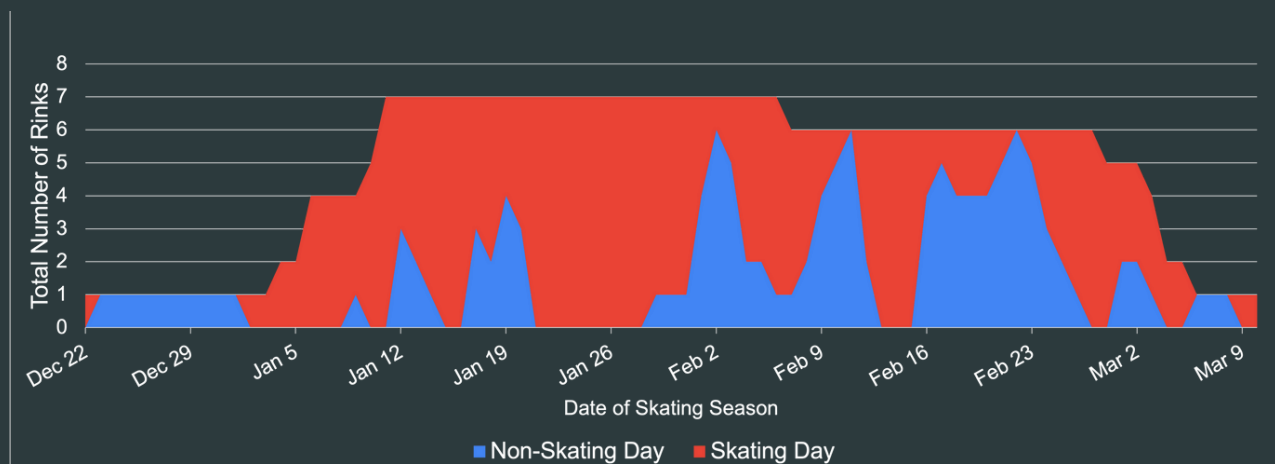
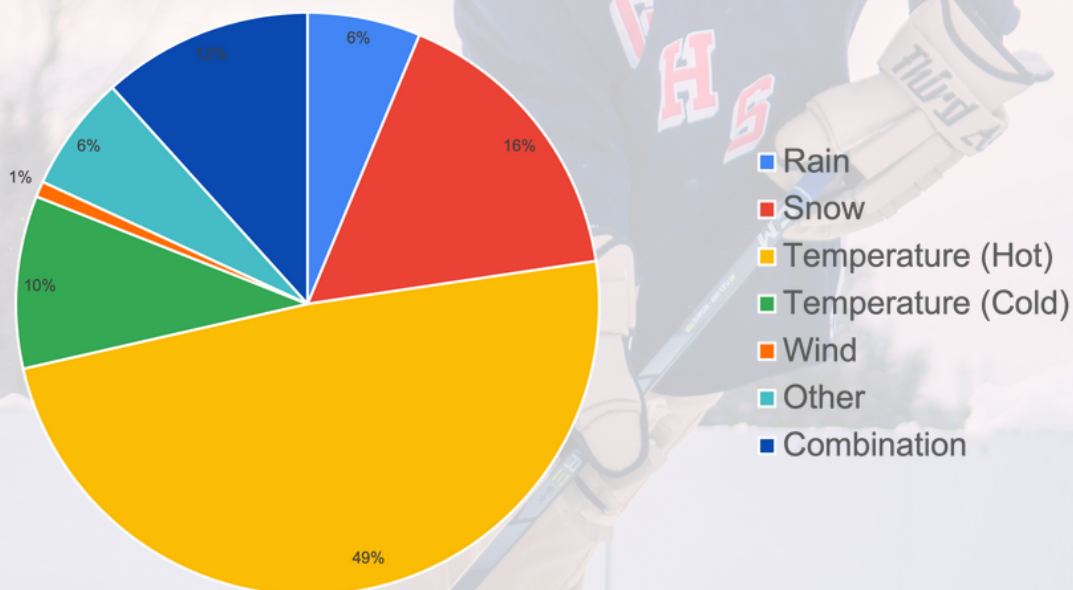


FIGURE 5: NORTHEAST USA REGION



Weather FACTORS

FIGURE 6: ALL RINKS



Figures 6 through 10 summarize the reasons given by Sentinels for days during the winter when their rink was not skateable or was less-than-optimal.

Weather FACTORS

FIGURE 7: WEST CANADA REGION

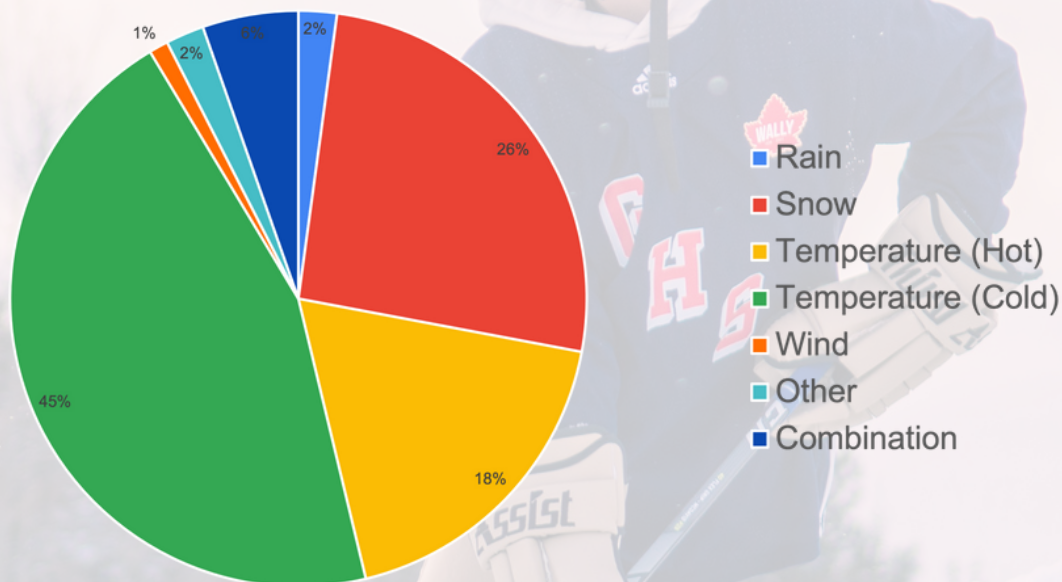
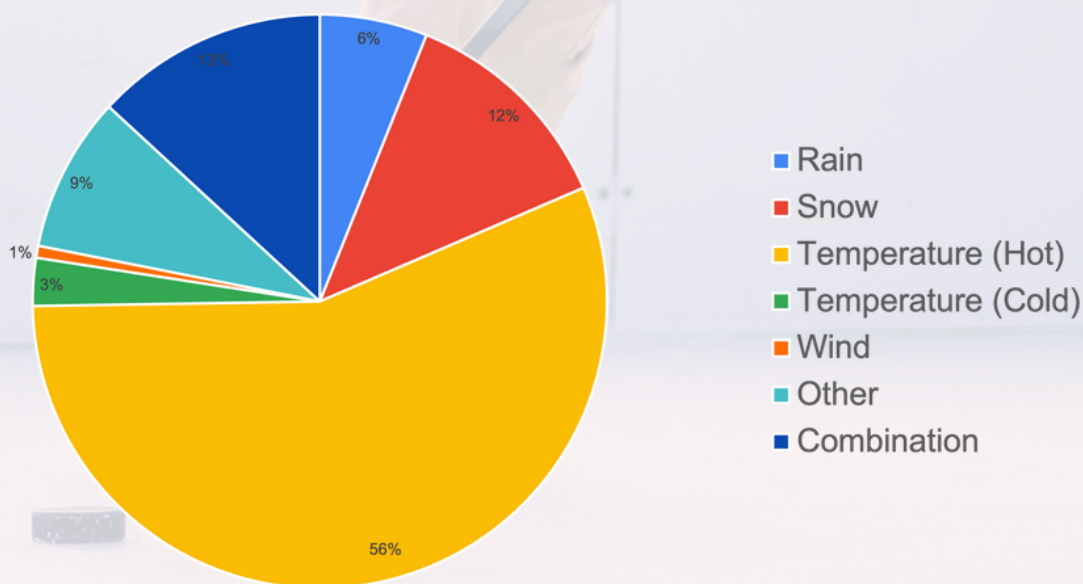


FIGURE 8: EAST CANADA REGION



Weather FACTORS

FIGURE 9: NORTHWEST USA REGION

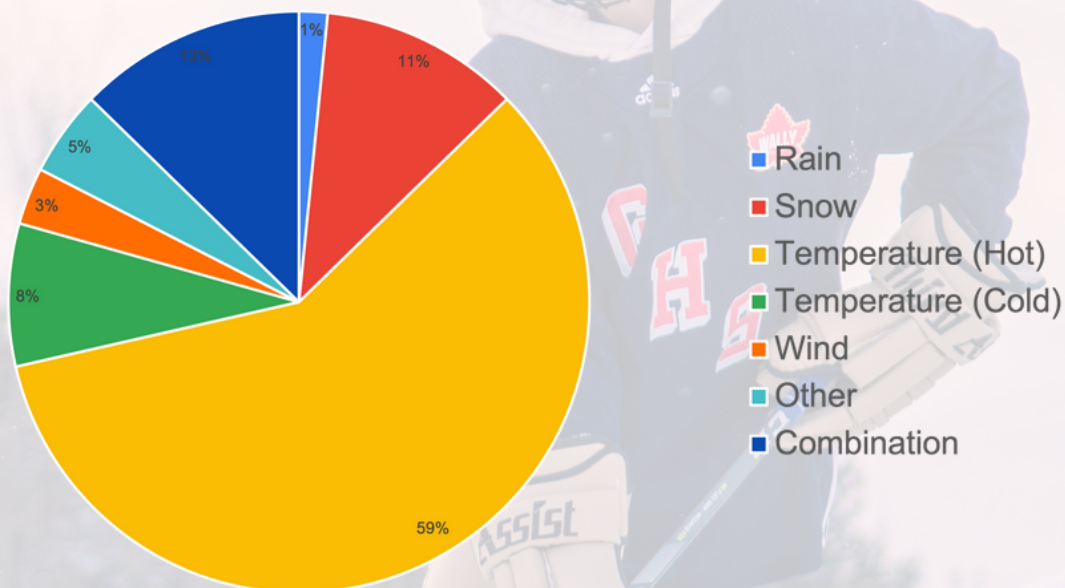
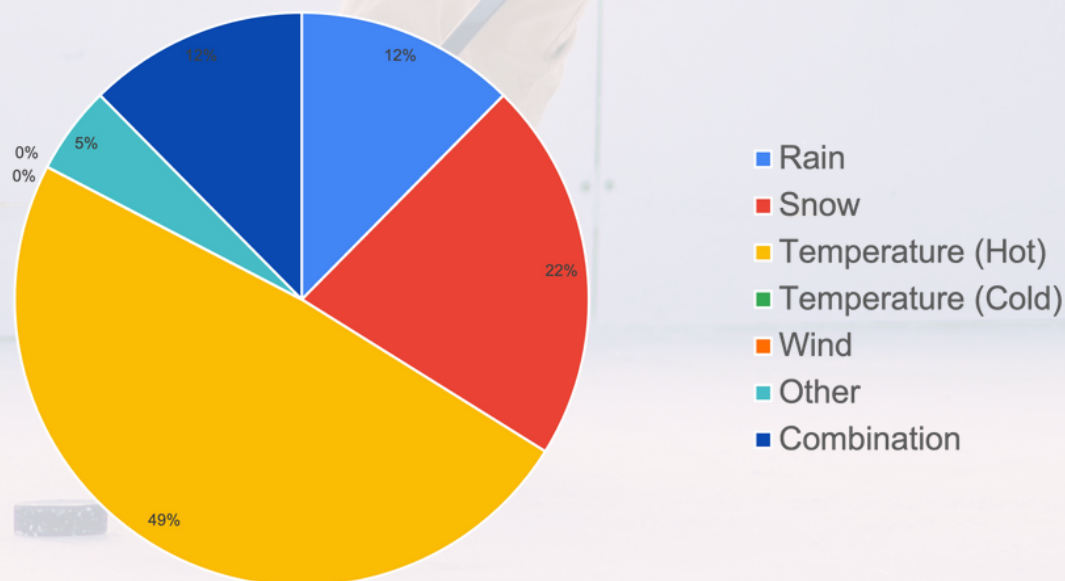
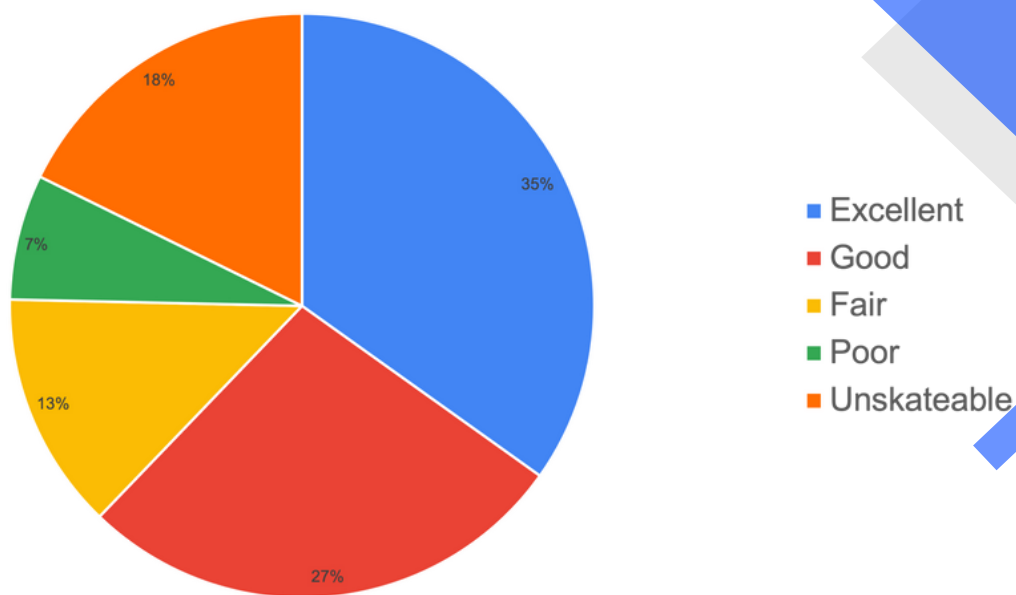


FIGURE 10: NORTHEAST USA REGION



Ice CONDITIONS

FIGURE 11: ALL RINKS



Figures 11 through 15 summarize the relative skating conditions reported by sentinels during the season.

Ice CONDITIONS

FIGURE 12: WEST CANADA REGION

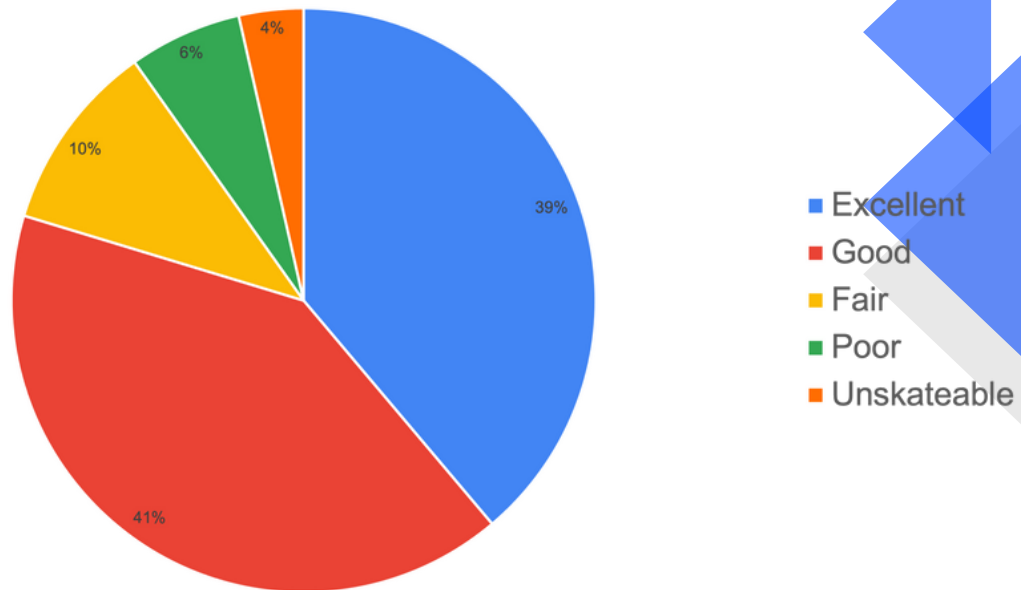
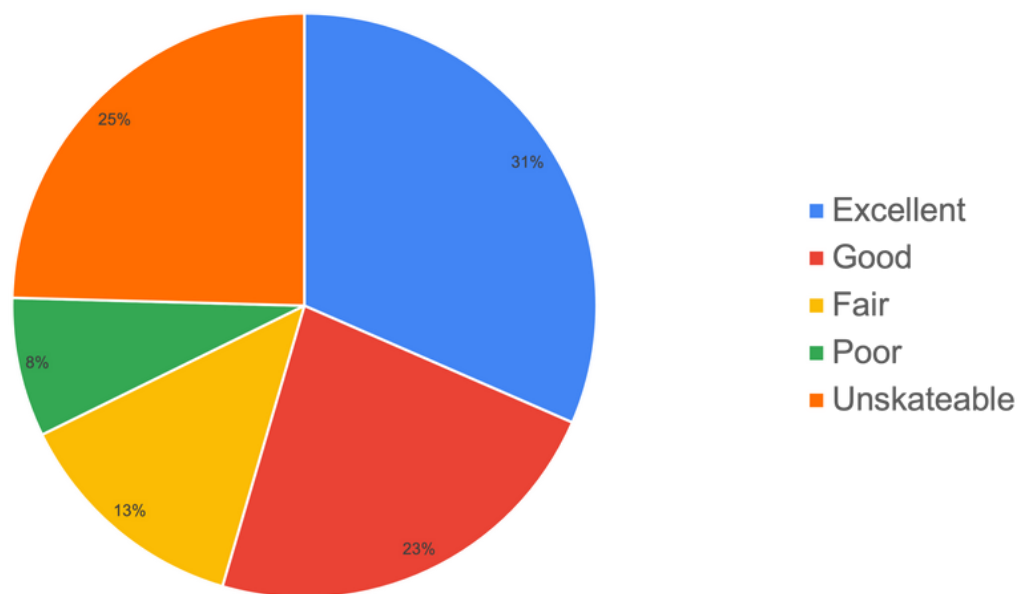


FIGURE 13: EAST CANADA REGION



Ice

CONDITIONS

FIGURE 14: NORTHWEST USA REGION

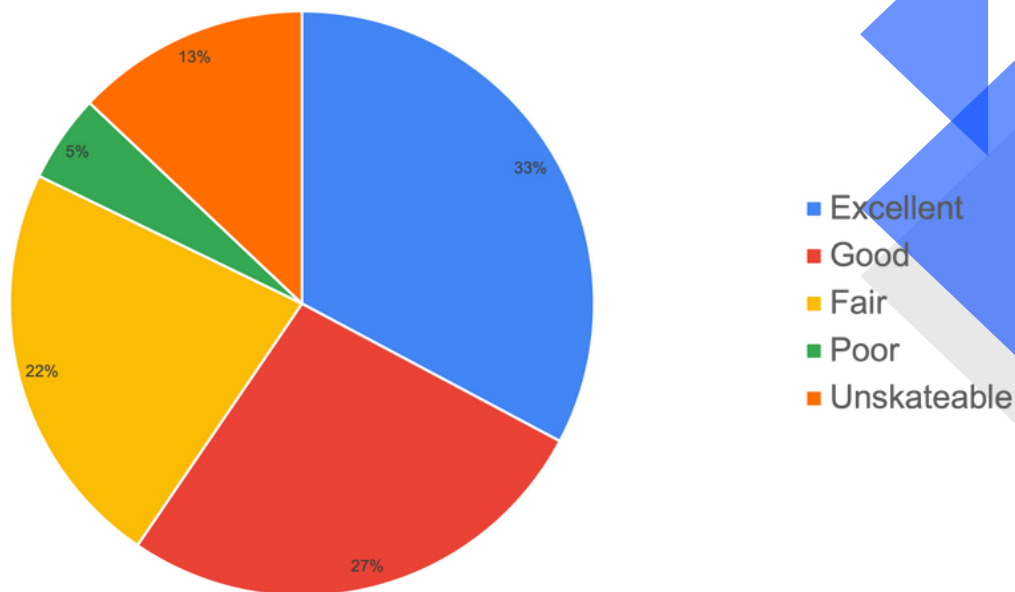
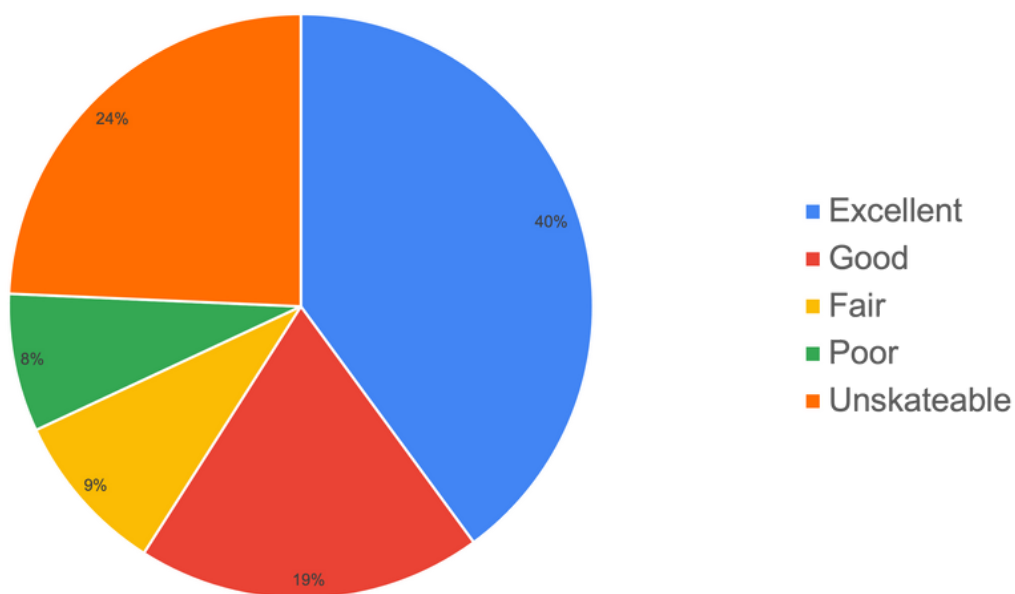


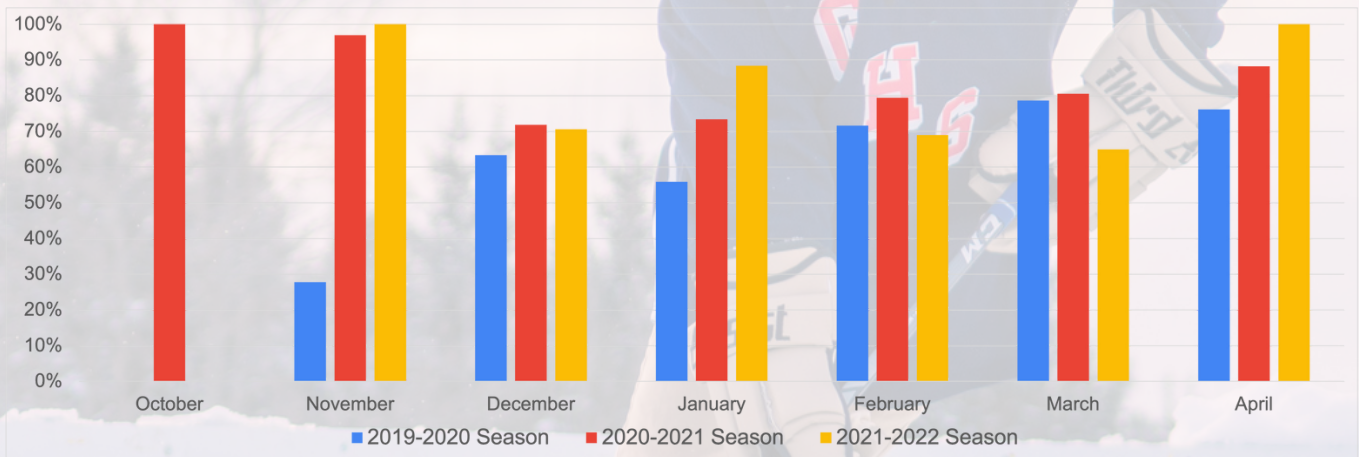
FIGURE 15: NORTHEAST USA REGION



SKATING SEASON

Comparison

FIGURE 16: ALL RINKS



Figures 16-20 compare the percentage of skateable days per month between the 2019-2020, 2020-2021, and 2021-2022 skating seasons.

SKATING SEASON Comparison

FIGURE 17: WEST CANADA/ALASKA REGION

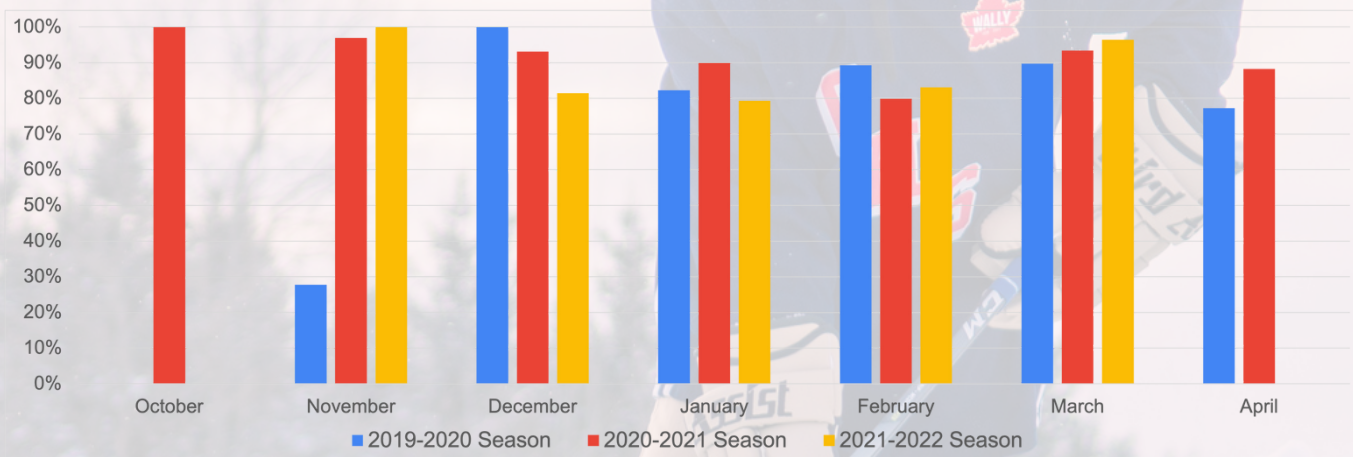
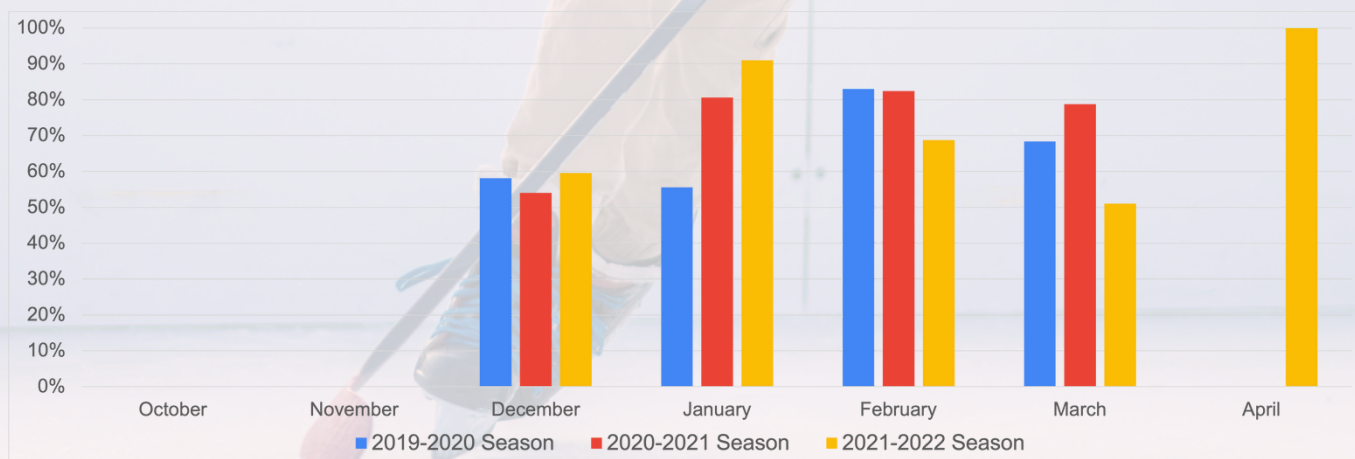


FIGURE 18: EAST CANADA REGION



SKATING SEASON Comparison

FIGURE 19: NORTHWEST USA REGION

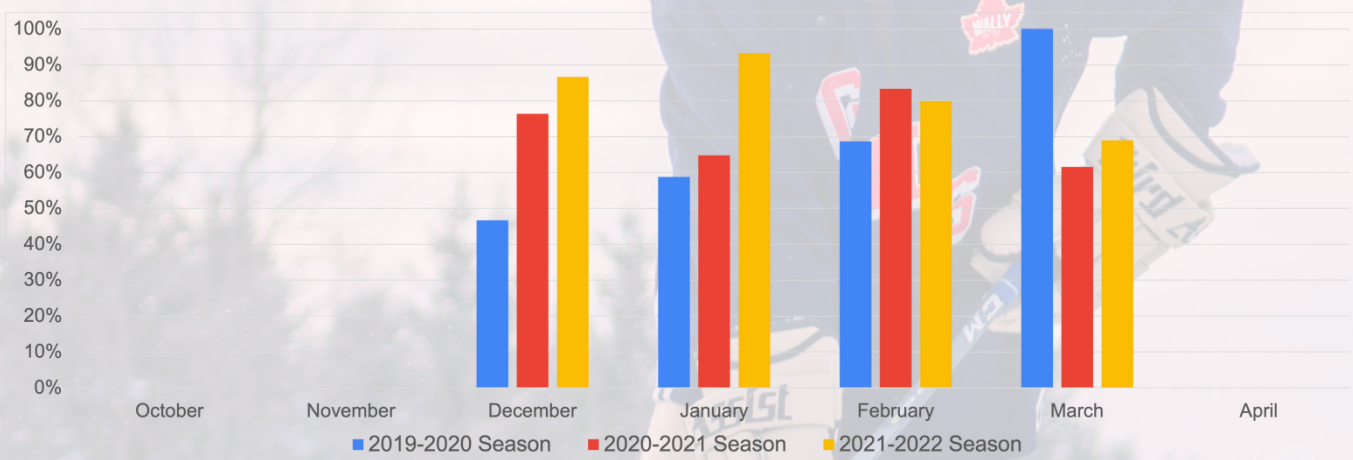
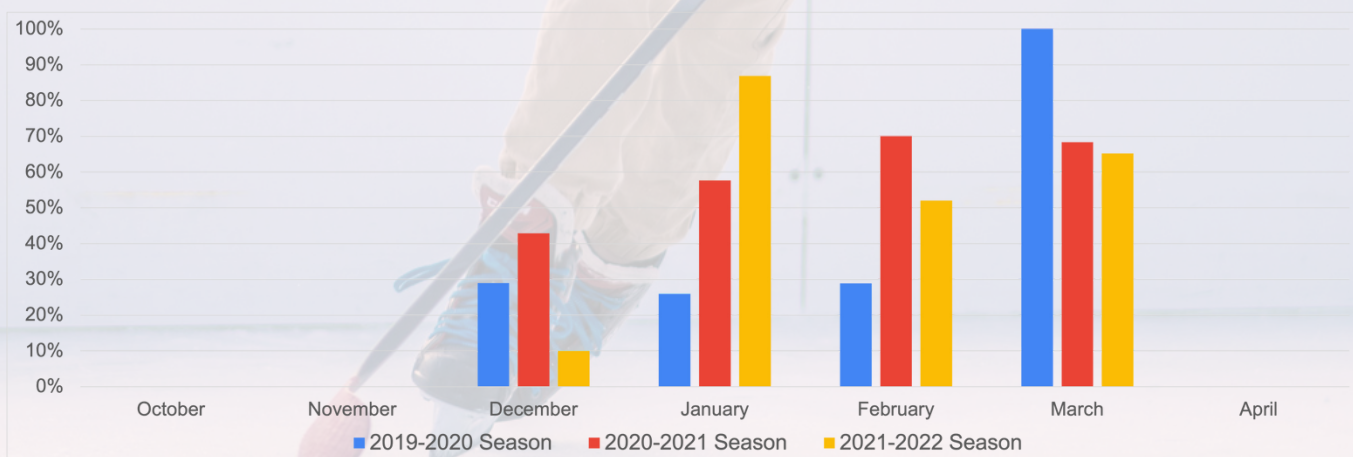


FIGURE 20: NORTHEAST USA REGION





THANK *You* FOR SUPPORTING

WHERE BACKYARD SKATING MEETS ENVIRONMENTAL SCIENCE

We apologize for releasing our annual report several months later than usual. The winter of 2021-22 was another challenging one for everyone because of the ongoing pandemic. The campus of Wilfrid Laurier University was closed for the entire skating season, meaning that RinkWatch team members worked from home. Like so many of our participants, we also had to spend time caring for children and for family members who fell sick with COVID, leaving us less time to spend analyzing data and creating this report.

January 2023 will mark the 10th anniversary of the RinkWatch project. We sincerely thank all our participants and Sentinels who take time over the years to share information with us about their skating rinks. Your data has helped us generate a detailed understanding of how winter weather conditions and longer term changes in climate affect outdoor skating. We hope you will join us once again in our 10th anniversary year, and wish you good health and good skating this coming winter.

Laura, Robert, Colin and Haydn – The RinkWatch Team

Shelley Jackson
DESIGN

For media inquiries in English or French, please contact Robert at rmcleman@wlu.ca

THANK *You*

THE 2021-22 RINKWATCH SENTINEL PROGRAM HONOUR LIST OF VOLUNTEERS:

Alessandro Wilner, Andy & Dawn McGregor, Aric Dodd, Bob Ruggio, Brian Eckhardt, Brian Phillips, Carole Hunt-Ford, Chris Fraser, Dan Sanborn, Emily Burger, Eric Walker, Guy Moreau, Jackson Wilson, Jason Vlahos, Jeremy Wakaruk, Jimmy Skrivanos, Kaija Hupila, Kevin Riley, Kishore Desai, Mark Rafferty, Matt Lozar, Max Farley, Michael Burman, Michel Godbout, Murray Reingold, Pat Blake, Philippe Allard, Rick Nasta, Sean Howard, Shelley Jackson, Tom Trottier, Zach Weston



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DESIGN

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