

AAS Solar Eclipse Task Force: Lessons Learned 2014-2024

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Lessons Learned from Plans and Preparations for the 2017-2024 Solar Eclipses

Splinter session June 11, 2024: 2:00 PM - 3:30 PM

Michael Zeiler: Visitation to the Eclipse Path

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And next up we have Michael Zeiler. Many of you will have seen his fabulous maps that he produces. He's also done a lot of work on predicting visitation. And so today he's going to tell us about prediction reality. And I'm really excited to see what the set of,,, okay. Should be running as it started. Yep. Just great.

Good afternoon.

Most of you have seen watershed maps Tillet Linear dating the Mississippi based and versus other basins. This map here is kind of like that, except it's what I call a drive shed map. And this is the basis of my method is that I make the assumption that people drive the shortest path to the path and that if they're closer, they're more likely to go visit.

So that's the basic idea behind the predictions that I made. And to that in numbers, I decided for somebody living 200 miles from the center line of the eclipse, there's a likelihood of between half and 2% that they'll actually go visit the eclipse. So that's a proximity base model, and that diminishes as you go further away. And then to recap, this is roughly that well, this is actually fairly precisely the number of people who live inside the path without traveling.

That's over 31 million people. Now, what actually happened on Eclipse Day? This is a compact opposite of the some of the satellite imagery. As other people have noted, there was kind of an inverse weather versus meteorological map because some of the worst areas projected were clear and vice versa. In Texas, we had a very mixed cloudy in the first half of the path, including me.

I got clouded out for the first time in 12 eclipses, but clear in Dallas and beyond. I couldn't really find very good statistics for Texas, but for Arkansas with skewed things in Arkansas was that the Department of Health predicted the 1.5 million visitors. I don't know where that came from. That wasn't realistic, but that's why you have the difference between those two headlines.

One says it was a big success and the other says it was a disappointment. Missouri had clear weather, very high visitation numbers. Missouri is the first of five states that I think exceeded my predictions. Illinois had a great success in Carbondale,

where they were dancing with the clouds in 2017. This time they had a clear and wonderful view.

I couldn't find hard numbers for Illinois, but I got reports of long traffic jams in the area. In the end, 50,000 people alone were in the Indianapolis Motor Speedway. That must have been a great party. I haven't seen any statewide reports for Indiana, but 100,000 in Bloomington is a big number. Ohio, 150,000 people came to state parks, 200,000 visitors in greater Cleveland.

So Ohio also was a big success on Eclipse Day, Pennsylvania, the northwest corner of Pennsylvania, the area along the lake and around Erie, the city of Erie was eclipse central and Pennsylvania, cloudy in the morning but sunny in the afternoon. Good crowds. But I couldn't get much documentation for numbers. New York, the state, the governor of New York actually released press release a few days after the eclipse with their estimate of visitation.

So that was very kind of them. It's a little hard to pass their numbers, but they leave the impression at least half a million people came to New York for the eclipse, which was beyond my estimates of Vermont, was also significantly beyond my estimates with 160,000 visitors. That was no doubt attributable to the fine weather that day for those states.

New Hampshire. I have a very tiny prediction for New Hampshire because for other places they would more likely end up in a different state. But it turns out that a huge number came through New Hampshire. But I think that was a lot of that was through traffic instead of destination traffic. Maine was another big win for the eclipse, way beyond my estimates more than double my highest meant for visiting and also because of the uncharacteristically clear weather.

So in conclusion we see two maps here, the weather map, of course. And then the second map is an interesting map. It's a map of the percent of occupancy in Airbnbs throughout the nation. So that orange band is very clear. So the first conclusion is obviously weather was a major impact on eclipse, visitation and traffic. It was a pretty consistent pattern.

If if an area was cloudy, they didn't really have the traffic jams. It was sunny. We heard from somebody yesterday that there was a 13 hour traffic jam, I believe in Vermont. The region that was the big winner was New England, also Missouri and Idaho. Ohio did very well in terms of visitation. And that's something another pattern that I noticed was that in several states there were local predictions I felt were way too high and unrealistic.

And so they skewed some of the press reports afterwards saying, you know, the massive numbers didn't come. So local vendors were disappointed. But I think overall the numbers were pretty solid. So it's too early for accurate estimates. I have I've seen very few statewide reports, but I think the on the preponderance of the evidence, -4 million visitors was likely exceeded.

Thank you.

Questions for Michael. I assume this is Laurie asking a question.

So, Michael for New England, did you do any estimates based on what Canadian travel would be down to the United States? Did you include that in your

No, no, I didn't. may be the reason why it may have you may have underestimated.

okay. I, I consciously didn't include international travel because I made the judgment that it was be a very small percent because, you know, it's a bit of a hassle to cross the international border.

If you can find a suitable viewing location in your own country. Well, true. But for Vermont, it's an easy the access from Canada isn't too difficult.

And. Okay, so those are the things that may have not been I don't know what kind of data the provinces collected. Of course, Montreal was the key point up there, but that may be one reason why your numbers may not you may have not included and I don't again, I don't know how the provinces provinces will.

Yeah, well, I should also say one other thing is, is that my model is very simple, intentionally so. So it's not designed to capture nuances like that. It's more of a probabilistic averaging method. Hi.

Hi. First of all, thank you for your maps of. You're welcome. Lots of people love them. I use them. Okay. This is better.

Okay. I wanted to ask you. Yeah, I'm from Texas and we were disappointed, but I think looking back, we had some mayors in Texas. I, you know, put out press releases. I looked it up just now. I think it was February was the first one that I found. So this is mid-February that they needed They declared a state of disaster to get federal funding, I guess, which caused, in my assessment, people to fear going to the pass.

It was a big controversy. And so I would just, you know, like to as a I guess, eclipse chaser, I am not not an expert in this. I would just suggest maybe try to next time when we're either gone or the next generation be a little bit more cautious when talking about city and local county and government know, especially when we have planners coming in from the national task forces.

I think it's awesome and amazing. It's hard for me to even get some communities to trust national planners, you know, because there's so much going on that sometimes it's hard for people to trust someone on Zoom. You know, they want to you know, they want someone to sit down and especially the Hispanic culture, we want to, you know, have a cup of coffee, face to face dialog.

And so it's just I think sometimes we just have to be very cautious. Otherwise we end up not having the crowds that maybe would have come.

It's just it's difficult. It's a difficult thing model because there's so many variables.

All right. If we have time. Yeah. So especially with all the the weather changes and all that, I remember hearing, you know, still this week, I heard stories of people

who missed the 2017 eclipse because they were trying to move and didn't get there. The traffic was so bad. Did that happen at all with the weather, migration or just back roads that got too congested?

Any reports of that?

I don't know. But the typical pattern for traffic is that traffic going into the eclipse path in the morning generally isn't too bad because people distribute their arrival through a period of several hours. But what happens is as the moment the total solar eclipse ends, people get in their cars to return back home. And then you have instant traffic jam on many highways in the path that that certainly happened in states like Vermont.

Major traffic jams we heard yesterday, 13 hours was one delay. Okay. And the other thing I'll say from Ohio perspective, there's definitely the way things were in the media and some of the agencies were telling locals to stay home, you know, that a lot of the outsiders come. The national park says, please don't come to the national park.

Let everybody who doesn't live around here come, which I thought was atrocious. But that was kind of interesting, too, which kept the locals off the road. So. All right, that's too bad. Yeah. All right. Thank you.