Agenda – Council – January 27, 2022

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – December 6, 2021

Item No. 1 Air Quality Program and Protective Information

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On January 19, 2022, the Executive Policy Committee recommended to Council:

1. That the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment be referred to the Standing Policy Committee on Protection and Community Services and Parks.

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – December 6, 2021

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On January 19, 2022, the Executive Policy Committee recommended to Council:

1. That the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment be referred to the Standing Policy Committee on Protection and Community Services and Parks.

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

On December 8, 2021, the Executive Policy Committee laid the matter over for 30 days.

STANDING COMMITTEE RECOMMENDATION:

On December 6, 2021, the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

COUNCIL DECISION:

On September 29, 2021, Council concurred in the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment and adopted the following:

1. That the Winnipeg Public Service be directed to report back to Council within 90 days on an Air Quality Program & Protective Information for Winnipeggers that:

    A. The public service reaches out to the Air Quality office of Sustainable Development of the Manitoba Government improve coordination between governments and request specific plain-language changes to the monitoring information provided by the province of Manitoba and consider review of Winnipeg monitoring stations, determining whether more Winnipeg monitoring is needed.

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – December 6, 2021

DECISION MAKING HISTORY (continued):

COUNCIL DECISION (continued):

B. Notifies via our website and other communications Air Quality information that educates the public on changing conditions, climate change threats, create awareness and support preventative information on pollution efforts and effects. Including identifiable place where residents have information on AQHI such as is found on the town of Kelowna's website.

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the forgoing.

ADMINISTRATIVE REPORT

Title: Air Quality Program & Protective Information

Critical Path: Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – Executive Policy Committee – Council

AUTHORIZATION

Author	Department Head	CFO	CAO
J. Shaw, L. Gilmour	T. Wallace, Acting Chief	N/A	M. Jack

EXECUTIVE SUMMARY

Air quality concerns, especially of the intensity and duration witnessed in Winnipeg this summer, present a relatively newer hazard for our city; but the city can expect to see more of through the impact of climate change and increased wildfire seasons. Air quality is a similar hazard to heat, in that, while usually uncomfortable, the true impacts and warning signs of significant illness are not always clear until it has reached a dangerous level. The Office of Emergency Management (OEM) has identified both air quality and heat as hazards requiring increased public awareness on warning signs, risks and actions to mitigate.

Inadequate preparedness and awareness of the risks presented by climate change, including decreased air quality from wildfires, may increase exposure of residents to harmful health hazards, increase pressure on our health system through increased patient loads, and decreased quality of life for Winnipeg residents.

Taking action and increasing the public's awareness, understanding of risks, and overall preparedness towards hazards such as smoke from wildfires, enables residents to protect their health, decrease burdens on health care systems and enables resiliency to environmental hazards.

The Public Service has met the requested requirements outlined and is continuing to have ongoing dialogue with both Provincial and Federal stakeholders that are engaged or accountable for air quality and its subsequent monitoring to discuss risk communication strategies and how to better improve messaging for residents. Additionally, the OEM has looked to perform a risk communication scan of the City of Kelowna's messaging along with other municipalities through partnerships in the Big Cities Emergency Management collective.

RECOMMENDATIONS

That this report be received as information.

REASON FOR THE REPORT

At its September 29, 2021 meeting, Council concurred in the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment and adopted the following:

That the Winnipeg Public Service be directed to report back to Council within 90 days on an Air Quality Program & Protective Information for Winnipeggers that:

A. The public service reaches out to the Air Quality office of Sustainable Development of the Manitoba Government improve coordination between governments and request specific plain-language changes to the monitoring information provided by the province of Manitoba and consider review of Winnipeg monitoring stations, determining whether more Winnipeg monitoring is needed.

B. Notifies via our website and other communications Air Quality information that educates the public on changing conditions, climate change threats, create awareness and support preventative information on pollution efforts and effects. Including identifiable place where residents have information on AQHI such as is found on the town of Kelowna's website.

IMPLICATIONS OF THE RECOMMENDATIONS

There are no implications to receiving this report as information.

HISTORY/DISCUSSION

The Air Quality Health Index (AQHI) is a Government of Canada tool that provides a standard of measurement of current air quality and impacts to that quality (from a variety of hazards). The AQHI also provides general guidance on actions to take at the different levels and high-level at-risk group definitions. More information on the AQHI can be found here: https://www.canada.ca/en/environment-climate-change/services/air-quality-health-index.html

Due to hazardous air quality conditions rated as "Very High Risk" on the AQHI scale, the City of Winnipeg Community Services Department (CmS) chose to close all outdoor recreation services on Tuesday, July 20 by 14:30 in order to protect the health and safety of both City of Winnipeg employees and residents. CmS reopened outdoor services on Thursday, July 22 once the air quality conditions had improved. Air quality, weather, and smoke data throughout July and August is attached to this report as Appendix A.

During the summer months, the City of Winnipeg Emergency Preparedness webpage (*https://winnipeg.ca/emergencypreparedness/default.stm*) has Air Quality and Heat as two hazard links on the landing page. The specific Air Quality page (*https://winnipeg.ca/emergencypreparedness/hazards/air-quality.stm*) provides additional general guidance on air quality as a hazard and actions residents can take to protect themselves, including a link to the AQHI. In 2021, the City also issued messages via social media on air quality impacts to the City and provided links to pages where more information was available.

A critical complexity of air quality as a hazard is the degree in which it can quickly fluctuate across a geographical area and timeframe. It can be light and manageable in West Winnipeg and heavy and impactful in East Winnipeg at the same time. Or, it can be so dense one hour and close to clear skies the next. The current tool for assessing risk, the AQHI, applies one level for all of Winnipeg (based on observations at three monitoring locations) and it is challenging to apply preventative measures across Winnipeg based on an AQHI reading when hyper local conditions are a reality of the hazard.

In acknowledgement of the challenges of addressing air quality, the OEM is working with partners at Manitoba Public Health and the Winnipeg Regional Health Authority in a coordinated effort to develop more proactive messaging for the public on the risks of air quality, the impacts to be mindful of early-in exposures, and suggested guidance for actions to take during air quality events. Other discussions ongoing include the accuracy of current air quality monitoring across the City and whether additional monitors (and appropriate locations) are required; ability to access additional resources including mobile monitoring stations; and options to enhance support and response during air quality events (identified clean air shelters).

In addition to working with partners within the province, OEM is looking at best practices in communicating air quality across other Canadian jurisdictions where air quality is a more well-known hazard. The OEM has looked to perform a risk communication scan of the City of Kelowna's messaging along with other municipalities through partnerships in the Big Cities Emergency Management collective. These jurisdictions include but are not limited to: **Vancouver** (*www.vch.ca/public-health/environmental-health-inspections/healthy-built-environment/air-quality/outdoor-air-quality*)*;* **Kamloops** (*www.kamloops.ca/our-community/environment-sustainability/air-quality*); **Edmonton** (*www.edmonton.ca/city_government/environmental_stewardship/environmental-air-quality*); and **Calgary** (*https://craz.ca/monitoring/calgary-southeast/*)

OEM is also working with the City of Winnipeg's Community Emergency Advisory Committee to develop improved messages and communications channels on the risks of air quality and heat for the Summer of 2022, specifically targeted at identified populations with vulnerabilities to these hazards.

FINANCIAL IMPACT

Financial Impact Statement **Date:** November 5, 2021

Project Name:

Air Quality Program & Protective Information

COMMENTS:

There are no financial implications arising from the recommendations of this report.

Original signed by
John Hall FCMA, CGMA
Financial Controller
Fire Paramedic Service

CONSULTATION

This Report has been prepared in consultation with:

N/A

OURWINNIPEG POLICY ALIGNMENT

Emergency Management aligns with section 01-2b of the Our Winnipeg Plan. Specific alignment includes:

- 01-2b Direction 1: Provide Emergency Fire/Rescue and Pre-Hospital Paramedical Response, Enabling Strategy: Collaborate and communicate with other governments and agencies on education and awareness programs, investigation, logistical support and joint preparedness.
- 01-2b Direction 2: Prepare for Disasters and Emergencies, Enabling Strategy: Maintain the City's capacity to respond to disasters and community crises; Broaden emergency training to encompass new trends in response and recovery
- 01-2b Direction 3: Maintain Emergency Planning Efforts to Prevent Hazards from Developing into Disasters and to Reduce the Effects of Natural Hazards including Extreme Weather, Enabling Strategy: Provide Risk hazard analysis information to decision makers.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

The Climate Action Plan recognizes the impacts of air quality pollution as a result of climate change on population health. The measures proposed align with Strategic Opportunity 7.1 Community Climate Resiliency Actions:

- 7.1 Implement Opportunities to Improve Winnipeg's Resilience and Adaptability to the Effects of a Changing Climate

SUBMITTED BY

Department: Winnipeg Fire Paramedic Service
Division: Office of Emergency Management
Prepared by: Jason Shaw and Lisa Gilmour
Date: November 5, 2021
File No: N/A

Attachments: Appendix A – Air quality, weather, and smoke data (July & August, 2021)

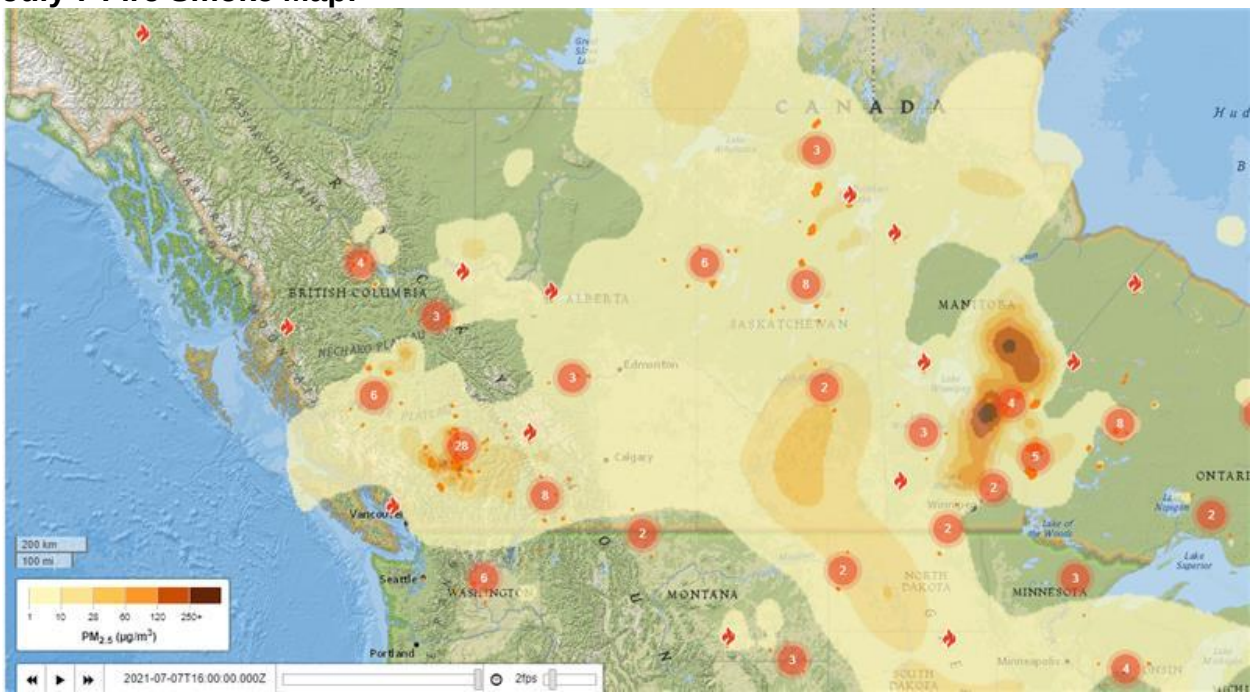
Appendix A – Air quality, weather, and smoke data (July & August, 2021)

Weather in Winnipeg July 20 – 23:

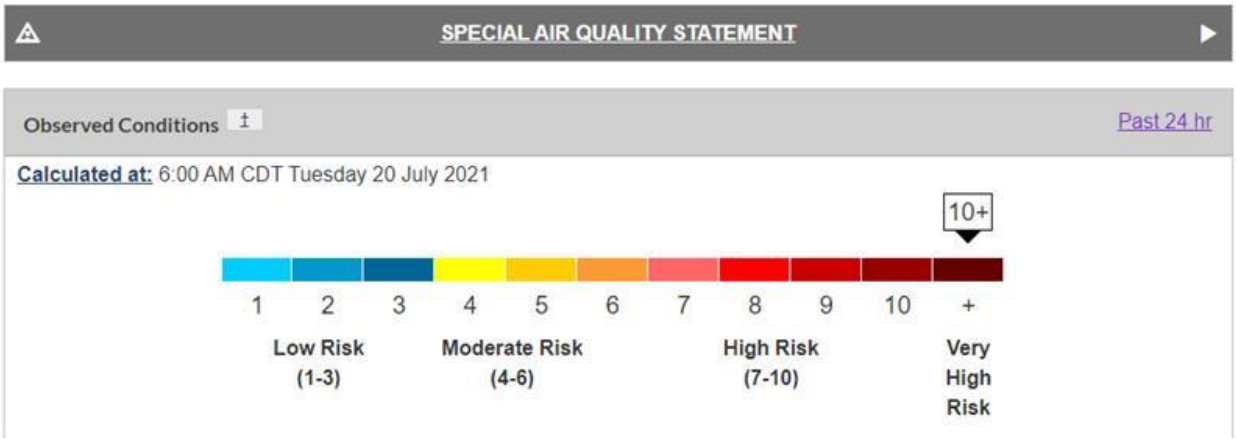
Date	Max Temp (°C)	Min Temp (°C)	Mean Temp (°C)	Heat Deg Days (°C)	Cool Deg Days (°C)	Dir of Max Gust (10s deg)	Speed Max Gust (km/h)
2021-07-20	20.9	16.7	18.8	0	0.8	12	33
2021-07-21	26.3	18.8	22.6	0	4.6	12	48
2021-07-22	30.6	18.8	24.7	0	6.7	-	-
2021-07-23	32.1	14.2	23.2	0	5.2	32	39

Source:
https://climate.weather.gc.ca/climate_data/daily_data_e.html?StationID=27174&timeframe=2&StartYear=1840&EndYear=2021&Day=28&Year=2021&Month=7#

July 7 Fire Smoke Map:



July 20 AQHI:



July 21 AQHI:

Forecast Maximums Next 24 hr | Health Message

Issued at: 6:00 AM CDT Wednesday 21 July 2021

Wednesday	**8** - High Risk
Wednesday night	**5** - Moderate Risk
Thursday	**4** - Moderate Risk
Thursday night	**3** - Low Risk

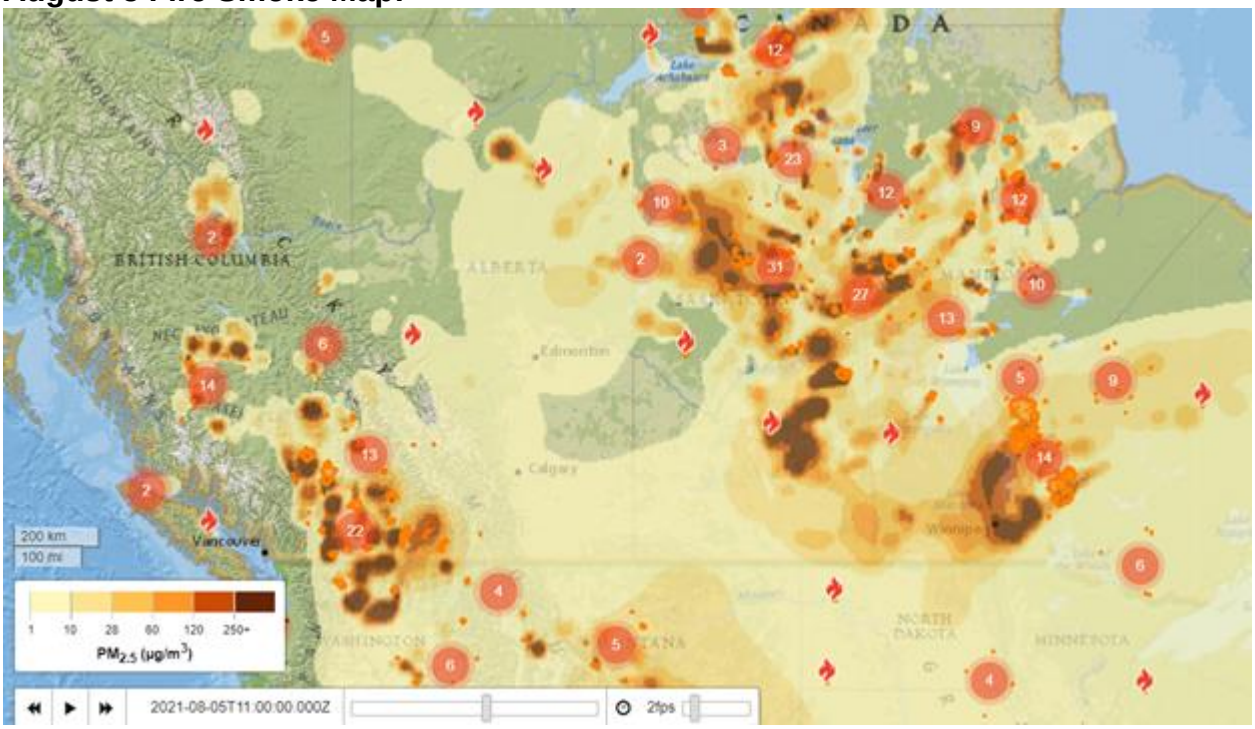
August 4 AQHI:

Forecast Maximums Next 24 hr | Health Message

Issued at: 6:00 AM CDT Wednesday 4 August 2021

Wednesday	**5** - Moderate Risk
Wednesday night	**4** - Moderate Risk
Thursday	**10** - High Risk
Thursday night	**9** - High Risk

August 5 Fire Smoke Map:



Sources:
Air Quality: https://weather.gc.ca/airquality/pages/mbag-001_e.html
Fire Smoke Maps (firesmoke.ca)