THE CORPORATION OF THE

CITY OF WHITE ROCK

15322 BUENA VISTA AVENUE, WHITE ROCK, B.C. V4B 1Y6

MEETING NOTICE

Pursuant to the *Community Charter* a **SPECIAL COUNCIL MEETING** has been called to begin at **5:00 P.M.** on **WEDNESDAY, APRIL 21, 2021**.

DATE: **APRIL 21, 2021**
MEETING TIME: **5:00 P.M.**
LOCATION: **WHITE ROCK COUNCIL CHAMBERS**
15322 BUENA VISTA AVE., WHITE ROCK BC V4B 1Y6

PURPOSE: Impacts/ Considerations due to COVID-19 Pandemic

- COVID-19 Proposed Prevention Measures

The City of White Rock is committed to the health and safety of our community. In keeping with Health Minister Order of British Columbia, City Council meetings will take place without the public in attendance at this time until further notice.

Date: April 20, 2021 at 12:00 p.m. (noon)

Tracey Arthur, Director of Corporate Administration

WHITE ROCK
My City by the Sea!
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The Corporation of the
CITY OF WHITE ROCK

Special Meeting of Council
AGENDA

Wednesday, April 21, 2021, 5:00 p.m.

City Hall Council Chambers

15322 Buena Vista Avenue, White Rock, BC, V4B 1Y6

***Live Streaming/Telecast:** Please note that all Committees, Task Forces, Council Meetings, and Public Hearings held in the Council Chamber are being recorded and broadcasted as well included on the City's website at: www.whiterockcity.ca

The City of White Rock is committed to the health and safety of our community. In keeping with Ministerial Order No. M192 from the Province of British Columbia, City Council meetings will take place without the public in attendance at this time until further notice.

T. Arthur, Director of Corporate Administration

Pages

1. CALL MEETING TO ORDER

2. ADOPTION OF AGENDA

RECOMMENDATION
THAT the Corporation of the City of White Rock Council adopt the agenda for its special meeting scheduled for April 21, 2021 as circulated.

3. ADOPTION OF MINUTES 3

RECOMMENDATION
THAT the Corporation of the City of White Rock adopt the April 19, 2021 special meeting minutes as circulated.

4. COVID-19 Proposed Prevention Measures 8

Corporate report dated April 19, 2021 from the Fire Chief titled "COVID-19 Proposed Prevention Measures".

Note: Discussion on this topic required additional time, Council requested this Special meeting to be scheduled in order to continue.

RECOMMENDATION

THAT Council receives this report for discussion on potential COVID-19 community safety prevention measures that may be considered for implementation on the waterfront.

5. CONCLUSION OF THE APRIL 21, 2021 SPECIAL COUNCIL MEETING

Special Meeting of White Rock City Council

Minutes

April 19, 2021, 4:00 p.m.
City Hall Council Chambers
15322 Buena Vista Avenue, White Rock, BC, V4B 1Y6

PRESENT:	Mayor Walker Councillor Chesney Councillor Fathers Councillor Johanson Councillor Kristjanson (arrived at 4:02 p.m.) Councillor Manning Councillor Trevelyan
STAFF:	Guillermo Ferrero, Chief Administrative Officer Tracey Arthur, Director of Corporate Administration Carl Isaak, Director of Planning and Development Services Jim Gordon, Director of Engineering and Municipal Operations (arrived at 4:14 p.m.) Jacquie Johnstone, Director of Human Resources Colleen Ponzini, Director of Financial Services Eric Stepura, Director of Recreation and Culture Ed Wolfe, Fire Chief Donna Kell, Manager of Communications and Government Relations Rosaline Choy, Manager, Engineering Debbie Johnstone, Deputy Corporate Officer
GUEST:	Alex Nixon, Executive Director of the White Rock Business Improvement Association

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1. CALL MEETING TO ORDER

The meeting was called to order at 4:00 p.m.

2. MOTION TO CONDUCT A SPECIAL COUNCIL MEETING WITHOUT THE PUBLIC IN ATTENDANCE

Motion Number: 2021-207 It was MOVED and SECONDED

WHEREAS COVID-19 has been declared a global pandemic;

WHEREAS the City of White Rock has been able to continue to provide the public access to the meetings through live streaming;

WHEREAS holding public meetings in the City Hall Council Chambers, where all the audio/video equipment has been set up for the live streaming program, would not be possible without breaching physical distancing restrictions due to its size, and holding public meetings at the White Rock Community Centre would cause further financial impact to City Operations due to staffing resources and not enable live streaming;

WHEREAS Ministerial Orders require an adopted motion in order to hold public meetings electronically, without members of the public present in person at the meeting;

THEREFORE BE IT RESOLVED THAT Council authorizes the City of White Rock to hold the April 19, 2021 Special Council meeting to be video streamed and available on the City's website, and without the public present in the Council Chambers.

Absent (1): Councillor Kristjanson

Motion CARRIED (6 to 0)

3. ADOPTION OF AGENDA

Motion Number: 2021-208 It was MOVED and SECONDED

THAT the Corporation of the City of White Rock Council adopt the agenda for its special meeting scheduled for April 19, 2021 as amended to include "On-Table" information from the Fire Chief in regard to Item 4.2.

Absent (1): Councillor Kristjanson

Motion CARRIED (6 to 0)

4. CORPORATE REPORTS

4.1 Consumption of Liquor in Public Places Bylaw No. 2385

Corporate report dated April 19, 2021 from the Director of Planning and Development Services titled "Consumption of Liquor in Public Places Bylaw 2385".

Councillor Kristjanson arrived at the meeting at 4:02 p.m.

Councillor Trevelyan who requested the corporate report in regard to" Consumption of Liquor in Public Places Bylaw No. 2385" noted due to the increase in COIVD-19 cases and concerns with further gatherings at the waterfront asked to withdraw the request for consideration on this matter at this time. Instead the corporate report was received for information.

Motion Number: 2021-209 It was MOVED and SECONDED

THAT Council receive the April 19, 2021, corporate report from the Director of Planning and Development Services, titled "Consumption of Liquor in Public Places Bylaw No. 2385".

Motion CARRIED (7 to 0)

Motion Number: 2021-210 It was MOVED and SECONDED

THAT Council requests for a staff corporate report, for the next Council meeting, regarding Marine Drive temporarily being changed to a one (1) way with one lane closed to traffic; allowing for restaurants to expand their patio use area and there to be more area for pedestrians to social distance; included would be safety and liability elements.

Voted in the negative (1): Councillor Johanson

Motion CARRIED (6 to 1)

Motion Number: 2021-211 It was MOVED and SECONDED

THAT Council endorses that all patio fees be suspend for 2021 for the entire City; and that there be a refund issued to those who already paid for the year of 2021.

Motion CARRIED (7 to 0)

4.2 COVID-19 Proposed Prevention Measures

Corporate report dated April 19, 2021 from the Fire Chief titled "COVID-19 Proposed Prevention Measures".

April 19, 2021 announcements were made by the province and Health Officer that orders were being enacted for April 23, 2021 regarding travel

between health regions / gatherings in relation to the COVID-19 pandemic.

It was determined that more time was required to discuss the topic of this corporate report in more detail, an additional meeting would be called.

Motion Number: 2021-212 It was MOVED and SECONDED

THAT Council limit waterfront parking lots to White Rock residents with parking decals on display and veterans with veteran licence plates only.

Voted in the negative (5): Mayor Walker, Councillor Fathers, Councillor Johanson, Councillor Manning, and Councillor Trevelyan

Motion DEFEATED (2 to 5)

Motion Number: 2021-213 It was MOVED and SECONDED

THAT Council call a special Council meeting to be held Wednesday, April 21, 2021 at 5:00 p.m. with the topic addressed in the corporate report titled "COVID-19 Proposed Prevention Measures" as the one topic for discussion.

Motion CARRIED (7 to 0)

5. BYLAWS

5.1 BYLAW 2385, CONSUMPTION OF LIQUOR IN PUBLIC PLACES BYLAW

A Bylaw to allow for the consumption of liquor in Memorial Park Plaza.

Note: Bylaw 2385 was not considered due to the report only being received for information by Council

6. CONCLUSION OF THE APRIL 19, 2021 SPECIAL COUNCIL MEETING

The meeting was concluded at 4:58 p.m.

Mayor Walker

Tracey Arthur, Director of Corporate Administration

THE CORPORATION OF THE

CITY OF WHITE ROCK

CORPORATE REPORT

DATE: **April 19, 2021**

TO: **Mayor and Council**

FROM: **Ed Wolfe, Fire Chief**

SUBJECT: **COVID-19 Proposed Prevention Measures**

RECOMMENDATION

THAT Council receives this report for discussion on potential COVID-19 community safety prevention measures that may be considered for implementation on the waterfront.

EXECUTIVE SUMMARY

The primary purpose of this report is to provide Council with options for consideration that would support the recommendations of the Public Health Officer and help reduce the transmission or spread of the COVID-19 virus.

PREVIOUS COUNCIL DIRECTION

Motion # & Meeting Date	Motion Details
#TBD, April 12, 2021 Regular Council Meeting	Council direct staff to report what measures the City should put in place, if any, to help address keeping with Health Orders during the pandemic at the waterfront.

INTRODUCTION/BACKGROUND

The COVID-19 cases in the Fraser Health region are the highest in the province and the Provincial Health Officer is advising the public to stay home and remain in your neighborhood. White Rock is a destination community that attracts many visitors to the waterfront and beach especially with the restrictions imposed to reduce viral transmission during the pandemic. In support of the Provincial Health Officer's recommendations and to promote the health and safety of White Rock residents, staff have generated a list of options for Council consideration, following Council's direction, to try and reduce or limit visitation to the City's waterfront at a critical time during the pandemic.

FINANCIAL IMPLICATIONS

The cost to deliver a stronger, comprehensive communications and messaging plan would be approximately $2100. In addition, any closures of parking at the waterfront will result in lost revenues of up to $95K per month, depending on the combination of closed lots. Lost revenues from parking can be recovered as it qualifies through the COVID-19 Safe Restart Grant.

LEGAL IMPLICATIONS

Not applicable.

COMMUNICATION AND COMMUNITY ENGAGEMENT IMPLICATIONS

The proposed COVID-19 prevention measures, if implemented along the waterfront, may impact public access, and therefore impact local businesses or prompt responses from residents that had prepaid for parking passes or experiencing changes to traffic patterns along other routes.

INTERDEPARTMENTAL INVOLVEMENT/IMPLICATIONS

The Engineering and Municipal Operations Department along with Planning and Development, Human Resources, Finance, Recreation and Culture, Communications, RCMP and Fire have worked together to explore options that are included in this report.

CLIMATE CHANGE IMPLICATIONS

Not applicable.

ALIGNMENT WITH STRATEGIC PRIORITIES

Not applicable.

OPTIONS / RISKS / ALTERNATIVES

The following options are available for Council's consideration:

1. Develop a comprehensive communications plan. Communication would be an integral part of any significant change. Some potential communication approaches include:
    - LED signs at the Waterfront (1 day).
    - Website update (1 day).
    - Social media posts — Twitter, Facebook (1 day).
    - Information for staff (1 day).
    - News release (2 days).
    - Facebook/Instagram advertising (2 days).
    - Information for community partners (2 days).
    - Signage on site (if new, 5-7 days).
    - Ad in Peace Arch News (5-7 days).
    - Banner at the Pier arch (5-7 days).
2. Fence off the entire Promenade. The estimated timeline to implement this would be one week and dependent upon contractor availability. The cost would be approximately $30K depending on the extent of the closure. Fencing would only be necessary if people are to be kept off the Promenade.
3. Close parking lots. This would be accomplished with concrete barriers and the timeline to implement this would be one week with an approximate cost of $5K, recoverable through the COVID-19 Safe Restart Program.
4. Create parking spaces specifically for the pickup of takeout in designated lots adjacent to restaurants.
5. Limit waterfront parking lots to White Rock residents with parking decals only.

6. Reserve a parking lot for restaurant patrons only. Restaurants would issue temporary passes that patrons would display on their vehicles while dining in the restaurant.
7. Fencing off specific problematic areas including areas in front of restaurants where lineups occur.
8. Close the Pier. The timeline to implement a closure would be one day with limited cost.
9. Installation of additional signage. Some signs are available within current inventory and would take one week to implement.
10. Close Marine Drive. Physical barriers would be required with one week to install, along with detour signage and communication. It may be possible for some of the signage from the Marine Drive Hump Stabilization Project to be utilized. There would be considerable impact to residents along the detour routes of Columbia and Victoria. In addition, emergency response access would be required.
11. Marine Drive be designated to one way traffic only as was done during the Marine Drive Hump Stabilization Project. The unused lane could be offered to local businesses to expanded patio services, as what was carried out by the community of Deep Cove. Since parking lanes are not part of existing sidewalk use licences, a bylaw may be required to allow liquor consumption in these public areas if the direction is to allow restaurants to use this space for takeout liquor service and consumption.
12. Close the West Beach Parkade. The timeline to implement this would be immediate with no additional cost, other than loss of revenue.
13. Hiring private security to help with enforcement efforts. Private security would not have the ability to issue fines for public health order violations. While their presence may potentially deter COVID-19 non-compliance, any issuance of fines would still require an RCMP member. The approximate cost for private security is $250 per 8-hour shift, per guard or $1000 a week for two guards working two days for eight hours. This option is not recommended as communication around conduct and performance must take place through the employer rather than the individual.
14. Initiate communication with Semiahmoo First Nation to consider a partial or full closure of their public parking lot.
15. Add one or more additional RCMP officers on the weekends dedicated to the waterfront and to conduct proactive COVID-19 safety checks, assist bylaw officers when required and have a general uniformed presence in the area. Cost for two days of coverage is $1600 per officer. Recommendation is two officers be utilized for safety reasons while on foot patrol in dense crowds at a cost of approximately $3200 for two officers for two days.
16. Adjust the bylaw schedule to allow for more flexibility with hours to assist with enforcement efforts. There are three regular full-time Bylaw Enforcement Officers with shifts that cover the entire week. Bylaw Enforcement Officers do not have the authority to issue fines for non-compliance of public health orders. Shifts could be adjusted to reflect coverage of our busiest days and times (typically weekend afternoons and evenings).
17. Hire additional Bylaw Enforcement Officers. The recruiting for additional Bylaw Enforcement Officers would likely take 1-2 months with these positions currently being in high demand. The current draft Financial Plan includes approximately $28,000 for casual Bylaw Enforcement Officers, who are used to cover vacation or absences. Some of the casual officers have other jobs and may not always be available. The City is currently recruiting for

a Bylaw Patroller level position that would specifically target afternoon and weekend hours and enforcement of the no dogs on the promenade. The Bylaw Patroller position is expected to be filled in May/June 2021 at the earliest.

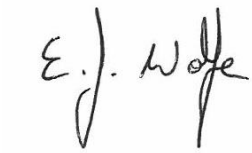
18. Request the province consider the City of White Rock for community vaccination as other communities in the province. The popularity of our community as a destination has greatly increased our vulnerability.

19. Initiate communication with BNSF police regarding the need for uniformed officers from their organization to assist with enforcement efforts along the railway and initiate communication with the province for enforcement at the beach.

CONCLUSION

The popularity of White Rock as a destination community particularly during the COVID-19 pandemic and desire to be outdoors has resulted in regular crowding on the waterfront. The influx of people in our community during the pandemic creates additional risk of COVID-19 exposure and transmission. In support of the Public Health Officer's recommendations and to protect the health and safety of White Rock residents, following Council's direction, staff have generated a list of COVID-19 prevention measures included in this report for Council's consideration.

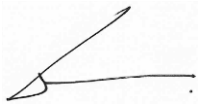
Respectfully submitted,



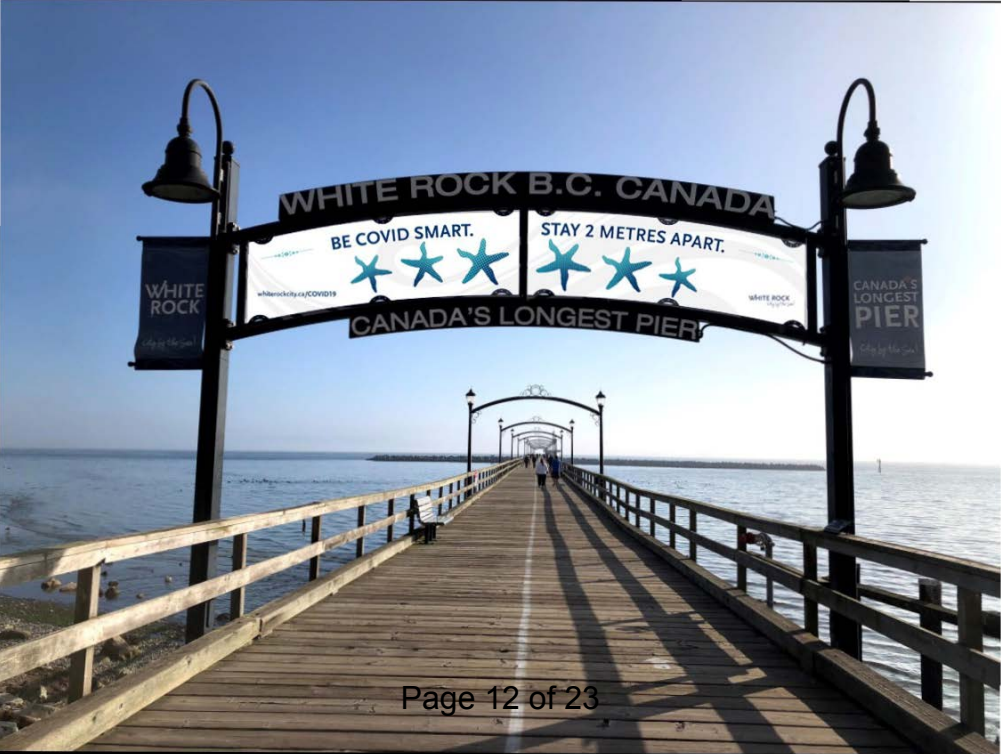
Ed Wolfe
Fire Chief

Comments from the Chief Administrative Officer

The corporate report is provided for Council's consideration.



Guillermo Ferrero
Chief Administrative Officer


WHITE ROCK B.C. CANADA
BE COVID SMART.
STAY 2 METRES APART.
whiterockcity.ca/COVID19
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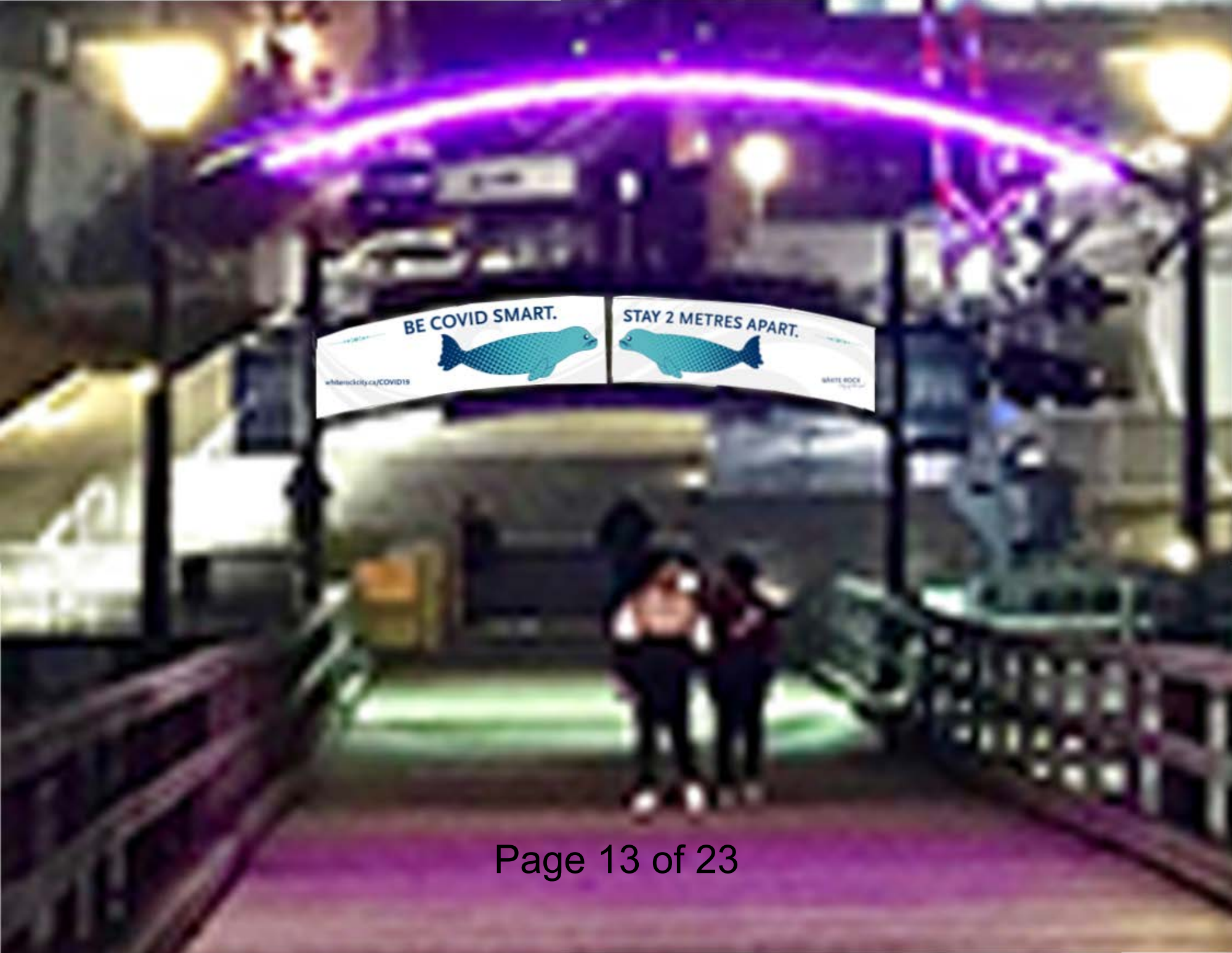
BE COVID SMART.
STAY 2 METRES APART.

Tracey Arthur

From: Tracey Arthur
Sent: Monday, April 19, 2021 3:39 PM
To: Tracey Arthur
Subject: FW: On Table inclusion for tonight

From: Blessin, Scott [PHSA] <Scott.Blessin@phsa.ca>
Sent: Monday, April 19, 2021 6:38 AM
To: Edward Wolfe <ewolfe@whiterockcity.ca>
Cc: Guillermo Ferrero <GFerrero@whiterockcity.ca>
Subject: RE: Corporate report

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good Morning Ed,

My colleague Amy Lubik has provided the following feedback for your consideration:

Hi Scott,
Please let me know if you think this is what they are looking for.

With gratitude,
Amy

Regarding limiting congestion on the waterfront, recommendations were evaluated based on public health recommendations from the National Collaborating Centre for Environmental Health.
shttps://ncceh.ca/documents/guide/covid-19-and-outdoor-safety-considerations-use-outdoor-recreational-spaces

The summary recommendations are below:

Options for risk reduction in outdoor spaces
The evidence presented here informs a number of potential actions for reducing the risk of transmission. However, each recreational area must be assessed for transmission risks such that the appropriate combination of measures can be implemented.

- **Maximize distance and minimize interaction** between park users, particularly where narrow trails or passages may bring people closer together (e.g., unidirectional traffic on trail loops).
- **Close or remove features** that cause visitors to gather, such as viewpoints or seating. If such gathering points can't be closed (e.g., entrances and exits to the park), provide limited supervision to those areas to encourage physical distancing.
- **Close features** on which virus may have settled, particularly those that have been in close contact with potentially ill people (e.g., playgrounds).
- **Sanitizing surfaces** may be necessary in specific situations, in which case priority should be given to smooth, non-porous surfaces on which the virus is most persistent.
- **Discourage activities that involve physical contact,** by closing sports fields and/or providing limited supervision to ensure distancing during activities.
- **Washrooms** may be a necessity. However, because of the presence of virus in feces and the potential for that virus to be aerosolized by toilets, public washrooms will require additional sanitation if they remain open. Users should be advised to close the toilet lid if possible. Ventilation of these spaces should be maximized.

COVID-19 and outdoor safety: Considerations for use of outdoor recreational spaces

Topics Built Environment (https://ncceh.ca/topics/built-environment) Contaminants and Hazards (https://ncceh.ca/topics/contaminants-and-hazards) COVID-19 (https://ncceh.ca/topics/covid-19) Infectious Diseases (https://ncceh.ca/topics/infectious-diseases) Outdoor Air (https://ncceh.ca/topics/outdoor-air)
[**NOTE:**a printer friendly version of this document is attached at the bottom]

Introduction

Outdoor recreational spaces make important contributions to social well-being as well as physical and mental health. During a public health emergency such as the COVID-19 pandemic, the use of these spaces by large numbers of people may also increase the risk of community spread. Public health strategies to minimize disease transmission risk in outdoor spaces have focused on individual actions as well as community-based approaches. Key individual actions include quarantine if one has symptoms of COVID-19, or (for asymptomatic people) staying at least 2 metres (m) away from others, observing hand hygiene and respiratory etiquette (e.g., coughing or sneezing into a tissue, mask or elbow).1 In contrast, community-based approaches to COVID-19 management of outdoor spaces in Canada have involved precautionary closures and limits on activities and access.

However, closure of parks, amenities, and green spaces also restrict opportunities for healthy outdoor activity and stress relief, and may drive individuals to access less suitable and more congested spaces. Thus, the management of outdoor recreational spaces requires a thoughtful analysis to balance the needs of the population against the potential risks of community spread.

This document was developed to address concerns related to the safe use of public spaces during the COVID-19 outbreak. The available evidence is synthesized in order to increase the understanding of the types of community-based precautions available and options for implementing them.

Challenges associated with park closures due to COVID-19

There are a number of reasons why closing parks and green spaces may be highly undesirable. These challenges include the mental health impacts of the pandemic, the overall health benefits of access to green space, the potential for riskier alternatives, and health inequities created by closing public spaces.

Mental health impacts and the benefits of green spaces

The impact of the pandemic on mental health is expected to be severe. There are already numerous media reports of surges in the use of crisis hotlines,2 and new centres have been established across the country to deal with the anticipated high volumes of calls. Many agencies have added recommendations for dealing with COVID-19-related stress. For example, the Canadian Association for Mental Health has a dedicated webpage with information and advice to help people deal with quarantine and self-isolation; supporting children, family and friends; and stigma and prejudice related to the pandemic.3

Access to outdoor green space is a demonstrated public health asset. Spending time in outdoor spaces is important for avoiding social isolation and engaging in physical activities, outdoor play or simply enjoying a change of scenery and fresh air.4,5 Due to restrictions on gatherings, movement, and related closures of workplaces and indoor recreational spaces, the pandemic has further amplified the overall contribution of outdoor public spaces to physical and mental health. It is therefore unsurprising that park use is increasing especially when weather is fair. Metro Vancouver reported higher than average use in 60% of its parks in the two weeks following the implementation of physical distancing measures.6 With many people unable to work and milder weather approaching, it is reasonable to assume that demand for outdoor recreational space will continue to rise.

Creating drivers for risky behavior

In a time of extraordinary stress related to the uncertain health and financial well-being of self and family, removing a potential resource for stress relief creates its own health challenges and may drive other negative behaviors. If parks and squares are inaccessible, people may move to other less desirable options, such as sidewalks and pavements that are not designed to encourage physical distancing when occupancy is high.7 More people crowding onto these high-traffic zones will inevitably result in failure to maintain a 2-m distance. Research on influenza outbreaks has suggested that crowding, even in an outdoor environment, may make a difference in the occurrence of an outbreak.8 Thus, allowing and enabling people to spread out as much as possible in outdoor spaces will reduce the risk of disease transmission.

Contribution of park closures to health inequities

Park closures are a health equity issue. Unlike higher-income families living in detached housing, those living in multi-unit residential buildings in urban centres often do not have access to private green space.9 Closing public green spaces amplifies a number of pandemic-driven stressors (income loss, food insecurity, health comorbidities) that will disproportionately impact the ability of these families and individuals to weather the emergency. Thus, the management of green spaces, like all other aspects of the COVID-19 pandemic, requires a health equity lens.10

Potential factors that impact the transmission of SARS-CoV-2 in outdoor environments

Maintaining safe access to green spaces is a challenge given that our knowledge of disease transmission is evolving rapidly. Most SARS-CoV-2 studies pertain to indoor environments, primarily from hospital and homecare settings and, in a few notable cases, cruise ships. At the time of writing, there is very limited research regarding SARS-CoV-2 in outdoor environments. However, SARS-CoV-2 studies in healthcare and laboratory settings and previous research on other respiratory outbreaks can be used to frame some key questions about the risks of SARS-CoV-2 transmission in outdoor spaces.

How is SARS-CoV-2 transmitted and what routes are relevant for outdoor spaces?

The primary modes of SARS-CoV-2 transmission are direct contact with an infected person or their respiratory droplets.11 Respiratory droplets are generated by talking, breathing, coughing, and sneezing, and are thought to travel less than 1 m before dropping to the ground.12 For this reason, maintaining a 2-m radius (i.e., double the "fall out" zone) is central to strategies for limiting the spread of the COVID-19 disease.11,13 Because maintaining a 2-m radius is logically easier in outdoor spaces, we would expect a reduced risk of transmission in uncrowded outdoor spaces compared to indoor spaces.

Contact with contaminated surfaces (hand to the eyes, mouth, or nose) is another recognized mode of SARS-CoV-2 transmission,11,14 and one that is not affected by the 2-m physical distancing rule. Surfaces become contaminated when respiratory droplets settle upon them. Transmission risk then depends on several factors, including the **concentration** of viable virus deposited and its viability on a specific **surface** for a given **time period**. In a recent laboratory study, SARS-CoV-2 was still detectable (but greatly reduced) on polypropylene plastic at 72 h, on stainless steel at 48 h, on cardboard at 24 h, and on copper at 4 h.15 This is consistent with Chin et al.,16 who found that the virus remained viable and detectable on plastic and steel for four days, on glass for two days, and on wood for one day (all at 22oC). The virus persisted much longer on smooth, nonporous surfaces compared to porous surfaces (wood, paper, cloth). Surfaces were not analyzed at different temperatures, but when suspended in culture fluid, the virus remained detectable for twice as long at 4°C than at 22°C. This may be a concern for viral persistence on outdoor surfaces in cooler weather, although more data is required.

There is some evidence that the SARS-CoV-2 virus is shed via the feces17 and the virus has been detected in the toilets of ill people.18,19 In one study that collected air samples throughout a busy hospital environment, the highest virus levels were found in the air in a "mobile toilet".20 This was attributed to people coughing or sneezing in an enclosed space, as well as the potential for aerosolization of the virus from flushing. "Toilet plumes" have been previously discussed as a means for disease transmission.21 Although there is insufficient evidence to determine whether this pathway is significant in the current pandemic, fecal transmission may be a consideration for the management of public washrooms.

Aerosol transmission: a key concern for park users

One of the key concerns for park users is whether COVID-19 can be transmitted via the exhalations of other users. Coughing, sneezing, talking and even breathing all produce aerosols that range in size from the larger respiratory droplets (> 5 µm), which settle quickly, to very fine droplets or particles (< 5 µm) that can remain suspended in the air for longer, travel greater distances, and can be inhaled deeply into the lungs.22 Aerosol transmission in this manner raises concerns that the 2-m "safe distance" may not be adequately protective, given research demonstrating that human sneezes can propel aerosols up to 8 m from an infected person.23 Recent modelling data (from an unpublished, non-peer-reviewed source) suggests that turbulence created by biking, running, and walking can entrain droplets, causing them to remain suspended longer and thus also increasing the safe radius.24 However, the risk of disease transmission depends not only on the generation of virus-containing aerosols, but also on the ability of the aerosolized virus to remain sufficiently concentrated and infectious by the time it reaches the next host.

Although the existing research on SARS-CoV-2 **does** support the generation of aerosols containing the virus, it **does not yet** support the virus remaining suspended or remaining infectious in suspension. Viral RNA has been detected in the air in hospital rooms and corridors, in the presence of sick patients, and even outdoors,19,20 although not in all cases.18 Viral RNA has also been found widely dispersed in the environment around an infected person, even on surfaces that the patient could not have touched or was distant from.18,19,25 These studies suggest that virus moved around the environment, perhaps as an aerosol, but does not indicate how long the virus remained viable and/or suspended. In the laboratory, a highly concentrated virus aerosol remained infectious for 3 h.15 In contrast, in a healthcare setting, virus recovered in air samples from patient rooms and corridors was **not** able to reinfect cultured cells.19 This indicates that either the aerosolized virus was no longer viable or that the amounts recovered were too low to cause infection. Thus, a great deal of additional information is required to understand whether COVID-19 can be transmitted via aerosols, particularly outdoors where virus-containing aerosols can be rapidly dispersed.

However, we do have reason to believe that aerosol transmission, if it is occurring, is not a primary mode of transmission in this pandemic. Research looking at healthcare workers, travellers on air planes, and the household contacts of tens of thousands of COVID-19 cases has consistently shown that transmission is strongly dependent on being in close proximity to a sick person for some period of time.26 This is in stark contrast to some well-known airborne diseases, like measles, in which the generation of a long-lived aerosol allows transmission even if the person has never been in the presence of an infected case. For this reason, the World Health Organization does not currently consider airborne transmission to be a primary mode of transmission for the general public.11 In Canada, healthcare workers who are performing procedures that artificially generate large amounts of aerosols (e.g., intubating a patient) are asked to use "airborne precautions." However, all other patient care is conducted under droplet and contact precautions only.27

Although virus particles may be detected in the air, physical distancing protects park users from the primary modes of transmission: direct contact and respiratory droplet transmission. However, hand hygiene and respiratory etiquette are also necessary to protect park users from SARS-CoV-2 that has been deposited on surfaces. Airborne precautions for the general public are not recommended by the Public Health Agency of Canada at this time, although it is acknowledged that wearing a non-medical face mask may be helpful if it serves to limit virus **emitted** by sick people who may or may not be symptomatic.28

How might the SARS-CoV-2 virus be affected by outdoor environmental factors?

A number of factors could influence the presence and viability of SARS-CoV-2 in outdoor spaces. Because there is insufficient evidence to assess the risk of transmission in outdoor environments, precautions must be based on what is known about SARS-CoV-2 in indoor and laboratory environments and other pathogens in outdoor environments. These factors include:

- **Crowding.** Previous research on mass gatherings has suggested that holding events in uncrowded outdoor venues was the least likely to result in influenza outbreaks.8
- **Wind speed and direction.** Particles settle more quickly in disturbed air because they are more likely to be intercepted by surfaces.12 However, in highly turbulent air particles may also remain suspended longer.
- **Meteorological conditions (temperature, humidity, and UV).** There is some evidence that SARS-Cov2 transmission may be affected by changes in temperature and humidity,29,30 which may affect the viability of the virus on surfaces and in droplets, but also independently modulate host immunity/susceptibility.31 It is also thought that UV radiation from sunlight affects the viability of influenza virus suspended in aerosols,32 such that changes in UV index may influence influenza transmission and the seasonality of outbreaks.33 Overall, however, the effects of meteorological conditions are expected to be quite **small,** as the current determining factor in transmission is the number of vulnerable hosts and the contact between them.31

Actions taken in other jurisdictions

There are currently several different approaches being taken to manage outdoor recreational spaces in Canada and elsewhere, and these have different implications at the federal/provincial versus municipal levels. At the federal level, all motor vehicle access to national parks, historic sites, and marine conservation areas was suspended on March 25, 2020. At the time of writing, the majority of provincial parks and recreational areas are also closed. This is intended to reduce non-essential staffing at park sites and minimize the risk of wildfires or the need for search and rescue.34 However, it also serves the key purpose of discouraging non-essential travel or pandemic tourism by members of the public who would or should remain at home.35 Discouraging travel to distant parks also discourages incidental contacts with services and people along the route, which might otherwise bring the virus into smaller or remote communities

The decision to close parks in urban areas is more complex. Because urban provincial and national parks are closed, the available green space in or near many cities has been reduced. Parks controlled by municipalities therefore need to be managed thoughtfully to avoid some of the adverse impacts of lack of green space. Many Canadian cities have tried to address transmission risk by closing specific amenities that people touch or that cause people to interact, such as such as playgrounds, skateboard parks, courts, spray parks, picnic areas, shelters and gazebos, and outdoor exercise equipment.36-40 The province of Ontario's emergency orders specify that areas not otherwise closed would be available for walk-through access only,41 and the City of Richmond has implemented one-way traffic on walking trails to minimize interaction.42 In some cases, enforcement officers have been deployed to maintain physical distancing in problem areas.43,44 In Vancouver, park "champions" dressed in colourful clothing and carrying props are being used to remind users of physical distancing, alongside park rangers issuing fines, as well as parking lot and road closures to discourage non-local users and increase distancing between cyclists and pedestrians.45 Full park closures remain an option if these partial measures do not have the desired effect.

However, not all jurisdictions are moving to close or limit recreational spaces. In some cities, the lack of road traffic has created opportunities to **open** streets as pedestrian thoroughfares, particularly when there are no parks or green spaces nearby.9,46 Opening new spaces encourages dispersion in the local environment, rather than resorting to non-essential travel or aggregating on sidewalks. This approach also addresses the fundamental inequity of access to green space for those living in multi-unit residential complexes. In London, park users have been asked to keep to local parks (to minimize travel) or better yet to remain in their own yard if they have one, in order to prioritize the use of public parks for those with no access to private green space.44 Given that the pandemic will require long-term changes to how people interact in public spaces, finding strategies that increase rather than decrease outdoor recreational opportunities is preferred.

Options for risk reduction in outdoor spaces

The evidence presented here informs a number of potential actions for reducing the risk of transmission. However, each recreational area must be assessed for transmission risks such that the appropriate combination of measures can be implemented.

- **Maximize distance and minimize interaction** between park users, particularly where narrow trails or passages may bring people closer together (e.g., unidirectional traffic on trail loops).
- **Close or remove features** that cause visitors to gather, such as viewpoints or seating. If such gathering points can't be closed (e.g., entrances and exits to the park), provide limited supervision to those areas to encourage physical distancing.
- **Close features** on which virus may have settled, particularly those that have been in close contact with potentially ill people (e.g., playgrounds).
- **Sanitizing surfaces** may be necessary in specific situations, in which case priority should be given to smooth, non-porous surfaces on which the virus is most persistent.

- **Discourage activities that involve physical contact,** by closing sports fields and/or providing limited supervision to ensure distancing during activities.
- **Washrooms** may be a necessity. However, because of the presence of virus in feces and the potential for that virus to be aerosolized by toilets, public washrooms will require additional sanitation if they remain open. Users should be advised to close the toilet lid if possible. Ventilation of these spaces should be maximized.
- **Provide opportunities for hand hygiene,** particularly if washrooms have been closed. Vandalism-proof hand sanitizer or hand wash stations may be needed.
- Ensure that **trash containers** are available for discarding personal protective equipment (e.g., masks and gloves), which may otherwise become a public health hazard.
- **Consider neighbourhood access** to parks before moving to restrict already limited options. If many residents need to access the same space, weekly **scheduling by home address** may be an option. Park space can be limited to local residents by closing parking lots.
- **Increase space available** to encourage dispersion and non-collective activities. Additional spaces may include streets and parking lots closed to vehicles, as well as private green spaces in urban areas, such as golf courses and other sports fields. **Update online park information** to reflect these new options for dispersion.
- **Increase enforcement of health orders** regarding physical distancing measures through deployment of sufficient numbers of authorized personnel.
- **Recommendations on the use of masks** should refer to the Public Health Agency of Canada's position on non-medical masks and disease transmission.28 At present, airborne transmission is not considered a primary mode of transmission; however, there are many other considerations around masks that may inform their use by the public, such as reducing risk from people who may be shedding the virus through coughing and sneezing.

Summary

The management of outdoor public spaces to limit the spread of the SARS-CoV-2 virus needs to be guided by updated evidence on the main routes of transmission as well as an understanding of the important beneficial role played by parks, green spaces, and other open areas in reducing stress and promoting health for people of all ages. Currently, direct physical contact and close proximity are regarded as the most important transmission risk factors and community-based measures are largely focused on physical distancing. The evidence on the risks of aerosol transmission and transmission from touching surfaces in outdoor environments is at this time weak, but research is ongoing and results could lead to changes in recommendations.

There are a number of uncertainties surrounding transmission of COVID-19 in outdoor environments that are relevant for public health decision-making:

- **What is a "safe distance"?** Although the majority of public health agencies recommend a 2-m radius, this safe distance may have to be amended if it proves that SARS-CoV-2 can be transmitted as an aerosol in a public setting. However, the current evidence strongly suggests that close proximity is a key factor in transmission.
- **How effective are non-medical masks used by the public?** There are many unanswered questions about the effectiveness of using cloth face coverings (e.g., masks, scarves, bandanas) in protecting against COVID-19.47 Although the US CDC has recently advised people to wear face coverings in public spaces,48 PHAC continues to emphasize that physical distancing, hand hygiene, and respiratory etiquette are the key means to slow transmission. Masks may be of use to prevent ill people from emitting virus, but mask use alone is insufficient to prevent healthy people from contracting the virus.28 However, much additional work is needed to understand how effective these home-made cloth barriers are when worn by either healthy or ill people.
- **How long does the virus survive outdoors?** All of the currently available studies on viruses in air, on surfaces, viability and disinfection are from experimental or clinical settings. Results for outdoor environments are not yet available but have been prioritized for research.49

Unlike many previous public health emergencies, the COVID-19 pandemic is likely to involve long-term cycles during which infection rates will rise and fall over several years. Policies and interventions will need to adapt and change through these cycles and societal systems will need to evolve to control future outbreaks.50 Public health decision-making concerning outdoor recreational spaces is part of this evolving system. The effectiveness of park closures will depend on how well they are coordinated with other prevention strategies, ongoing public education, and the engagement and mobilization of personnel and community groups in communication, monitoring, and enforcement.

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