TrafficWX: The Must Use App for New Storm Chasers

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University of New Hampshire
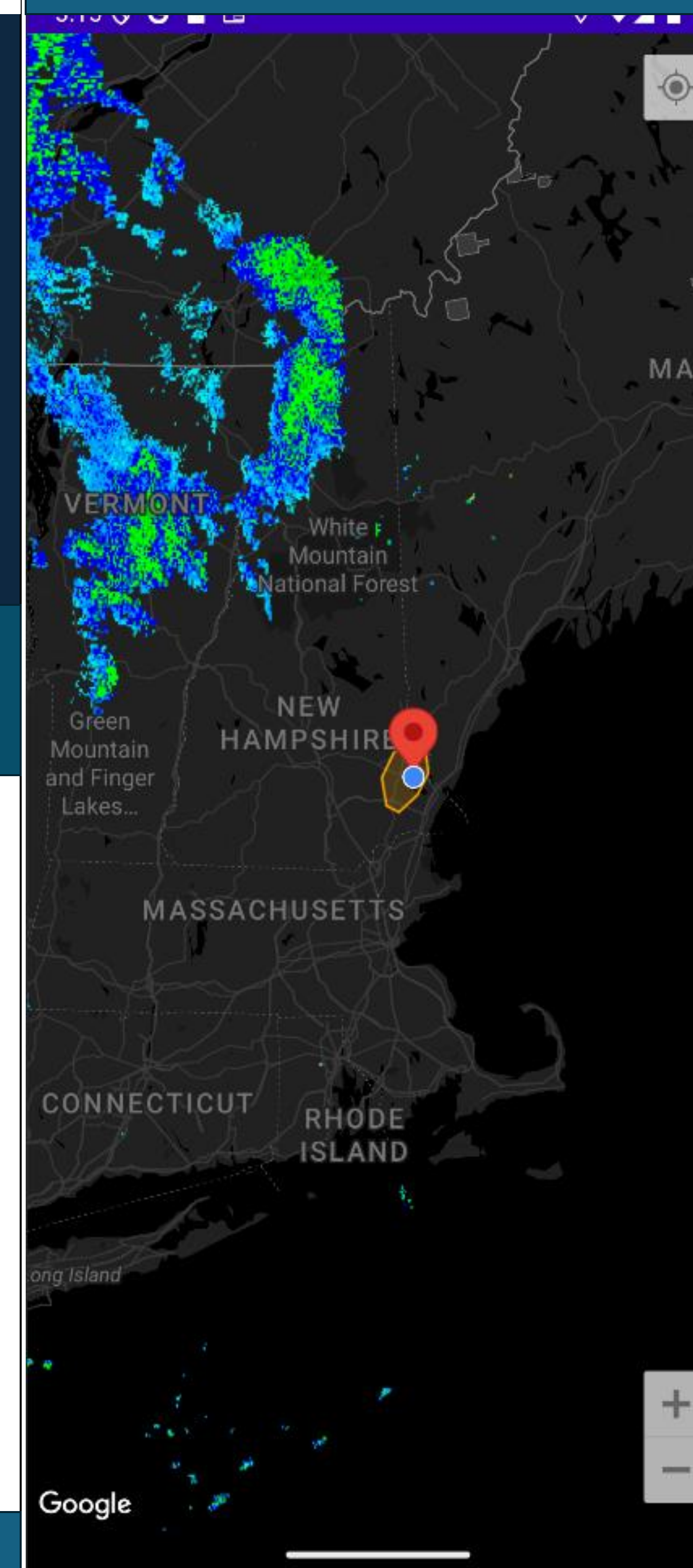InterOperability Laboratory

Introduction

Storm chasing is a growing hobby in the United States and even across the world. People are heading to the plains of Kansas and Oklahoma and the real daredevils head to Dixie to chase in the forests of Alabama and Mississippi. Many seasoned storm chasers today would tell you that the explosion in the hobby has made one thing even more dangerous than anything else, traffic. The Midwestern states, although beautiful to witness these storms, are the biggest culprit. These amateur storm chasers end up following other amateurs . This leads to deadly conga lines that unexperienced chasers may not be able to get out of and we need a solution. Here enters TrafficWX, an app that gives amateur storm chasers an accurate and efficient route out of the warning that they are in and avoid the clusters of cars while seeing the storms at a safe distance.
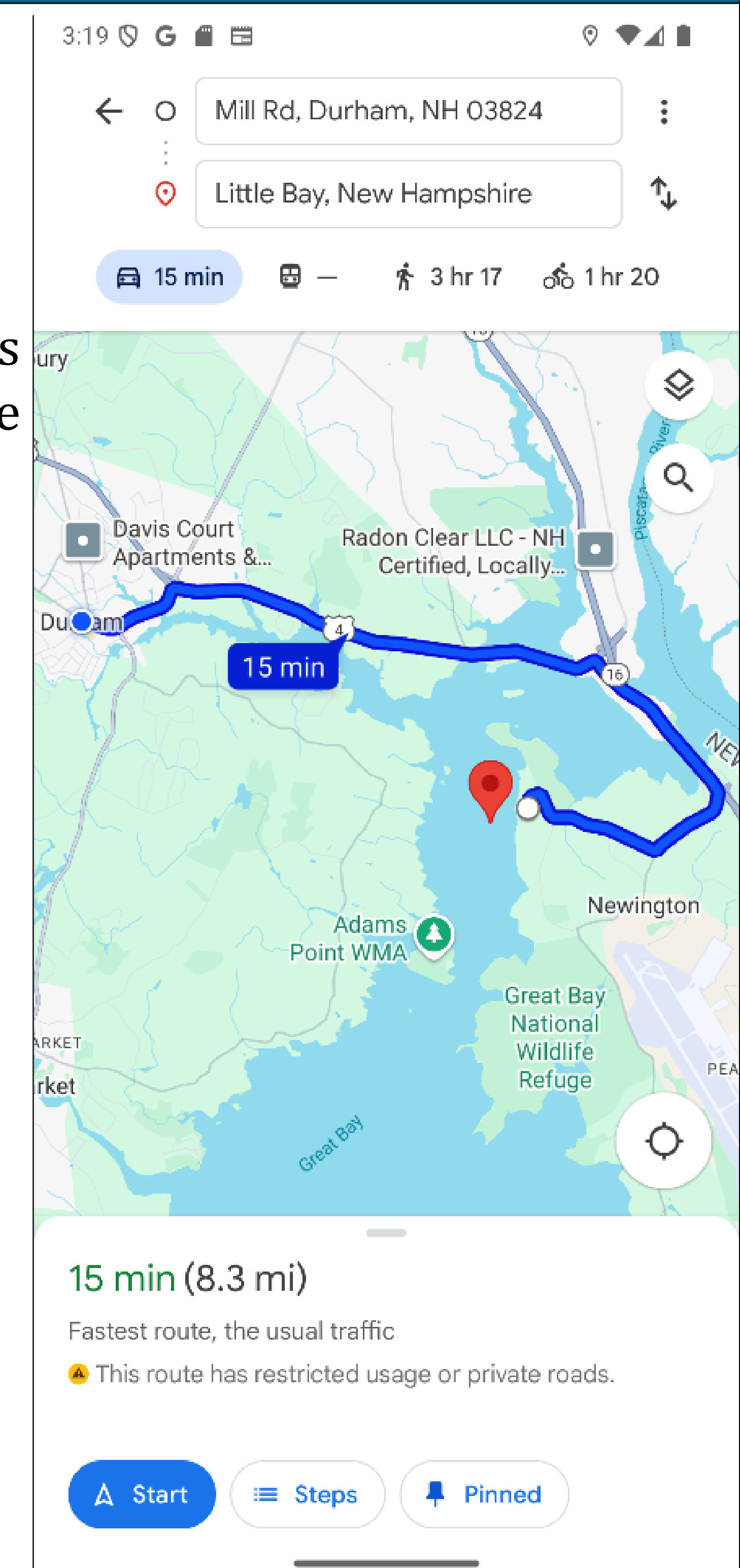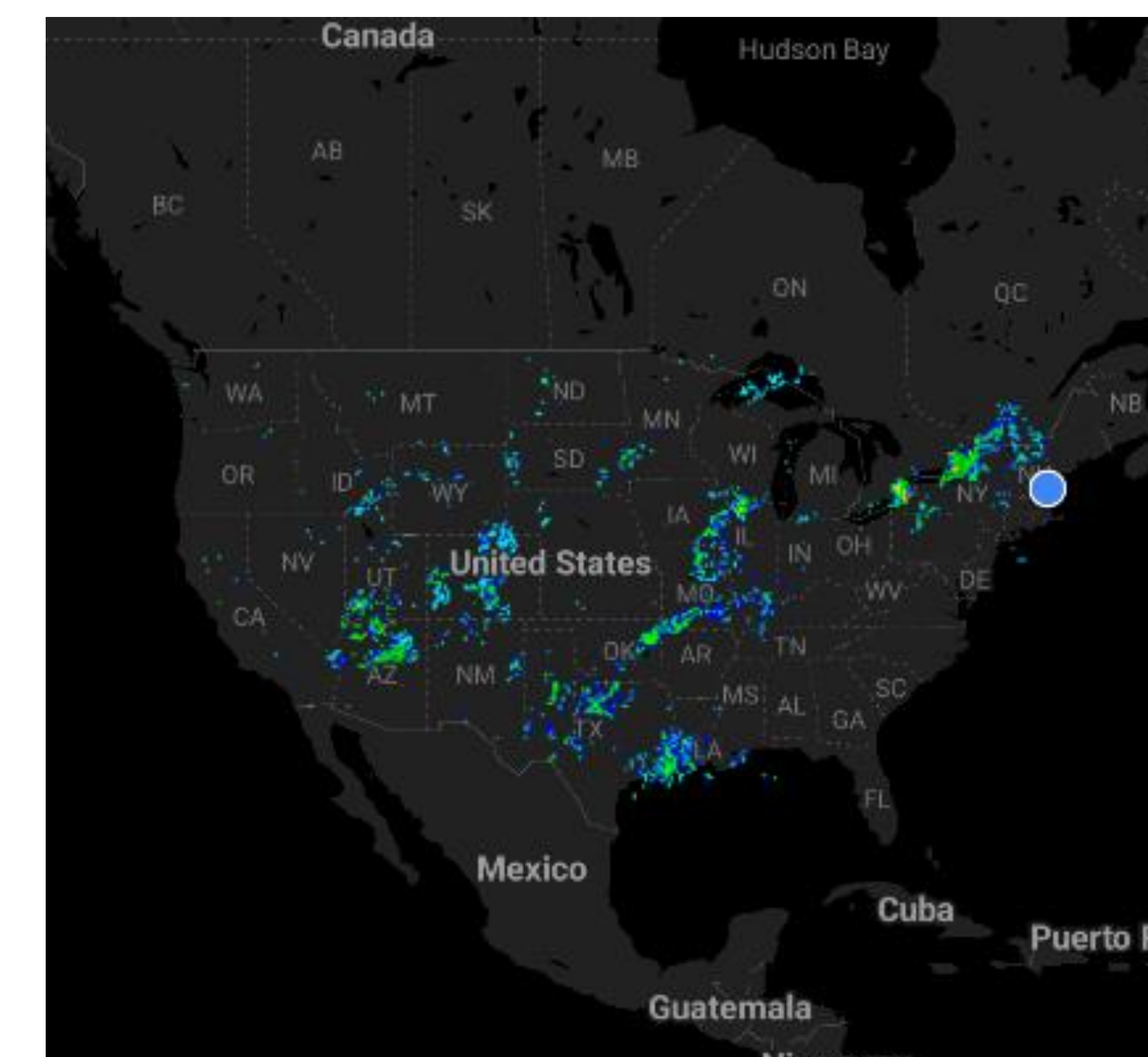
Methodology

The goal of this app is to help storm chasers stay safe while driving. The data for this project is all real time radar data, the Google Maps API, GPS services, as well as warnings issued by the National Weather Service. The app uses this data to project the warning polygons onto the map and always shows the user's location if they allow it as well as letting the user tap on a location in the us and add a location marker there that would act the same as a GPS location. If the user is within a warning and chasing, the app will show them the most efficient route out of danger. It also shows the real time radar across the country to see if the route is taking you into another storm as well so you can stay safe chasing.
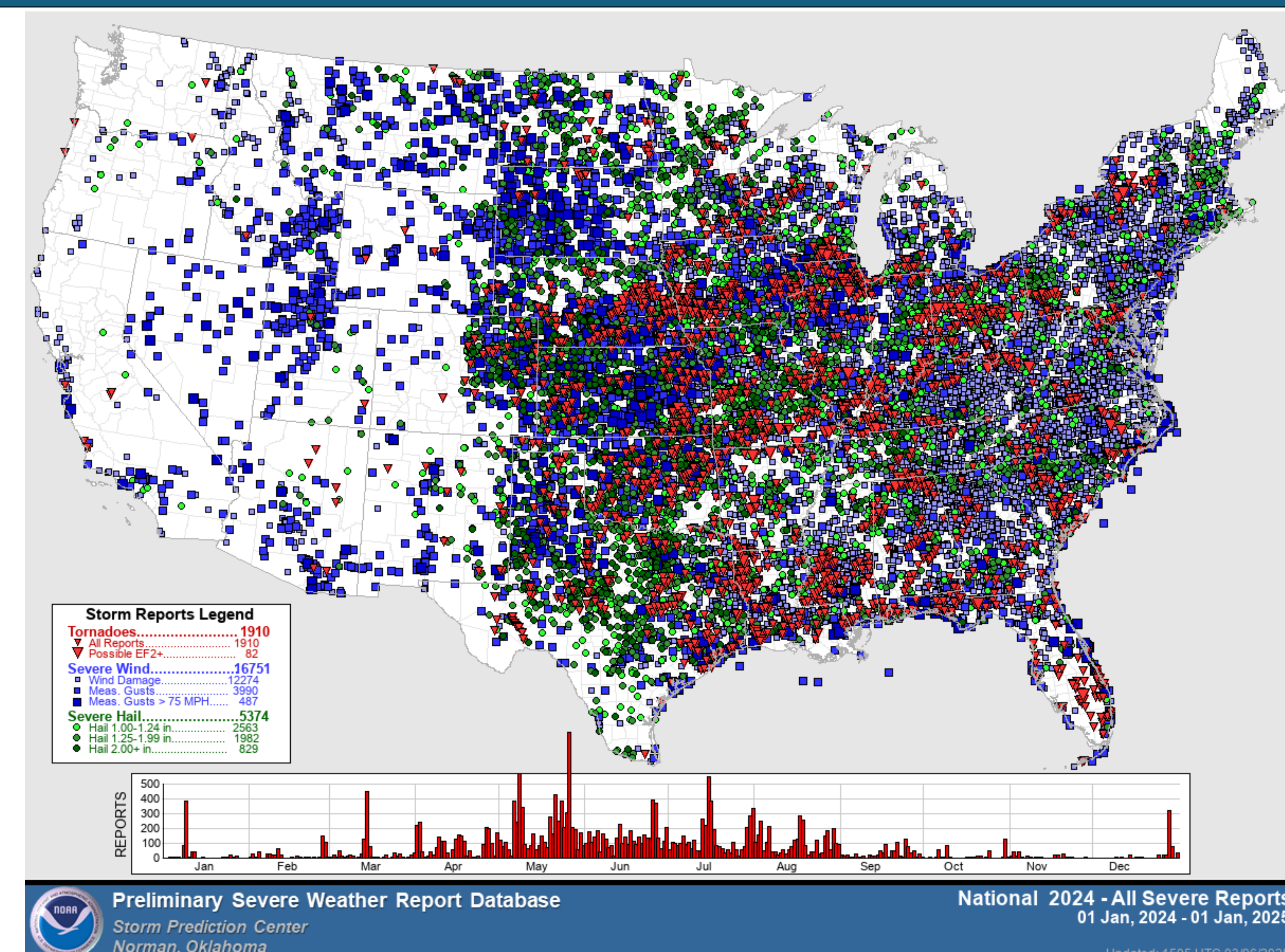
Data

The data gathered from this app has been very helpful in terms of finding efficient routes out of warnings. A group of amateur storm chasers who were chasing in West Virginia used this app to navigate through the mountains and find a route out of the path of an oncoming hailstorm. The app logged the route and they showed that they were in fact out safe. Everything worked as intended and give promise to the future of the app. So far in preliminary testing the app has recorded 10 successful drives and routes

App Showcase

This screenshot and route from the app shows the user within a warning around Durham, NH as well as the live radar around. Because the user is within the warning, and the quickest route out of the warning is across the lake, the app takes them straight to Google Maps to put the escape route in to go to that location. The bottom screenshot shows the entirety of the USA and the weather across the country

All Storm Reports in 2024

Storm Reports Legend
Tornadoes.........................1910
All Reports   1910
Possible EF2+   82
Severe Wind......................36751
Wind Damage   12274
Meas. Gusts   3990
Meas. Gusts > 75 MPH   487
Severe Hail......................5374
Hail 1.00-1.24 in.   2563
Hail 1.25-1.99 in.   1982
Hail 2.00+ in.   829

Preliminary Severe Weather Report Database
Storm Prediction Center
Norman, Oklahoma
National 2024 - All Severe Reports
01 Jan, 2024 - 01 Jan, 2025
Updated: 1505 UTC 03/06/2025