

DATE: February 20, 2024

REPORT NO: WLFD-03-2024

SUBJECT: **2024 Solar Eclipse**

CONTACT: Dennis Fisher – Fire Chief

OVERVIEW:

- This report outlines the details, concerns and potential emergency response, including activation of the Township's Emergency Operations Centre, for the upcoming total solar eclipse on April 8, 2024.

RECOMMENDATION:

That, Information Report WLFD-03-2024 regarding "2024 Solar Eclipse", dated February 20, 2024, be received for information.

ALIGNMENT TO STRATEGIC PLAN:

Theme #1 and #4

- **Build** – a safe, connected, caring and active community
- **Advance** – organizational capacity and effectiveness

BACKGROUND:

On April 8, 2024, all of Niagara Region will be in the "path of totality" of a total solar eclipse. A total solar eclipse happens when the moon passes between the sun and Earth, completely blocking the face of the sun. The sky will darken as if it were dawn or dusk. The path of totality is a narrow corridor of approximately 100 to 115 km wide in which the sun appears to be completely covered by the moon for a short period of time. People who are under a total solar eclipse, in 'the path of totality', are able to see features of the sun that are not normally visible. The region will be one of the few places in Canada that will be in the path of the total solar eclipse. Toronto and most of the GTA will be outside of the path and will only see a partial eclipse. There hasn't been a total eclipse visible from major Canadian cities since the 1970s, and the next one of this magnitude will be in 2079.

POTENTIAL IMPACTS:

Visitors: Niagara is expected to have a very high influx of visitors who come to view the

eclipse. People in areas outside of the path of totality will only see a partial eclipse making the Niagara region a premier viewing destination. In addition, Niagara has other benefits including being a well-known tourist destination, easily accessible, having a mixture of urban and rural areas for different viewing opportunities. It is difficult to estimate the number of visitors as total eclipses are rare events and occur in very different areas in terms of population, accessibility etc.

Media Attention: Total solar eclipses generate significant media attention. National and international media coverage is expected.

Resource Demand: A large influx of people will increase the demand for resources. During the 2017 eclipse, there was increased demand for resources including gas, food and water. Some of the impacted states such as Oregon took measures to avoid disruption of key resources, including additional gas deliveries leading up to the eclipse.

Infrastructure: Infrastructure use, particularly in smaller communities, could be significantly higher than normal. Road and highway congestion leading up to, and immediately after, the eclipse is very likely and may require monitoring and mitigation measures.

Emergency Management and Emergency Services: The eclipse could result in a higher demand and challenges for first responders which can be managed through coordination and planning measures. The State of Oregon noted that the development contingency and staffing plans were necessary to ensure that they could protect public safety during the 2017 eclipse.

SAFETY:

Niagara Region Public Health is leading public education geared around safety, beginning in March, including paid advertising over social media, media releases and pitches, posters, postcards, website updates and information to 211.

Like looking at the sun, looking at an eclipse without proper eye protection can cause damage to the eyes. Residents must wear eclipse glasses for viewing to avoid eye damage. Looking at an eclipse is no more damaging to the eye than looking at the sun, however, reduced brightness due to the eclipse as well as the eclipse phenomenon causes behavioral changes resulting in viewers staring at the sun for extended periods of time.

CURRENT SITUATION:

Township of West Lincoln, being part of the Niagara Region, will be among the few places in Canada to be within the path of totality during the solar eclipse on April 8, 2024. The Niagara Region will be a premier viewing destination, resulting in a very high influx of visitors. The high number of visitors, combined with a number of special events in neighbouring municipalities, traffic congestion, and demand on critical infrastructure, requires that emergency plans and procedures be in place prior to the eclipse.

The complexity of a total solar eclipse response requires a coordinated approach, with

involvement from multiple emergency management partners. Coordination and information sharing among partners at various levels of government and with different organizations across Niagara leading up to and during the response is essential to ensure situational awareness and to maintain a common operating picture. The Township's Community Emergency Management Coordinator has established points of contact with different levels of government, including regional departments, local area municipalities, provincial ministries, federal departments, and other key emergency management partners.

Staff has developed a specific emergency response plan, to guide the Township's internal response to the solar eclipse. Objectives include:

1. Establish a collaborative planning framework for managing the response of Township of West Lincoln departments, including the activation and staffing of the Township's Emergency Operation Centre (EOC).
2. Support emergency management planning and response among Township departments and key emergency management partners, including in the areas of resource management, information management, technology interoperability, and appropriate EOC activity.
3. Promote the coordination and sharing of information among departments partnering EOCs and emergency management teams, to build a common operating picture and appropriate situational awareness.
4. Develop and distribute consistent and relevant public messaging.
5. Ensure appropriate technology and channels of communication are in place among the EOC and field response personnel, to mitigate potential telecommunications disruptions due to degradation in cellular network service and increased demand on radio networks.
6. Implement preventative measures to mitigate potential disruptions on critical services due to increased demand and significant traffic congestion.
7. Develop plans to mitigate the impacts of potentially significant traffic congestion using traffic management strategies, public messaging, incident response crews, and resources.
8. Prevent and manage potential social and public health consequences of the eclipse and the expected mass gatherings.

The influx of people into the path of totality over a relatively short period of time has the potential to result in significant, even historic, traffic congestion. The path of totality will

include rural areas, small municipalities, and major transportation routes. Based on the experiences of the jurisdictions that experienced the 2017 eclipse, which also fell on a Monday, the times of greatest concern are the weekend prior to and the time directly following the eclipse.

The eclipse will occur on Monday, April 8, 2024. It will begin at approximately 14:04 (all times are in Eastern Daylight Time). The exact timing of the eclipse in the local area municipalities will differ very slightly. The eclipse will end at approximately 16:32. Totality will occur at approximately 15:17 and will last between 2 minutes and 58 seconds and 3 minutes and 46 seconds, depending on location

In West Lincoln, the eclipse will begin at 14:04, totality will begin at 15:17, maximum eclipse will be at 15:19, totality will end at 15:20, and the eclipse will end at 16:31. The total duration of the eclipse will be 2 hours and 27 minutes.

The date and time of the 2024 eclipse has long been known, which allowed for staff to attend advance planning sessions across the region. Several planning stages have been established to support and guide preparations for this event. Staff will meet with the emergency management group in February and March, working up to the event in April, to ensure staff is ready to respond appropriately to any emergencies arising before, during and after the event.

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