

INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC

# COVID-19: Safe Use of Urban Parks and Green Spaces During Gradual Lockdown Lifting

Last updated on July 8, 2020

# Notification

This document was written in the context of the COVID-19 health emergency. Produced in a short period of time and based on the knowledge gained from a rapid literature search and a summary and non-exhaustive analysis of the scientific and grey literature, the findings presented here may need to be revised as scientific knowledge related to the current pandemic evolves.

The decision to open or close some or all parks and green spaces or to make adjustments to promote their safe use rests with municipal authorities. However, municipal authorities should consult with regional public health departments so as to take into account the specific epidemiology of COVID-19 in each region and the health and wellness benefits that parks and green spaces can provide to the population.

# Summary

The purpose of this document is to provide guidelines to support the use of parks and green spaces during the COVID-19 pandemic. It reviews the main health benefits of green spaces and the basic principles to be respected to reduce the risk of spreading the virus in these areas. The document also presents promising initiatives put forward by municipalities in Québec, Canada and elsewhere in the world aimed at promoting the safe and optimal use of parks and green spaces. Finally, some relevant resources that can support the development of parks and green spaces by facilitating consideration of elements that are key to achieving this aim are listed.

# Highlights

- It is essential to make parks and green spaces accessible to the public, especially in the context of a pandemic lockdown, since they represent one of the few safe places where people can engage in a variety of physical and social activities.
- > Parks and green spaces improve many dimensions of physical and mental health.
- Parks and green spaces provides cool islands during periods of extreme heat.
- The recommendations for preventing the spread of the virus when visiting parks and green spaces are as follows:
  - Do not go to parks and green spaces if you have symptoms consistent with COVID-19, if you are awaiting a test or test result, if you are in home isolation, or if you have just returned from a trip;



- Maintain a distance of two metres between people from different households in parks and green spaces as a precaution;
- Practice respiratory etiquette;
- It is advisable to wear a face covering if a physical distance of two metres may be difficult to maintain;
- Wash your hands often or after touching parks and green spaces furniture and facilities .
- There are some basic elements that can encourage the use and attendance of parks and green spaces; these are as follows:
  - Geographic accessibility;
  - Aesthetics;
  - Cleanliness;
  - Safe design;
  - > The availability of activities that invite the use of facilities by different population groups.
- In addition to the previous basic elements, it is advisable to implement certain measures and arrangements which encourage physical distancing and reduce the risk of transmission:
  - Clean public facilities;
  - Communicate clearly and simply the guidelines related to hygiene, maintenance of physical distance and the use of spaces;
  - Provide access to hygienic sanitary facilities by requiring that physical distance be maintained (e.g., waiting in line);
  - Modify facilities, furniture and rules of use;
  - Designate small areas for use by a family bubble;
  - Improve accessibility to parks and green spaces;
  - Adopt specific measures for children.

It is important to remember that it is essential that parks and green spaces be equitably accessible, so that the entire population can benefit from them.

# Background

The new coronavirus pandemic has led Québec, like many jurisdictions around the world, to recommend public health measures to curb its spread (1). These measures include limiting the amount of contact between people, physical distancing, physical barriers, hand hygiene, respiratory etiquette, face coverings, disinfection and surface cleaning. These measures are considered effective approaches to reducing transmission and the number of COVID-19 cases (2, 3).

These measures have disrupted daily life and are likely to have an impact on health and wellbeing, particularly for vulnerable, disadvantaged populations or those living in urban environments where public space is more limited (4-10).

The health and wellbeing of a population depends on many factors, including those related to the characteristics of the built environment. In urban areas, the availability and accessibility of urban parks and green spaces<sup>1</sup> are characteristics that can promote population health and wellbeing (11, 12). During a pandemic, they are often the last refuge in urban areas where there is access to vegetation or a place to practice physical activities (12-14). Parks and green spaces can also be a source of community resilience by supporting the continued health and wellbeing of the population (5, 15).

During lockdown lifting, municipalities reopen their parks and green spaces as well as the sports facilities within them. The opening of many parks and green spaces results in an increased of trips to these areas (16).

At such times, it is necessary to ensure that parks and green spaces can be used while maintaining physical distancing so as to reduce the risk of spreading the virus (17, 18)<sup>2</sup>. However, this may be difficult to ensure, particularly in urban areas, due not only to the increase in the number of users and to the type of facilities currently available in parks and green spaces, but also to their level of accessibility. Indeed, the COVID-19 situation has made evident the fact that certain disadvantaged and vulnerable populations have more limited access to parks and green spaces (19). Consequently, in several European and North American cities, developments and development proposals that can promote safe access to and use of urban parks and green spaces are gradually being implemented (20).

# **Objectives**

This document has four objectives:

- Review the health benefits of parks and green spaces;
- Outline principles for the safe use of parks and green spaces during a pandemic;
- Describe promising initiatives aimed at promoting the use of parks and green spaces during the pandemic;
- Promote awareness of available relevant resources that support the implementation of urban greening projects and help improve access to parks and green spaces.

# Methodological approach

To meet these objectives, a literature search was carried out by means of the following:

- A survey of the scientific and grey literature and of media content, based on monitoring of COVID-19 and the built environment and lockdown lifting, conducted by the INSPQ since March 24, 2020. The databases consulted for this scientific monitoring are as follows: Ageline, Cinahl, Eric, Environment Complete, Health Policy Reference Center, Political Science Complete, Psychology and Behavioral Sciences Collection, Public Affairs Index, Socindex, PubMed. A manual sort of articles was also performed. For media monitoring, several RSS feeds are consulted using keywords related to COVID-19;
- A supplementary survey of the grey and scientific literature: identification of documents in Google and Google Scholar and on certain sites (e.g., the World Health Organization, governmental or institutional sites);

<sup>&</sup>lt;sup>1</sup> Urban parks and green spaces include parks, green spaces used for sports and physical activities, and urban forests.

<sup>&</sup>lt;sup>2</sup> Physical distancing: in Québec, if you must go out, to the extent possible, maintain a distance of at least two metres from other persons who do not live in your home (17).

- Existing documents published by the INSPQ on the built environment and health (some excerpts of which may be reproduced in full);
- A search for photos of examples of best practices was also conducted in Google Image, Pinterest and Instagram.

# Health benefits of urban parks and green spaces

During the pandemic, there has been a significant increase in the use of parks and green spaces as a way to get outdoors, engage in exercise and relax (14, 16). Research has shown that the accessibility of parks and green spaces is a significant determinant of health and wellbeing. Numerous scientific studies have demonstrated the benefits of parks and green spaces for physical and mental health (11, 21, 22). Examples of these benefits include:

### **Physical health**

- Parks and green spaces provide opportunities to engage in a variety of healthy physical activities (active transportation, sports, recreation and outdoor activities);
- Access to and availability of parks and green spaces in neighbourhoods are associated with reduced mortality from certain diseases, including cardiovascular and respiratory diseases;
- Trees bordering streets provide shade and help create connected green corridors that encourage walking and active transportation;
- The presence of parks and green spaces creates cool islands. Thus, parks and green spaces contribute to the improvement of people's thermal comfort, which has a direct effect on their health and wellbeing. They therefore provide a suitable refuge for population groups with less access to air-conditioned premises, and thus help reduce social inequalities in health.

## Mental Health

- > Concentration, sleep and confidence are positively influenced by the proximity of parks and green spaces;
- The presence of green spaces positively affects energy, mood and a sense of recovery from stressful events;
- The presence of parks and green spaces reduces the risk of developing symptoms of depression and decreases the impact of stress;
- Access to parks and green spaces has the potential to improve mental and physical health and to limit the anxiety and stress generated by the pandemic (12).

## **Social benefits**

Parks and green spaces encourage social interaction and involvement among the various age groups in society. They help weave a social fabric and create and maintain a sense of belonging to a community or neighbourhood (21, 23). The presence of parks and green spaces helps to break social isolation, particularly in disadvantaged areas. In fact, during the pandemic, greater use of parks, particularly small neighbourhood parks, has been observed in cities under lockdown (24).



## Seniors

Seniors are at greatest risk of suffering from the effects of COVID-19 and are a vulnerable group, as they are particularly likely to experience anxiety or depression related to their social isolation (23). In this regard, access to areas with vegetation, in addition to preventing isolation, encourages seniors to walk and helps them maintain good physical and muscular condition (21).

# Safe use of parks and green spaces

## Using parks and green spaces in accordance with public health guidelines

The risk of becoming infected with SARS-CoV-2 in the outdoor environment is considered to be very low, as long as people respect the physical distancing and hygiene guidelines in effect. To minimize the risk of infection, those using parks and green spaces should continue to do the following (18, 25-27):

- Do not go to parks and green spaces if you are experiencing symptoms consistent with COVID-19, are awaiting a test or test result, are in home isolation, or have just returned from a trip<sup>3</sup>;
- Maintain a physical distance of at least two metres between people from different households and consider visiting parks and green spaces outside of busy periods to facilitate this distancing;
- Comply with existing guidelines for outdoor gatherings, for example when meeting with family or friends in a park (28);
- Choose to visit a park or green space in the region where you live, since everyone is still being asked to avoid travelling between regions or from one city to another if possible, even though travel between regions is permitted (29);
- ▶ Wash hands frequently and practice respiratory etiquette<sup>4</sup> at all times;
- Consider wearing a mask or face covering when a two-metre distance cannot be maintained and you are engaged in a low-intensity activity, such as walking at a slow or moderate pace (27). Wearing a mask or face covering represents an added measure of respiratory etiquette in busy public places, including those outdoors. However, briefly passing by another person at a distance of less than two meters without contact and without stopping would carry a very low risk of becoming infected (1).

# Using urban furniture and playgrounds during gradual lockdown lifting

The use of urban furniture (park benches, outdoor tables, water fountains, etc.) by those using parks and green spaces to enjoy a moment of relaxation is considered safe when physical distancing and hygiene measures continue to be properly followed (18). Similarly, when playground use is permitted (31), it is considered safe for children and their families to use the play modules if they follow the physical distancing and hygiene measures in effect (18). It should be recalled that masks or face coverings are not recommended for young children under the age of two (26). Also, when sports equipment or toys are brought along, it is important to avoid sharing them with others and to clean them when you get home (26).

<sup>&</sup>lt;sup>3</sup> Travellers returning to Canada must remain in home isolation for the length of time specified in the Quarantine Act (<u>https://laws-lois.justice.gc.ca/eng/acts/q-1.1/index.html</u>).

<sup>&</sup>lt;sup>4</sup> Respiratory etiquette consists of covering your mouth and nose when coughing or sneezing using tissues or a bent elbow, and then washing your hands. It also consists of using tissues only once and disposing of them immediately in the trash after use, and avoiding touching your mouth or eyes with your hands (30).



# Staying active while physical distancing

Parks and green spaces provide the opportunity to practice a variety of sports, leisure and outdoor activities. Several of these activities have been newly reauthorized in Québec, particularly those practiced in groups (31). Specific recommendations have been issued to ensure that these activities are carried out as safely as possible, while respecting current hygiene guidelines (27, 32):

- Respect physical distancing principles. However, during team activities, brief and infrequent contact or closeness is permitted (e.g., during a game) (30);
- When walking or cycling, stay as far as possible from other cyclists and pedestrians and avoid riding in groups;
- Avoid practicing physical activities in very busy sections of certain parks. Avoid practicing activities during very busy times in certain parks;
- Avoid hugs and other expressions of enthusiasm that unnecessarily reduce the physical distance between teammates.

More details on the safe practice of such sports and physical activities in the context of gradual lockdown lifting can be found on the website of the INSPQ: <u>Pratique sécuritaire de la marche et du vélo à l'extérieur en contexte de pandémie de COVID-19</u> (in French only), and on the website of the Gouvernement du Québec: <u>Reprise des activités sportives, de loisir et de plein air en contexte de COVID-19</u> (in French only) and <u>Guidelines specific to recreation and sports.</u>

## Enjoying swimming sites while continuing to protect yourself

Many parks and green spaces in urban areas offer access to swimming sites such as pools, splash pads, wading pools and beaches. Therefore, public health measures should continue to be applied to minimize the risk of COVID-19 transmission. Municipalities and operators of swimming sites can also help reduce the risk of infection for bathers and employees by following the recommendations available at: <u>COVID-19: Swimming</u> <u>Sites</u>.

# Determinants of use of parks and green spaces

Although the health benefits of green spaces have been demonstrated, appropriate facilities will allow for the maximization of their use. Certain characteristics are conducive to the use of parks and green spaces: geographic accessibility<sup>5</sup>, aesthetics, cleanliness, safe design<sup>6</sup> and the availability of activities that invite the use of facilities by different population groups (11, 21).

A well-maintained green space will be visited more often, making it a good place to support social connections and strengthen communities. Proper maintenance also contributes to making such places safer, which is a particularly important issue for certain more vulnerable population groups, including persons with disabilities, children, women and the elderly (33). Well-maintained green spaces also help reduce crime in neighbourhoods, particularly because of their increased use and the increased surveillance carried out naturally by users.

<sup>&</sup>lt;sup>5</sup> The European Commission recommends that every resident should have a green space within 300 metres of his or her home, as the crow flies, or within a ten-minute walk (21).

<sup>&</sup>lt;sup>6</sup> The six principles of safe design are: signage, visibility, high usage, formal surveillance and access to help, design and maintenance, municipal consultation and community involvement (33).

Various elements and facilities within a park or green space can also have an impact on its use: paths, lighting, picnic table areas, playground equipment, sports fields, sanitary facilities and water fountains. The presence of shade is also of interest to users. Finally, the size of a green space influences the type of activities carried out there: linear parks encourage physical activity, while small parks, for example, are more conducive to relaxation activities (34).

# Some pathways for action

As municipalities around the world move toward reopening or have reopened parks and green spaces, some have put in place measures to minimize the risk of infection.

## **Clean public facilities**

The risk of transmitting the virus through these facilities is seemingly low according to the INSPQ, given that the survival of the virus in the outdoor environment is limited (18). However, standard cleaning procedures for urban facilities and accessories must be maintained. Keeping facilities clean, particularly those which are handled frequently (e.g., water fountains, play modules, tables, etc.) is a targeted measure that could help reduce the risk of virus transmission (18). In regard to this, the INSPQ provides details in the document *COVID-19: Surface Cleaning and Disinfection*.

## Communicate hygiene, physical distancing and usage guidelines

A communication strategy is a common tool used to remind people of hygiene and physical distancing guidelines when visiting parks and green spaces. Installing explanatory signs at several strategic locations in the park will remind visitors that health guidelines are still in effect (35).

The messages communicated should be simple and tailored to the general public so that they are easy to understand. It is advisable to include an infographic with the message to facilitate understanding by people who cannot read or by allophones. Infographic signs should be installed at park entrances and around community, sports and playground facilities. Infographics concerning park use are best disseminated through municipal media, such as websites, social media and local newspapers (36).

Messages may also suggest that visitors bring their own reusable water bottle and hydroalcoholic gel, and include information about the closure of certain facilities (37). Finally, information about other measures in effect in a green space should appear alongside the guidelines for sanitation measures, thus drawing an association with public health measures (36).

### Examples from here and elsewhere

Communication strategies	
Here is an infographic produced by the City of Burlington (Vermont, USA). The municipality appeals to citizens to share, asking them to use parks thoughtfully to ensure that everyone has access to them in turn and, of course, to remain physically distant from other users.	but please limit your time here and MOVE ON So others can use the space without creating unnecessary crowding.
	Source: https://enjoyburlington.com/covid19/
In addition to the health guidelines posted at park entrances, several Montréal boroughs demonstrate visually what a two-metre distance looks like. Opposite: a sign at the entrance to Clifford Park, Le Sud-Ouest Borough.	Image: Section of the sec
	Source: Ariane St-Louis, 2020.

## Provide access to sanitary facilities

Access to sanitary facilities is a measure that encourages hand hygiene in parks. This measure can take different forms. These may include maintaining access to existing washrooms, or adding temporary amenities such as hydroalcoholic gel dispensers or mobile hand-washing stations or automatic self-cleaning toilets (38). As concerns this, obtaining drinking water from water fountains should be encouraged, both for reasons of hygiene and to avoid dehydration during periods of extreme heat. It is recommended to fill reusable water bottles rather than to drink directly from water fountains. Whatever the form chosen, sanitary facilities should be cleaned and maintained frequently (38). If washrooms are inaccessible, it is recommended that users be warned so that they can prepare themselves accordingly.

### Examples from here and elsewhere

# Access to sanitary facilities The city of Paris has added hydroalcoholic gel dispensers on its territory, notably in parks and green spaces, as well as soap dispensers on about sixty public water fountains in public spaces, in parks and near children's playgrounds (39, 40). Image: Comparison of the playgrounds (39, 40). Source: Design Collectif CLEF, photo Laurent Teyssier, 2020 The City of Westmount has added hydroalcoholic gel dispenser stands at several of its playgrounds (41). Image: Comparison of the playgrounds (41). Source: Madeleine Borgeat, 2020 Source: Madeleine Borgeat, 2020

## Modify facilities, furniture and rules of use

Modifying facilities, urban furniture and rules of use is another measure that can be carried out at low cost to encourage the maintenance of a two-metre distance between users. In the context of a pandemic, a redefinition of the activities offered in green spaces could be proposed: for example, wider paths for walking or running, more areas for rest and individual exercise than for team sports. Temporary closure of smaller park areas that are prone to congestion, such as viewpoints, could be considered.

In addition, furniture and equipment (benches, tables, swings, etc.) can be arranged differently in the park, such that they are placed far apart. For example, the city of Longueuil included in its urban planning for the summer season the addition of street furniture in nine municipal parks, placed so as to respect public health guidelines (42). It is also possible to restrict access to some parts of the furniture. For linear parks, trails or circular routes, one strategy could be to determine a direction of travel to avoid having hikers cross by each other (43). Finally, residual municipal spaces, such as undeveloped land, or underutilized green spaces (e.g., cemeteries, soccer fields, baseball diamonds, golf courses) represent opportunities to create new areas for use (44).

### Examples from here and elsewhere



## Outline small circles for family bubbles

A simple and useful initiative for busy parks where distancing can be difficult to maintain is to draw small circles two metres apart on the grass, each representing a space available for a single user or family (45). Similarly, a circle with a radius of two metres can be drawn on the ground to visually demonstrate the distance to be maintained.

### Examples from here and elsewhere

Creation of small bubbles	
The City of Ottawa has traced circles in several major parks in the city to encourage physical distancing during busy periods. Opposite: Mooney's Bay Park.	Source: City of Ottawa, 2020, https://twitter.com/ottawacity/status/127116531469 7437186/photo/1
Avenue Park Stanley linking the Basile-Routier and Maurice-Richard parks in the borough of Ahuntsic-Cartierville.	Source: Gabrielle Désilets, 2020



## Improve accessibility to parks and green spaces

Given the significant benefits for health and wellbeing that parks and green spaces can provide, especially during a pandemic, extreme caution should be exercised when deciding to close urban parks and green spaces (5, 21, 34, 46, 47). The health benefits of parks and green spaces aside, their closure can exacerbate social inequities in access to areas with vegetation. Needless to say, more affluent populations are generally guaranteed access to green space in a private yard (46).

In the context of the pandemic, preliminary evidence suggests that certain populations have more difficulty accessing parks and green spaces (12, 48-50). For these populations, measures must be implemented. These include the creation of new parks and green spaces (51) or the improvement of access points to existing parks. To this end, the creation of a network of spacious and greened bicycle and pedestrian links around and between parks can help improve accessibility to parks and green spaces (27). The City of Montréal has created such a network linking the city's major parks to encourage active travel while ensuring physical distancing between users. This network alone represents 112 km of safe active lanes (52).

## Specific measures for children

The recommendations and measures mentioned above also apply to children's playgrounds. Infographics specifically designed for children should be displayed at the entrance to areas intended for their use. To continue to encourage having fun while minimizing contact between children, it could be interesting to consider options other than traditional play modules, such as unstructured outdoor play facilities or games traced on the ground. These types of arrangements also have the advantage of stimulating children's creativity rather than restricting modules to a single use (e.g., a slide is for sliding, a swing is for swinging). As previously mentioned, municipalities should not hesitate to modify the design of parks and green spaces, for example by transforming underused areas, to encourage children's play while allowing them to maintain distance from each other (53). To cite an inspiring example, Saint-Joseph school in Granby transformed its bicycle parking area into a life-sized foosball game. This allows children to play together without touching (54, 55).

## **Examples from here**

Alternatives to play modules	
Kept open during the lockdown, the Île-aux-Volcans project adjacent to Père Marquette Park in Montreal's Rosemont-La Petite- Patrie borough is a public space for children inspired by the concept of unstructured play. There are mounds for climbing, sliding, hiding, sand and logs for building all kinds of structures, large rocks for sitting on, for jumping from one to another, etc.	Source: Rosemont-La Petite-Patrie Borough
The play modules and painted pavement of the Avenue Park Stanley pedestrian street project linking the Basile-Routier and Maurice- Richard parks (Ahuntsic-Cartierville borough, Montréal) encourage multi-purpose use while making it easy to maintain distance from other users.	Source: Gabrielle Désilets, 2020

To help communities implement these kinds of public health measures, the United Kingdom's *Ministry of Housing, Communities & Local Government* developed a ten-step approach (56). The first steps relate to the identification of the areas and the measures to be put in place, until being evaluated and modified, if necessary. A schematic diagram is presented in the Annex.

# Available resources and tools

Lockdown measures have limited people's access to many services and facilities, including parks and green spaces in many jurisdictions (46,57).

It is important to prioritize the creation of supportive environments for vulnerable populations. Preliminary data linked to COVID-19 indicate that disadvantaged and densely populated areas are more likely to be severely impacted (7, 58). In addition, these areas are often characterized by more limited access to parks and green spaces (59).

Designing outdoor facilities and initiating greening projects is a way to increase access to areas that promote health and wellbeing while ensuring physical distancing measures can be respected. As a result of this pandemic, it is anticipated that there will be a greater demand for smaller green spaces or neighbourhood parks (34). Municipalities can/could be able to take advantage of this to revitalize unused land (44).

Several guides are available on greening projects and the development of parks and green spaces. This list derives in part from an issue of the OPUS collection produced by the INSPQ: <u>Des actions pour une utilisation</u> <u>et une conception optimales des espaces verts</u> [in French only].

### I'm looking for tools

- Sports and leisure guides. Projet Espaces [in French only].
- Vivre en ville. <u>Verdir les quartiers, une école à la fois : le verdissement des cours d'école pour une nature de proximité</u> [in French only].
- Centre d'expertise et de recherche en infrastructures urbaines (CERIU). <u>Guide d'aménagement d'un</u> parc municipal [in French only].
- Institut national de santé publique du Québec (INSPQ). <u>Guide des aires et des appareils de jeu</u> [in French only].
- Nature Québec. <u>Conservation des îlots de fraîcheur : une boîte à outils à l'intention des municipalités —</u> <u>Guide 1</u> [in French only].
- Union des municipalités du Québec. <u>Guide des meilleures pratiques pour un aménagement sécuritaire</u> <u>destiné aux municipalités et à leurs partenaires</u> [in French only].
- UK Ministry of Housing, Communities & Local Government. <u>Coronavirus (COVID-19): safer public places</u> <u>— urban centres and green spaces.</u>

## I'm looking for inspiration

Here are some examples of projects that have been carried out across Québec:

- Institut national de santé publique du Québec (INSPQ). <u>Projets de lutte aux îlots de chaleur urbains</u> [in French only].
- Conseil régional de l'environnement (CRE) de Montréal. <u>Interventions locales en environnement et</u> <u>aménagement urbain (ILEAU)</u> [in French only].

- Nature Québec. Milieux de vie en santé [in French only].
- CAMF 2020 Award. L'île aux volcans Rosemont-La Petite-Patrie Montréal.

# Conclusion

Parks and green spaces have a positive effect on the physical and mental health of the population. Given the low risk of transmitting the virus in the outdoor environment, in case of a lockdown reinstatement the closing of urban parks and green spaces and their facilities must be avoided if possible (25, 47, 56, 60). The benefits they confer on health and wellbeing are all the more important during a pandemic when the population's access to certain places and resources may be limited.

To keep urban parks and green spaces open, there are several simple, affordable and user-friendly measures that can be implemented. These measures will facilitate compliance with public health guidelines and limit the spread of the virus when these locations are being visited.

Access to parks and green spaces will enhance the quality of life of individuals and the community. At a time when many aspects of life are being disrupted, it is important to support such access, particularly in neighbourhoods where the population is more vulnerable and disadvantaged.

# Appendix Diagram to facilitate implementation of measures



Adapted from Coronavirus (COVID-19) : Safer public places - urban centres and green spaces (56).



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## COVID-19: Safe Use of Urban Parks and Green Spaces During Gradual Lockdown Lifting

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### ACKNOWLEDGMENT

The translation of this document has been made possible through a financial contribution from the Public Health Agency of Canada through funding for the National Collaborating Centre for Healthy Public Policy (NCCHPP).

This document is available in its entirety in electronic format (PDF) on the Institut national de santé publique du Québec Web site at: http://www.inspq.qc.ca.

The French version is entitled COVID-19 : utilisation sécuritaire des parcs et espaces verts urbains en contexte de déconfinement graduel and is also available on the web site of the Institut national de santé publique du Québec at: <u>https://www.inspg.gc.ca/publications/3043</u>

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Publication No.: 3043 - English version

