breathe

EDMONTON'S GREEN NETWORK STRATEGY

Strategic Plan

August 2017

Edmonton

4   POLICY ACTIONS   79

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4.9 Improve collaborative open space planning among City stakeholders, community partners and other jurisdictions.

4.10 Develop a sustainable funding model that responds to operational requirements, community capacity and local needs.

In the following sections, each Strategic Direction is prefaced by an explanation of the **major issues and background context** relevant to the topic. Accompanying the preface are **function icons** (see **SECTION 2.1**) that show how the Policy Actions of each Strategic Direction help to support the diverse functions of open spaces; the brighter the icon, the better the Policy Actions support that function. The **Policy Actions** will address the identified issues and accomplish the goal of an integrated, multifunctional green network. Within each Strategic Direction, the Policy Actions are categorized under the following headings to illustrate their intent:

» **Planning + Design**, i.e. effective and creative planning and design actions, including further strategies in defined subject areas to enhance, restore and expand the green network
» **Management + Operations**, i.e. ongoing and shifting approaches to management to ensure that the green network is healthy, safe, diverse and accessible
» **Engagement + Partnerships**, i.e. the active support and engagement of the City, public and private sector stakeholders, other levels of government, agencies, and Indigenous communities
» **Analysis + Monitoring**, i.e. tracking and monitoring of key metrics and variables to see where progress is being made and where adaptive management may be required

Although the Policy Actions are generally directed toward the City of Edmonton, some require collaboration and action by other parties as well. Community leagues, Indigenous communities, non-profit organizations, school boards, the development industry, provincial and federal governments, businesses and individuals all have a part to play in ensuring *BREATHE*'s success.

Many of the Policy Actions contain direction for initiatives that should be undertaken to accomplish the Vision and Strategic Directions. Further direction related to some of these actions is provided in the associated *BREATHE* Implementation Plan.

4.1 SAFE + INCLUSIVE

Ensure that the green network is safe, accessible and inclusive for all.

The green network is an important community asset, which means its open spaces should be designed, provisioned and operated for people of diverse incomes, genders, ages, ethno-cultural identities and physical abilities. In practice, this can involve a challenging balance between meeting the needs of the majority of open space users, and ensuring that some of our City's most vulnerable people are not excluded. Creating inclusive spaces requires that the green network provides appropriate physical infrastructure for visually or mobility-impaired community members; signage, equipment, access points and pathways can greatly impede or enable accessibility. Even amenities like washrooms and benches can help encourage participation by children and older adults who may require more frequent breaks than other users. However, equally important are adjustments to policies, procedures and processes that expand opportunities for participation and create spaces that celebrate diverse cultures and needs.

A precondition of welcoming, inclusive urban environments is safety. Both real and perceived threats have the potential to compromise feelings of comfort or enjoyment, and can deter people from using problematic open spaces. Safety concerns identified during the *BREATHE* project development process include criminal activity, physical or verbal harassment and environmental hazards like unstable slopes,

malfunctioning equipment or foreign materials (e.g. glass) hidden in the ground cover. Other concerns arise from conflicts among different users of open space (see Section 4.4.3: Minimizing Conflicts). In many ways, concerns about safety intersect with opportunities to make open spaces more inclusive for the diverse peoples of Edmonton — for example, exploring means to redress racism and improve intercultural relationships.

Based on the breadth of safety and inclusivity issues discussed here, it should be emphasized that solutions must involve interdisciplinary, collaborative and creative action. Design interventions can help reduce crime, improve accessibility and mitigate hazards from unsafe environmental conditions, but these issues also require preventive contributions from enforcement and maintenance personnel. Marginalized or minority populations benefit from having their specialized needs considered during open space (re)development, but also from educational and engagement campaigns that shift attitudes and improve understanding. The City, Indigenous communities, community partners and citizens of every background will need to work together to ensure that Edmonton is a welcoming, vibrant place to live.

4.1.1 CRIME REDUCTION

Planning + Design

a) Incorporate Crime Prevention Through Environmental Design (CPTED) principles in the (re)design and programming of open spaces and the facilities within them, including efforts to encourage passive surveillance and a sense of ownership over open spaces through animation, active uses and community building initiatives.

b) Develop and regularly update a Park Safety Strategy to better understand threats to the safety and security of users in parks and open spaces.
   - The Strategy should examine the sources of safety concerns and make recommendations that aim to enhance park-user safety, including the appropriate deployment of City and community resources for the purposes of crime prevention and enforcement. The Strategy should also make recommendations regarding the functionality, maintenance and deployment of Blue Phones or other emergency notification measures in high-crime locations.
   - Encourage the participation of stakeholders and community partners in developing and implementing the Park Safety Strategy.

Management + Operations

c) Ensure that City personnel involved in the design, construction and maintenance of open spaces are familiar with CPTED principles and methods to accommodate design for crime prevention alongside other open space priorities (e.g. ecological integrity, winter appropriate design).

d) Collaborate among City departments, other public agencies and community partners to share data and information to identify where and how CPTED design principles should be implemented.

4.1.2 REDUCING HAZARDS

Planning + Design

a) Consider sight lines and improved road-related safety amenities (e.g. fencing, controlled road crossings) in designing child-oriented open spaces.

b) In accordance with **Strategic Direction 4.6 Public Access + Connectivity,** ensure that open spaces are designed to accommodate sufficient access for emergency or rescue vehicles and personnel, and appropriate routes for safe public ingress and egress during emergencies.

c) In accordance with **Strategic Direction 4.7 Ecological integrity,** ensure that the Wildlife Passage Engineering Design Guidelines are implemented to reduce the potential for vehicular collisions with wildlife.

Management + Operations

d) Maintain parks, open spaces and the public facilities, amenities and equipment within them to a level of quality that does not place the public at risk of danger or injury.

e) Preserve natural vegetation and pursue designation/acquisition of open spaces to mitigate risks from natural hazards in areas prone to flooding, erosion or slope instability.

f) Where open spaces are developed within the work area of abandoned oil and gas infrastructure, ensure that access and maintenance activities do not conflict with public usage of the open space.

g) Ensure that use of open space for potentially hazardous activities such as construction or utility laydown areas does not negatively impact or conflict with public usage or existing amenities of the open space.

4.1.3   INCLUSIVE SPACES

Planning + Design

a)   Wherever feasible, trails and pathways should be (re)designed and maintained to ensure universal access. While not every open space will provide accessible trails and pathways (e.g. some natural trails, mountain bike trails), the network as a whole will provide a diverse range of safe, challenging and accessible pathways for recreation and active transportation.

b)   Develop guidelines for determining where barrier-free pathways (e.g. smooth surfaces and gentle grades) should be provided to enable natural experiences for persons with mobility challenges.

c)   Adhere to universal accessibility guidelines when (re)developing public structures and facilities in parks and open spaces, including picnic facilities, washrooms, pavilions, etc.

d)   When (re)developing play spaces and playgrounds, incorporate barrier-free play equipment, site designs, play elements and opportunities to foster and integrate play for all children, especially those with physical and cognitive disabilities.

e)   Provide greater opportunities for those with mobility concerns to gain access into the River Valley and Ravine System and to the river edge by improving trails or pathways (e.g. surfacing, width, grade) or providing alternative means of access (e.g. funicular, lift).

f)   Design signage to facilitate readability by the widest range of users, including those with visual impairments. Signage design should conform to City protocols and should consider addressing or incorporating braille, placement at eye level of seated persons, larger fonts, universal symbols and multiple languages.

Management + Operations

g)   Provide open space opportunities and experiences for all Edmontonians, regardless of age, ability, socio-economic background, culture, sexual orientation or gender identity. When designing and programming open spaces, consider the socio-economic, cultural, physical and psychological accessibility needs of the intended users, and engage with the relevant communities accordingly.

h)   In collaboration with the Homeless on Public Lands Committee, consider the use of temporary overnight shelters in open spaces on an as-needed basis when emergency shelter beds or other accommodation are unavailable or inaccessible.

i)   Provide gender-neutral facilities in all new or renovated public washrooms and changerooms within parks, open spaces and the facilities within them.

j)   Identify safe, designated areas for Indigenous communities to practice cultural activities (e.g. traditional harvesting activities, ceremonies, etc).

k)   Ensure that parks and open space services and programs meet the needs of children, youth, older adults and their families by meaningfully engaging them in park planning and design, and by providing quality experiences that accommodate activities for all ages, including:
  › Child-centred spaces that take a holistic, best practices approach to child development
  › A combination of active and passive recreational opportunities for older adults
  › Amenities and gathering spaces that promote a welcoming, inclusive environment for youth
  › Elements of learning and play for all ages, which should not be limited to formal playgrounds (e.g. natural spaces and habitats, wading pools, climbing features, obstacle courses, etc.)

❯ Co-locating amenities (e.g. playgrounds and adult fitness equipment) to support intergenerational recreation and play, where appropriate

Engagement + Partnerships

l) Consult Accessibility Liaison Officers on all open space (re)development projects. Where appropriate, extend consultation to the Accessibility Advisory Committee.

m) Work with Community Outreach staff to connect homeless persons who are encamped in open spaces with safe alternate accommodations and support services, in accordance with City policy and Housing First principles.

n) Collaborate with corporations, non-profit organizations, community groups and other philanthropic organizations to create a fund that expands opportunities for low-income Edmontonians and their families.

o) Leverage public engagement, events and programs to support open space community outreach for socially isolated and other vulnerable populations.

Analysis + Monitoring

p) Engage with community partners to evaluate and reduce the financial barriers to accessing Edmonton's open spaces (including special purpose facilities) and outdoor programs for low-income persons and families.
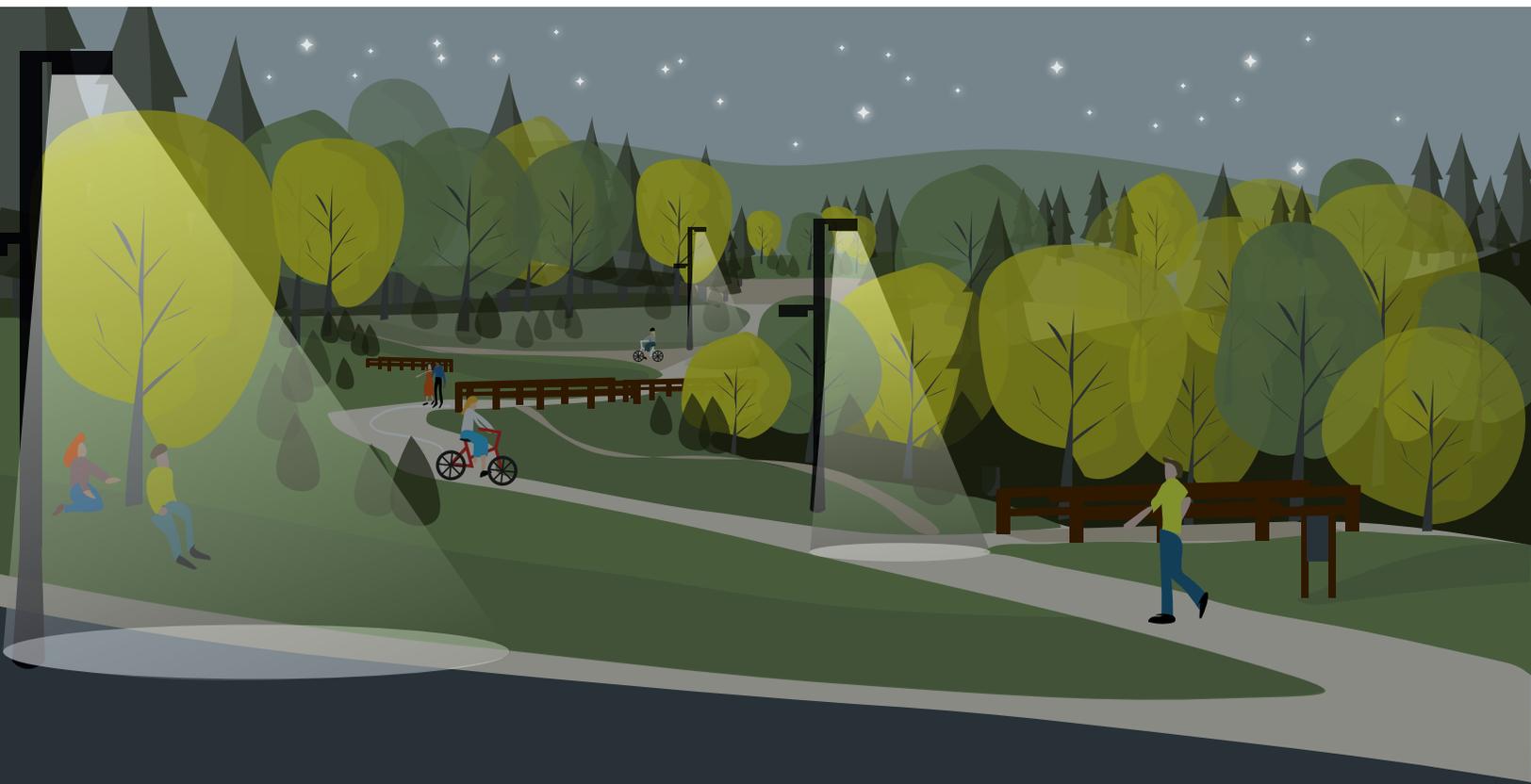
4.2 VIBRANT SPACES

Make open spaces vibrant, sustainable and functional to support community identity and needs.

Cities everywhere are investing in environments that attract and retain residents, workers and visitors. People need amenities that support their activity preferences as well as spaces that enable enjoyable experiences, encourage social gathering, evoke interest and beauty, reflect local cultures and create a sense of place. In Edmonton, the green network is effective at providing for many activities, but there is potential to make open spaces more multifunctional, innovative and flexible to elevate them from "effective" to "outstanding".

An important concept in creating vibrant spaces is animation, or the extent to which they are well used. A busy, active park or streetscape is more likely to attract people than one that appears desolate. Edmontonians consistently express disappointment with local open spaces that seem underused or neglected, and prefer open spaces with a sense of character and beauty. Some even noted that they enjoy "people watching" as a favourite activity.

Animation is a challenging outcome to "design" through policies and recommendations, because human behaviour and preferences are often unpredictable. What makes a person want to spend time in a place? The best answers acknowledge that there are many different "recipes" for bringing people together, but often they involve some combination of:

» Amenities or infrastructure that respond to community demand for a certain use;
» Programming that introduces events, programs or activities to the space;
» Scenic quality of the landscape based on natural characteristics (e.g. vegetation, terrain), human alterations or cultural modifications, and the visibility of the landscape from points of interest to viewers; and
» Attractive or interesting design that promotes a unique sense of place and aesthetic appeal.

Vibrant spaces are not only created by animating places, but also by leveraging opportunities to recognize and celebrate Edmonton's rich heritage and culture. Public art, historic sites or interpretive information and places to practice traditional or ceremonial activities enable people to connect with unique places and reinforce a sense of community identity, whether that community is the local neighbourhood or Edmonton at large.

4.2.1 LANDSCAPE + URBAN DESIGN

Planning + Design

a) Adopt best practices in landscape and urban design during open space (re)development to encourage social interaction and compatible relationships with surrounding uses.

b) Incorporate a balance of sunlight and shelter to encourage user comfort in every season, and in variable weather. Develop guidelines outlining the circumstances under which it is acceptable to shadow open spaces, and required mitigation measures to improve pedestrian-level comfort in relation to sunlight and wind.

c) Open spaces should contain sufficient trees or other shade structures, strategically situated to support social gathering and permit surveillance of adjacent activities.

d) Develop a Lighting in Open Spaces Strategy that considers the appropriate application of lighting for safety, design and aesthetics, and situations where lighting is not appropriate due to ecological sensitivity or light pollution issues.

e) Explore opportunities through landscape and urban design to recognize and emphasize Edmonton's scenic landscapes, ecological heritage and cultural connections to the land (e.g. native species and vegetation patterns).

f) Promote a culture of excellence in open space design, including site planning, landscape architecture and amenities/facilities. Design should incorporate elements of interest, beauty and creativity wherever possible. The City should encourage open space design competitions and expand its support of extraordinary designs to promote public interest.

g) Encourage year-round usage of open spaces by employing siting and design that promotes sheltering from winter climate impacts, and incorporating well-designed artificial lighting to extend winter hours of operation. Winter climate comfort can be achieved through various means, such as:

- ❱ Sheltering open spaces by framing them by surrounding development, with blocks and parcels oriented to optimize solar access
- ❱ Providing infrastructure and amenities that encourage winter use, including shared-use greenways for walking, cycling and cross-country skiing
- ❱ Landscaping with drought-tolerant and low-maintenance native vegetation species
- ❱ Designing the street pattern and orientation to shelter open spaces from prevailing winds

h) Use vegetation and plantings in open spaces to introduce colour, shade, beauty and aesthetic value to the cityscape.

i) Develop a toolkit of high-quality open space design interventions for use in different environments, outlining appropriate applications and capital/operating funding implications for each.

j) Support placemaking in priority locations (e.g. main streets, transit nodes, downtown) and underutilized open spaces through high quality urban design and enhanced amenities.

k) Through the development approval process, require proponents of open space (re)development to demonstrate how the design aspects of their project enhance the character, aesthetic value and quality-of-life of the public realm.

l) Protect vistas, views and visual connections between the North Saskatchewan River Valley and Ravine System and the top of bank through implementation of top-of-bank development

standards, development of public roadways and view points, and responsible maintenance of vegetation.

m) Where appropriate, incorporate elements into open space design that encourage people to gather and linger, such as seating, public art, lighting and shade structures.

n) Ensure that open space designs consider accommodations for a range of individual, family (of different sizes) and large group use.

4.2.2 PROGRAMMING

Planning + Design

a) Leverage physical and cultural heritage to build community identity and sense of place within parks and open spaces. Public art, historic structures and heritage artifacts may be used to establish focal points or anchors for social gathering and activity.

b) Use public art to enhance visual interest, cultural expression and social interaction in open spaces. Embrace opportunities for public art to function as recreational or play equipment, and for community facilities to function as public art.

c) Encourage public art as a means of space activation and placemaking throughout the city, particularly in the Central Core.

d) Create guidelines for the appropriate type and placement of art in different types of open spaces.

e) Leverage food and urban agriculture opportunities (e.g. community gardens, edible forests and landscaping, farmers' markets, mobile food vendors) to encourage community gathering and social experiences.

f) Develop a Festival City Strategy to evaluate, promote and strategically plan for events in open spaces. The strategy should identify means of

improving support for festivals such as new funding sources, streamlining booking/permitting processes and providing adequate infrastructure for a range of event needs throughout the year.

g) Investigate locations for accommodating future events and festivals, considering available amenities, impacts on open space and surrounding neighbourhoods, and the distribution of, and access to, events and festivals citywide.

Management + Operations

h) Encourage the (re)development and operation of safe, comfortable, attractive and active open spaces in order to retain visitors, who in turn create a sense of activity and vibrancy.

i) Support programming related to awareness and educational opportunities, in accordance with **Strategic Direction 4.4 Education + Awareness.**

j) Explore the potential for events, activities and programs to animate open spaces citywide.

k) Support events and initiatives in open spaces that actively promote intercultural awareness, including outreach and welcome events for newcomers and other members of the community.

l) Expand opportunities for temporary uses such as events, art installations, performances, food vendors, markets and pop-up experiences of every type (e.g. movie screenings, movable seating, winter warming shelters, parking space parkettes), and effectively communicate those opportunities to the public.

m) Maintain and develop programming and amenities that encourage winter activity, and provide appropriate ancillary facilities, such as winter chalets, temporary shelters, washrooms, cleared pathways and active-transportation connections.

n) Expand and maintain winter-oriented recreational and active transportation infrastructure, including cross-country skiing, snowshoeing and skating trails (e.g. the Victoria Park Iceway), tobogganing hills and neighbourhood skating rinks.

o) Explore ways to promote outdoor patios, events and festivals year round in partnership with local business and community organizations.

p) Prioritize open spaces for year-round use on a case by case basis, taking into account public demand and financial implication.

Engagement + Partnerships

q) Acknowledge and include Indigenous communities, heritage and culture (past, present and future) in placemaking initiatives.

r) Explore opportunities to communicate the value and variety of cultural and heritage experiences in open spaces among both residents and visitors in accordance with **Strategic Direction 4.4 Education + Awareness**.

s) Collaborate with relevant stakeholders to protect and manage Edmonton's heritage in open spaces.

t) Partner with the Edmonton Arts Council to engage Edmontonians regarding their satisfaction with and ideas for art in public places.

Analysis + Monitoring

u) Maintain a comprehensive and spatially-explicit inventory of event and festival sites (including parks, pedestrian priority streets, and plazas, squares and promenades) and the amenities available to support them.
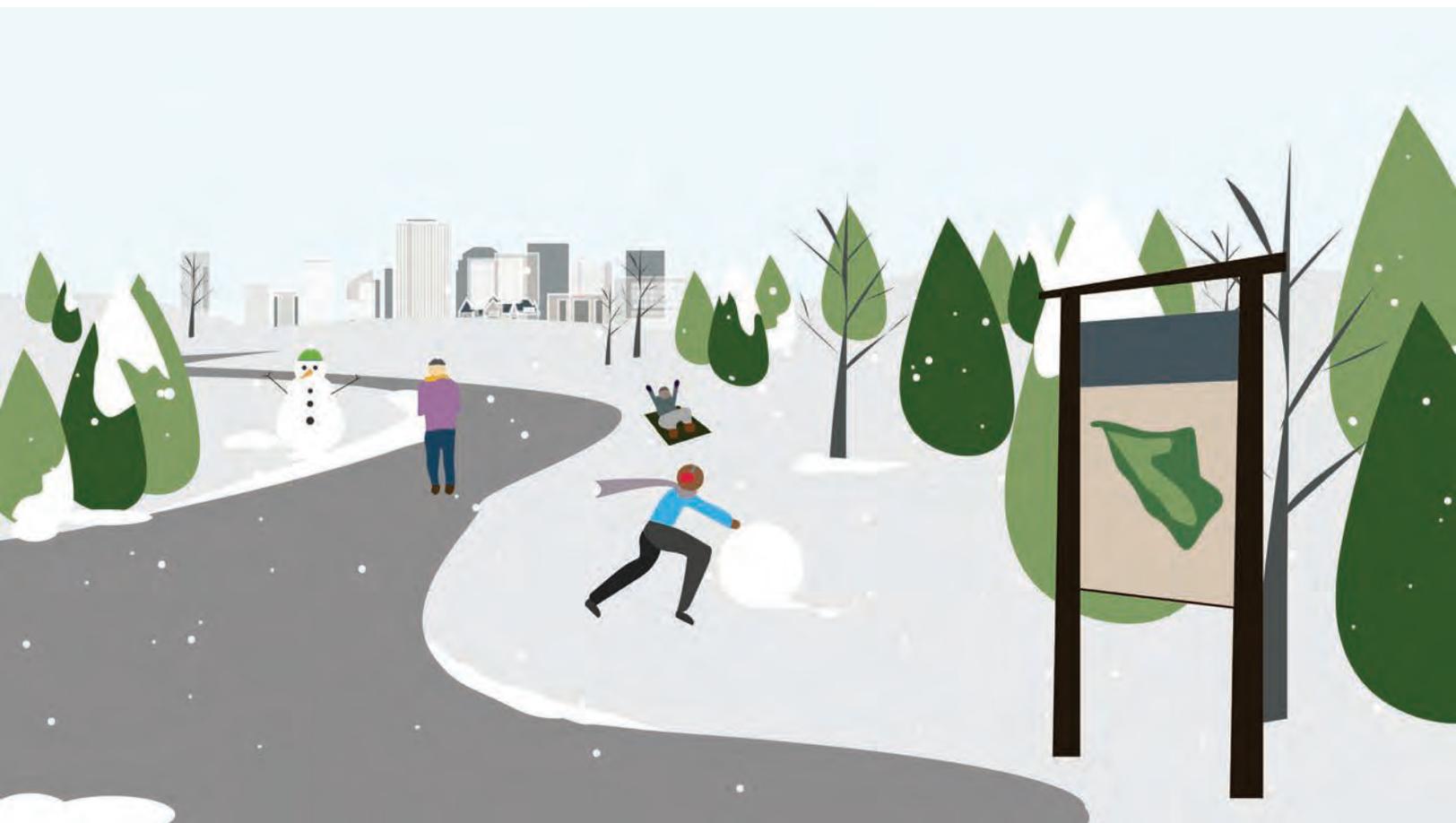
4.3 COMMUNITY ENGAGEMENT

Empower people to become active participants and stewards in planning, sustaining and using the green network.

The City is one of many agents working together to achieve a holistic, well-functioning green network. There are opportunities to engage residents and community partners in planning and funding open space (re)development, and to enhance their role as environmental stewards and community volunteers.

Community engagement is a cornerstone of open space planning in Edmonton. The City acknowledges the value of citizen involvement in decision making, and commits to engagement opportunities ranging from consultation to community empowerment. Existing processes incorporate an engagement component into open space planning at multiple levels, including this Green Network Strategy.

Given the ongoing nature of the conversation about engagement in Edmonton, both the City and communities must work together to build inclusive engagement processes that provide avenues for people to voice their aspirations, ideas and concerns. Progressive engagement processes actively extend those opportunities to people whose voices have been historically underrepresented in civic dialogues (e.g. Indigenous peoples, ethno-cultural minorities, renters and low income residents, children and youth, persons with disabilities). Additionally, the City must work to protect and enhance opportunities for residents to engage in the open space projects championed by their community partners (e.g. community leagues, school boards).

At the same time, civic participation extends far beyond public engagement. Indigenous communities were the first stewards of the green network; they have a unique historic and ongoing relationship with the lands of Edmonton. Community groups and sports groups also have a vested interest in the development or preservation of places important to them, and each contributes significantly to the planning, development, management and stewardship of the green network. Open spaces provide an opportunity for individuals to become involved in their community, resulting in improved social cohesion. In turn, communities can supplement and enhance City efforts to develop, program and maintain open spaces, alleviating pressure on limited municipal resources while tapping a greater public pool of knowledge and innovation.

Encouraging civic participation can take many forms, including direct support for residents who want to become involved (e.g. providing structured programs, financial or administrative support, materials and resources) or indirect support by removing barriers to involvement (e.g. streamlining City processes, addressing insurance and employment restrictions). Participation also includes community-based initiatives that improve open spaces through activities and events. In many cases, opportunities for participation already exist, so communicating opportunities, connecting people with resources and performing outreach can be the most efficient means of encouraging engagement.

4.3.1 COMMUNITY STEWARDSHIP

Management + Operations

a) Investigate, review, expand and support opportunities for community stewardship of open spaces (including trails and pathways) and programs for stand-alone events, short term initiatives or projects, or longer-term involvement.

b) Define, communicate, facilitate and manage volunteer opportunities through a centralized volunteer management system and user-friendly online portal. Explore other opportunities for integration of volunteer programs, such as cross-promotion or messaging alignment.

c) Support community stewardship of natural or ecologically-sensitive areas by engaging with special-interest groups (e.g. nature clubs, mountain biking or cross country skiing clubs) and adjacent landowners, partnering with academic or conservation stakeholders, and reducing bureaucratic barriers to participation.

Engagement + Partnerships

d) Facilitate community involvement through community liaison roles (e.g. park rangers, community recreation coordinators, festival and event liaisons) to enable continuous local dialogue, provide public education and increase City presence in open spaces.

e) Support community-based efforts to engage youth in parks-based programs, advisory groups and consultations, and leverage academic work experience requirements to encourage youth volunteerism in open space initiatives.

f) Encourage the participation of communities and individuals in planning, designing, programming and operating open spaces whenever possible to encourage a sense of ongoing personal investment. Examples might include:
- Temporary installations
- Program and festival support
- Tactics for communicating the opportunities available in Edmonton's open spaces
- Pilot projects (e.g. pop-up open spaces, etc.)
- Commemoration, storytelling and public art

Analysis + Monitoring

g) Conduct an internal resource review to evaluate the City's ability to continue providing communities with user-friendly resource materials and professional support for community park fundraising and development. The review should identify strategies for rectifying any gaps or deficiencies, in collaboration with community leagues and other relevant stakeholders.

4.3.2 PUBLIC ENGAGEMENT

Engagement + Partnerships

a) Include community engagement as an essential component of all public open space design, planning and programming projects. Engagement programs must conform to City principles and goals of engagement, including:
- Meeting communities where they are
- Involving the public early and through multiple phases
- Using a multitude of engagement tactics
- Tailoring engagement events to diverse groups
- Providing clear communication about how input is used, and how it informs project outcomes

b) Identify and engage with existing and potential stakeholder and user groups during the open space planning process to ensure that the proposed program and design reflects local and city-wide needs and aspirations.

c) During open space engagement processes, actively pursue representation from marginalized communities, including socio-economic and cultural minorities, children and youth, older adults and persons with limited mobility or visual impairments.

d) Ensure that community-driven park improvement and development projects have employed appropriate, comprehensive engagement methods to ensure representation from a broad cross section of the affected community. Supplement community engagement efforts where necessary to ensure adequate participation opportunities for underrepresented groups.

e) Coordinate City-led public engagement campaigns for related open space projects or initiatives in order to reduce redundancy, improve efficiency and avoid "engagement burnout" among citizens. Partner with community leagues, special interest groups, Business Improvement Areas and other stakeholders to coordinate their own public engagement processes with those of the City, in order to align messaging and clarify to the public their role in the decision-making process.

f) Conduct a comprehensive program of targeted needs assessments to better understand how marginalized or underrepresented communities are using Edmonton's open spaces and to identify opportunities for improved participation. The engagement process should employ alternative or grassroots outreach techniques to ensure a broad diversity of individuals are represented.

g) Provide translation services and communication assistance (e.g. American Sign Language interpretation, closed captioning) to support community needs assessment and public meetings where needs exist.

4.3.3 INDIGENOUS ENGAGEMENT

Engagement + Partnerships

The City acknowledges that it is situated within Treaty 6 territory; within the Métis Nation of Alberta Zone 4; among the traditional territories of many First Nations and an important homeland of the Métis Nation; and that many Indigenous peoples call Edmonton home.

a) Ensure meaningful opportunities for engagement when projects intersect with Indigenous interests and concerns, in order to raise awareness and contribute valuable insights about heritage, culture, open space planning, development and future land uses.

b) Recognize and respect Indigenous protocols and processes during engagement. Honour the contributions, values, wisdom and traditional knowledge of Indigenous peoples, and empower engagement participants to collaborate and co-create solutions and opportunities for everyone.

c) Commit to growing relationships between the City and Indigenous peoples, and celebrate our successes and achievements.

River Valley
Clean Up!

4.4 EDUCATION + AWARENESS

Improve awareness of open space opportunities and appropriate use.

Exciting open space amenities and experiences are available throughout the City, but their potential sometimes remains unrealized because residents are not aware of the many opportunities their green network offers. As discussed in Strategic Direction 4.2: Vibrant Spaces, *BREATHE* consultation participants expressed dissatisfaction with desolate, underused open spaces, and usually attribute the problem to an inefficient allocation of open space supply, or a failure of open space programming to respond to community needs. In reality, people may be unaware of the location of open spaces, or the variety or calendar of programs and events within them. Connecting with residents and visitors can be challenging, especially among people who have difficulty accessing conventional methods of communication (e.g. unable to attend community meetings, limited comprehension of English), but the City and its community partners have a variety of tools — like wayfinding, online information and outreach events — that can help improve awareness.

Another important gap occurs when Edmontonians are unclear on the intended use of different open space types, or about how best to coordinate their activities with other users. The most visible manifestation of these misunderstandings is user conflict, as when dogs and cyclists interfere with one another along shared pathways, or when picnickers and frisbee players attempt to use the same space. In some cases, the open spaces themselves require improvements to

separate conflicting uses through design interventions, and future conflicts can be prevented by planning multifunctional open spaces with compatible uses. But often a more effective (and more cost effective) solution involves educating users about permissible uses and rules of use for different open space types. Such education can raise awareness about rights and responsibilities, and increase understanding among diverse user groups.

In addition to reducing user conflict, education can be leveraged to increase awareness of the cultural, historical and natural background of Edmonton and beyond. The green network can be considered an "outdoor classroom" that promotes learning experiences for people of all ages, from interpretive displays and nature playgrounds to orienteering programs and walking tours. Outdoor experiences also develop competencies, knowledge and skills that residents can apply in natural landscapes throughout Edmonton and beyond. Open spaces can be particularly important for sharing and interpreting historical and cultural information. The green network offers many opportunities for reconciliation through Indigenous ceremonies and traditional practices, and help build community across cultures and generations through outdoor festivals and events. Finally, education is essential for promoting and building greater awareness about conservation and stewardship initiatives by public and private stakeholders alike.

4.4.1 EDUCATION

Management + Operations

a) Partner with Indigenous communities, schools, community leagues, non-profit organizations, and other levels of government to explore educational and programming opportunities throughout Edmonton's open spaces. Opportunities should encompass a diversity of ecological, cultural, historical, social and recreational perspectives.

b) Collect and share stories about Edmonton's open spaces among residents and visitors through on-site interpretative material, online collections, special events, etc.

c) Celebrate Edmonton's natural and cultural heritage through the naming of open spaces, and ensure appropriate interpretive displays are provided to explain the name to visitors. Amend naming conventions to better acknowledge the contributions of Indigenous communities to the history and ongoing story of Edmonton.

Engagement + Partnerships

d) Collaborate with Indigenous communities to promote opportunities for reconciliation and for celebrating Indigenous heritage and cultural practices in open spaces. Such opportunities should recognize the diversity of Indigenous peoples, experiences and narratives in Edmonton, and should engage Indigenous communities themselves to ensure their heritage is accurately and sensitively depicted and to avoid the risk of cultural appropriation.

4.4.2 COMMUNICATION

Management + Operations

a) Explore a variety of communication, interpretation, and outreach programs to promote the diversity of open spaces that are available to citizens.

b) Provide accurate, comprehensive, and timely information about any changes, improvements, and public participation opportunities related to open spaces.

c) Expand and improve the functionality and user experience of the online City of Edmonton parks and recreation portal, and consider integrating this information into a mobile app.

d) Work with tourism agencies (e.g. Explore Edmonton, Travel Alberta) to promote and market Edmonton's open spaces by implementing a comprehensive communications and outreach strategy to highlight their beauty, value, multifunctionality, uniqueness and heritage.

e) Improve public awareness of the location, distribution and opportunities of Edmonton's open spaces by developing site specific wayfinding signage installations and print/online materials that employ best practices and conform to City protocols.

f) Identify City employees in public-facing roles (e.g. Community Recreation Coordinators, Festival and Event Liaisons, etc.) who have cultural sensitivity training or who speak a language other than English in order to better facilitate communication with the public.

g) Measure and evaluate awareness of open space opportunities and experiences using citizen surveys, online mapping tools and additional methods of engagement.

4.4.3 MINIMIZING CONFLICTS

Management + Operations

a) Through field observation and public consultation, identify open spaces where users have conflicting purposes and employ a combination of public education, signage and design interventions to address conflicting uses where present.

b) Use signage and public education programs to inform users about personal responsibility, applicable bylaws, and permitted or restricted uses when using open spaces. Wayfinding treatments (e.g. signage or other design techniques) should be employed to communicate the spatial delineation of areas intended for a specific use.

c) In multifunctional open spaces, consider developing or converting existing shared/shared-use pathways to separated pathways (e.g. a bi-directional path for cyclists and a separate path for pedestrians) in high usage areas. When this is not possible, signage should be present informing cyclists that they must yield to pedestrians.

d) In multifunctional open spaces, reduce conflicts among dogs and other open space users by separating off-leash areas from conflicting uses (e.g. recreational pathways, playgrounds) using fencing and site design, educating dog owners about applicable bylaws and etiquette, and providing adequate amenities (e.g. refuse bags, trash receptacles) to support responsible use.

Engagement + Partnerships

e) Use public engagement and other communication initiatives to educate Edmontonians about the rights of open space users, particularly minority or marginalized persons (e.g. youth, homeless people, ethno-cultural minorities). Ensure that parks employees, bylaw enforcement and the Edmonton Police Service are aware of these rights and empowered to confront harassment.

**ONLINE
SURVEY**
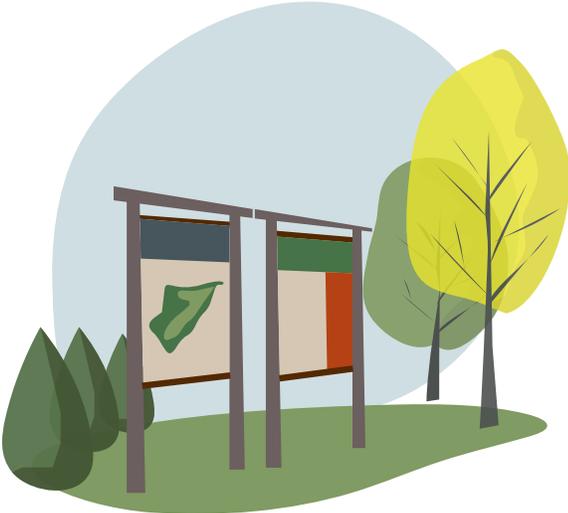
4.5 DISTRIBUTION + SUPPLY

Ensure an adequate supply, quality, diversity and distribution of open space throughout Edmonton.

Edmonton has an excellent green network, but some neighbourhoods have a better supply and more diverse opportunities than others. There are many reasons why this might be the case: some neighbourhoods were developed before the City of Edmonton created parkland standards, some neighbourhoods are located near the exceptional open spaces of the River Valley and Ravine System, and some neighbourhoods have a larger or smaller population than others. The task of the Green Network Strategy is to determine where these differences amount to gaps or inequities, and to establish a framework for ensuring that every neighbourhood has an appropriate supply and diversity of open spaces in the future.

Providing 'enough' open space incorporates several criteria that acknowledge functionality as a key component of green network value:

» **Distribution:** The arrangement of open spaces across the landscape
» **Quality:** The functionality of an open space, considering the condition of its infrastructure/ amenities and the value of the functions it provides
» **Diversity:** The arrangement of different open space types and functions across the landscape.
» **Supply:** The physical amount of open space

Assigning a single standard to each one is complicated by two factors. First, all four criteria are related, so they must be examined as interdependent factors to determine the appropriate provision of open space. One open space might be less functional than another, but a diversity of open spaces can result in a high quality, multifunctional neighbourhood network. One neighbourhood might have a lower amount of open space than another, but its open spaces might have better functionality or better access than average.

Second, neighbourhoods of different ages and densities have very different needs and opportunities for future open space development. For example, the downtown core has less open space per capita (and less private open space, e.g. backyards) than developing areas, but opportunities to acquire additional land for typical parkland development are limited. This type of deficit may become even more pronounced as Edmonton grows. However, what some areas lack in supply could be offset by improvements to distribution, quality or diversity and by exploring innovative or flexible open space opportunities.

In order to address this complexity and improve network resiliency, this Strategy emphasizes the value of multifunctional spaces in order to make the most efficient use of limited resources. The Strategy identifies some of the most significant opportunities and deficits in the current green network, but more importantly, it establishes a framework for open space decision making that will remain relevant as Edmonton evolves over time.

4.5.1 OPEN SPACE DEVELOPMENT

Planning + Design

a) Consider parkland impact assessments, community needs assessments, land acquisition strategies and development guidelines to plan for open spaces.

b) Ensure that private open space or private amenity space supplements, but does not replace, public open spaces that are to be provided according to development guidelines and needs assessments.

c) Ensure that conversions of open space to other land uses are supported by City policy and by a community needs assessment establishing that the open space in question is surplus to community needs. Decisions to convert open space to other land uses should acknowledge the potential long term impacts of permanent open space loss. Community needs assessments supporting the decision to redevelop should incorporate both current and projected future community needs.

d) Require development proponents to articulate, through sound market and/or consultation research, key demographic characteristics of the population to be served by the development, and use such demographic information to create an appropriate program for the proposed open space.

e) Ensure that planned amenities are supplied as soon as possible during the parkland development process in order to support community needs as neighbourhood growth proceeds in Developing and Urban Growth Areas. Coordinate City parkland development processes with community parkland improvement and development processes to better support this outcome, in accordance with **Strategic Direction 4.9 Collaborative Planning.**

f) Consider leveraging neighbourhood revitalization programs to renew open space infrastructure and amenities in mature neighbourhoods.

g) Ensure that open space (re)development projects consider the potential for archaeological discoveries on site. Collaborate with Indigenous communities, City staff and other relevant authorities to determine appropriate protocols in the case of chance archaeological discoveries.

h) Improve coordination of planning and investment in the redevelopment of existing open spaces by establishing eligibility and prioritization criteria, and developing a process for determining potential programming options.

Analysis + Monitoring

i) Community needs assessments should identify the unique characteristics of the neighbourhood or community of interest, including populations with alternate needs (e.g. ethno-cultural minorities, differently abled persons, children and seniors, Indigenous communities), and should translate those characteristics to appropriate development and programming outcomes through research and public consultation. Future community needs should be considered through analysis of demographic and behavioural trends.

4.5.2 USE OF OPEN SPACES

Planning + Design

a) Provide a multifunctional network of open spaces that responds to the recreational, social and environmental needs of communities through a variety of active and passive experiences. While a diverse range of functions may be supplied across a neighbourhood or community, individual open

spaces should be designed and programmed to supply functions that are compatible with one another.

b) Consider the following principles when evaluating the compatibility of uses:

> **Level of Use:** In activity/amenity nodes active uses can co-locate successfully. Active uses are also appropriate in areas that are perceived as unsafe.

> **Level of Nuisance or Impacts:** Uses that generate noise, spillover or other impacts require a buffer from surrounding uses.

> **Continuity of Use:** In situations where activity is concentrated in an amenity/activity node, consideration for uses with different activity peaks throughout the day, week or year will contribute to the success of the space.

> **Safety of Other Uses:** If the use has the potential to interfere with the safety of neighbouring users then buffers or protective measures need to be implemented, e.g. dog off leash areas and cycling pathways.

> **Specificity of the User Group:** To facilitate the comfort of users, most notably children and older adults, consideration of appropriate neighbouring uses is required (e.g. washrooms, transit access).

> **Accessibility:** To promote accessibility, co-locating related facilities is important.

> **Seasonality:** All spaces should be planned with both summer and winter use in mind.

> **Ecological Sensitivity:** To protect important ecosystems and sensitive landforms, neighbouring uses with potential negative impacts should be avoided.

> **Historical and Cultural Integrity:** For historic and cultural spaces that are sacred or fragile, special consideration is required for neighbouring uses to ensure that they do not interfere with the integrity or quality of these spaces.

4.5.3 IMPROVING SUPPLY + DISTRIBUTION

Planning + Design

a) Distribute open spaces throughout the city to enable equitable access by residents of every neighbourhood.

b) Prioritize underserved and high growth areas for open space acquisition, development and improvement.

c) Ensure a balanced and comprehensive distribution of open space experiences and functions across Edmonton.

d) Consider innovative and flexible means of supplying open space in redeveloping areas. Examples include:
> Brownfield or vacant lot redevelopment
> Publicly accessible private spaces
> Publicly accessible green roofs
> Complete streets
> Permanent conversion of streets or alleys
> Temporary or seasonal street closures
> Parking lot redevelopment
> Dry ponds and reservoirs

e) Prioritize open space diversification and multifunctionality in areas most susceptible to demographic changes.

f) Develop a new City Cemetery Strategy that addresses the appropriate supply, distribution and functionality of cemeteries throughout the city.

g) Engage with the Province of Alberta to explore the potential for public access, improved network connectivity and limited open space development within and across the Transportation Utility Corridor.

4.5.4 IMPROVING QUALITY + FUNCTIONALITY

Planning + Design

a) Expand the network of trails and pathways, especially where investment would promote access to the River Valley and Ravine System or connectivity throughout the network, in accordance with **Strategic Direction 4.6 Safe + Inclusive.**

b) Prioritize neighbourhoods currently underserved by dog off leash areas for acquisition/development of new or expanded parks, and provide dog walking amenities in high demand.

c) Develop a Public Washrooms Strategy to ensure that public washrooms are appropriately provided and distributed throughout the city.

d) In addition to washrooms, develop other ancillary amenities (e.g. benches, lighting, water fountains, etc.) to increase user comfort in open spaces, especially for active recreational users, young children, older adults and persons with limited mobility.

e) Improve access to picnic amenities and flexible seating spaces in underserved locations and locations with high demand.

f) Consider developing or permitting limited commercial amenities (e.g. food and beverage kiosks, small cafes, equipment outfitters or rental shops, mobile and market vendors) in select parks and open spaces, prioritizing those that support City mandates and open space services, and ensuring that appropriate public engagement and disclosure processes are followed. Barriers to commercial permitting should be identified and resolved where possible.

g) Optimize usage of the North Saskatchewan River by enhancing opportunities for responsible water based recreation and water access, including access for mobility challenged persons in accordance with **Strategic Direction 4.1 Safe + Inclusive.**

h) Develop amenities to support fitness and lifelong physical literacy, including outdoor exercise equipment designed for a variety of ages and levels of ability; barrier-free pathway circuits and running tracks; and stairways that can accommodate safe fitness related usage.

i) Develop amenities to support working and taking lunch breaks in open spaces (e.g. pocket parks, seating, tables, shade structures, Wifi), especially in high employment areas (e.g. Downtown Core, office and industrial areas).

j) Provide expanded opportunities for nature play, and other unstructured recreation in proximity to nature, for people of all ages without compromising the ecological integrity of environmentally sensitive, significant or natural areas.

k) Encourage sidewalk patios and street food vendors to promote vibrant streetscapes and park edges, including food trucks, fresh food kiosks and mobile markets.

l) Relax regulations concerning urban agriculture on residential boulevards to permit community gardening.

m) Consider fruit bearing trees as a greater proportion of deciduous tree plantings on public lands, and engage with community partners to establish long term maintenance and harvesting agreements.

n) Incorporate low-maintenance edible berry shrubs, vines and other edible or medicinal plantings in public open spaces throughout the city.

o) Develop more community gardens in underused City owned open spaces.

p) Consider implementing administrative or regulatory actions to support urban agriculture, e.g. leasing City-owned land for community gardening, inventorying lands that could be used for urban agriculture, creating guidelines to integrate urban agriculture into public spaces, or working with developers to provide infrastructure for urban agriculture.

q) Develop amenities or designate existing open spaces to accommodate emerging recreational activities (e.g. wall/ice climbing, disc golf) in collaboration with community stakeholders.

r) In collaboration with school boards and community partners, explore means to reduce the amount of open space dedicated to underused sports fields, and increase opportunities for nature play, unstructured recreation or other undersupplied functions, as identified by a community needs assessment.

s) Open spaces should provide a balance of amenities and functions to provide a unique, interesting experience to visitors from outside Edmonton, while supporting the daily recreational, ecological and social needs of workers and residents.

Management + Operations

t) Extend hours of operation and year round operation of washrooms in locations with high demand.

u) Increase investment in maintenance and lifecycle planning of infrastructure and amenities, particularly picnic amenities, sports fields and playgrounds.

v) Consider enhanced amenities (design and durable materials), programming and maintenance regimes in open spaces of the Central Core, while recognizing the maintenance implications of higher quality amenities and higher usage sites.

Engagement + Partnerships

w) Collaborate with Indigenous communities to advance projects that support and celebrate Indigenous heritage and cultural practices.

4.6 PUBLIC ACCESS + CONNECTIVITY

Improve open space access for residents and visitors.

Nearly all Edmontonians have open space within walking distance, but the network could be improved for all modes of transportation in other ways. By better connecting well-used transit and active transportation routes to open spaces, the City could begin to close gaps in access for cyclists and transit users, and support transportation priorities. Improving access in this regard might involve expanding existing routes and pathways, developing new ones, and providing supportive wayfinding infrastructure to effectively direct people from one place to another.

Improving access also requires overcoming barriers that interrupt connectivity of the network. A significant example in Edmonton is the North Saskatchewan River Valley and Ravine System, which enables connectivity through the valley but often interrupts connectivity between the tablelands and the valley, and between the north and south sides of the river. Improving connectivity across the river and its tributaries, and across major transportation corridors like Anthony Henday Drive and the Yellowhead rail corridor, requires creative solutions that involve investments in collaboration, infrastructure, and strategic network planning.

Other barriers are presented at a smaller scale. The personal vehicle remains the mode of choice for most Edmontonians to access open spaces, so site design should incorporate appropriate vehicle oriented amenities (e.g. parking, circulation roads) to enable access. However, many *BREATHE* engagement

participants would consider using or would prefer to use active modes of transportation if the network were sufficiently improved. The most commonly identified barriers include an absence of safe and well connected infrastructure (e.g. bike paths, shared or barrier-free pathways, sidewalks) and the distances required to travel between place of residence and preferred open space destinations.

The latter concern highlights the close relationship between green network access, distribution and connectivity. For example, open spaces that are well distributed throughout a neighbourhood increase the proportion of residents who have access to an open space within walking distance. Similarly, good distribution throughout the city improves access for drivers, cyclists and transit users.

However, access depends not only on the distance between an origin (e.g. place of residence) and a destination (e.g. park), but also on the available routes between the two points. A pedestrian located at the North Saskatchewan River top of bank may be within 400 metres from the river edge, but if stairways or alternative connections are unavailable, access to the river edge becomes compromised. Conversely, enhancing connections among open spaces, city destinations, neighbourhoods and mobility networks effectively expands the green network by increasing the number of open spaces that can be accessed from any given place.

4.6.1 TRAILS + PATHWAYS

Planning + Design

a) Improve and expand the trail and pathway network to improve pedestrian and cyclist friendly environments within open spaces and promote connectivity citywide. Expand active transportation circuits and loops within open spaces and throughout neighbourhoods.

b) Require easements for pathways to connect future schools and park sites with the surrounding neighbourhood whenever feasible during the community planning process.

c) Preferentially develop or retain trails and pathways with natural surfaces (packed dirt or gravel) in areas of significant ecological sensitivity unless paving is required to mitigate issues related to high usage or erosion, or to accommodate a demonstrated demand for barrier-free pathways.

d) Where feasible, pathways should be developed through open spaces in order to promote immersive user experiences, while balancing the need to preserve the ecological integrity of natural areas.

e) Ensure that appropriate amenities (e.g. refuse containers, benches, dog litter containers, etc.) are provided alongside well-used trails and pathways.

f) Construct active transportation bridges to ensure that major/busy road and rail networks do not partition the trail and pathway network.

Management + Operations

g) Ensure that the trail and pathway network is maintained in good condition. Establish a strategic, comprehensive approach for addressing existing

erosion issues, and apply best management practices to prevent erosion from occurring on intact trails.

h) With the exception of dedicated winter active transportation corridors (e.g. cross country skiing or snowshoeing pathways), increase snow clearing and de-icing efforts on paved pathways and active transportation routes. Establish consistent clearing and winter access priorities for shared-use pathways within and among open spaces to promote winter connectivity throughout the city.

i) Ensure that the trail and pathway network provides opportunities for recreation and active transportation for all users, including people with visual or mobility impairments, in accordance with **Strategic Direction 4.1 Safe + Inclusive.**

Engagement + Partnerships

j) Engage with park and open space users to identify potential trail hazards, and continue engagement to inform them about proposed actions and opportunities for public involvement.

4.6.2 WAYFINDING

Management + Operations

a) Improve public awareness of the location, distribution and opportunities of Edmonton's open spaces by implementing and improving existing City wayfinding initiatives in order to provide a consistent wayfinding and signage system throughout the green network.

Analysis + Monitoring

b) Building on existing materials, develop and maintain an accurate, comprehensive online map of Edmonton's green network (including open spaces, major active transportation routes and landmarks,

and trails and pathways) to support access and wayfinding, in accordance with **Strategic Direction 4.4 Education + Awareness.** A print version should be made available at convenient locations throughout the city at no cost to the public.

4.6.3 CONNECTION + MOBILITY

Planning + Design

a) Protect and expand an integrated network of open spaces by connecting them through utility or ecological corridors and the pathway network wherever possible. Connectivity of open spaces should be prioritized to the River Valley and Ravine System; among large or significant open spaces; and with existing, planned or potential active transportation systems.

b) Develop a minimum grid of year-round active transportation routes (pedestrian, cyclist and other) to connect open spaces and other destinations throughout the city. Encourage complete streets that incorporate high quality pedestrian and cyclist infrastructure to promote safety and visual interest along identified active transportation routes, incorporating natural landscaping elements, green infrastructure treatments and/or associated plazas or parkettes.

c) Integrate land use decisions with transit and integrated mobility decisions when planning or redeveloping open spaces.

d) Create safe, walkable and barrier-free environments within parks and open spaces, including accessible internal circulation routes and entrance points, to promote active mobility and pedestrian connectivity year-round, in accordance with **Strategic Direction 4.1 Safe + Inclusive.**

e) Provide bicycle infrastructure within parks and open spaces, including bicycle parking structures, maintenance equipment, and cycling paths.

f) Provide transit access to open spaces, prioritizing larger, destination and high functioning open spaces or significant open spaces in socially vulnerable neighbourhoods.

g) Locate and design future open spaces such that access (including emergency, legal and maintenance access), parking, and circulation are appropriate for the intended use and anticipated level of activity.

h) Provide well integrated transitions among sidewalks, cycling infrastructure, the shared-use pathway network, other pedestrian networks, transit facilities and open spaces (particularly those in the River Valley and Ravine System). Open spaces should be connected to surrounding areas by sidewalks and pathways to increase pedestrian and cyclist mobility and access.

i) Amenities and activity nodes within open spaces should be accessible by a variety of transportation modes, including personal vehicles, transit and active transportation modes. Parking areas should be located in close proximity to amenities or activity nodes and should be connected via barrier-free pathways. Additional access points may be required to facilitate connection with active transportation networks outside of open spaces.

j) Avoid developing parking lots in environmentally sensitive areas.

k) Consider reviewing the Zoning Bylaw with respect to parking requirements for parks and related facilities. Parking requirements should accommodate access for all modes of transportation but should not compromise the primary recreational, social or environmental uses of the site.

l) In collaboration with school boards and developers, ensure that roadway widths will adequately service open spaces, including sufficient space for school bus transportation needs where applicable, while

ensuring that street designs prioritize safety for pedestrians and other modes of active transportation.

Management + Operations

m) Encourage the use of adjacent parking lots, including schools and recreation centres, for overflow parking. Public information should be provided for overflow parking areas through wayfinding signage and information on the City's website.

n) Encourage carpooling, transit and shuttle services to support access to special events and festivals. Improve transit access during large outdoor festivals by terminating routes closer to relevant venues and extending service to align with event hours of operation.

o) Consider designating areas as short term parking to encourage parking turn over during peak periods or in highly used open spaces.

4.7 ECOLOGICAL INTEGRITY

Preserve and enhance the ecological quality and connectivity of the green network.

Edmontonians are passionate about the value of their environmental resources: nearly everybody who participated in the *BREATHE* engagement process enjoys nature based experiences, and acknowledges the importance of biodiversity and healthy ecosystems. As discussed earlier in the Strategy, the green network provides countless ecological services that benefit humans and ecosystems alike, including food production, water management, climate regulation and risk mitigation. Managing ecological integrity and connectivity in Edmonton is imperative for supporting quality of life and environmental health regionwide, and for supporting Indigenous communities in maintaining their traditional relationship with these lands.

Nevertheless, planning to preserve ecological integrity in the green network requires a balance between human use and conservation. Many stakeholders agree that some additional parkland or amenity development would benefit activity in the River Valley and Ravine System, but already some valuable natural areas have been disturbed by recreational or industrial development, municipal utilities, transportation corridors and erosion. Throughout Edmonton, growing populations place pressure on ecosystem services, and urban development fragments ecological connectivity and causes habitat loss, particularly in developing areas and the tablelands. Additional threats include invasive species, disease and climate change.

The framework of the Green Network Strategy attempts to optimize protection efforts by adopting a network approach to open space planning. Resources for land acquisition are limited, so the City must apply in a strategic manner the various tools at their disposal to preserve ecological integrity. Biodiversity core areas could be conserved through reserve dedications, conservation covenants or purchase. Corridors with high connectivity value could be protected as greenways, acquired through easements or co-located with linear infrastructure (e.g. utilities, pipelines, rail corridors). The urban matrix can be enhanced with engineered green infrastructure and outreach to private residents whose trees and yards provide important ecosystem services.

Preserving ecological integrity involves much more than land conservation. Education is an important component of increasing awareness and action among City personnel, community partners and the general public. Community organizations are particularly essential to stewardship and maintenance activities in Edmonton's natural spaces. A corporate culture of learning can help the City find creative ways to enhance ecological integrity and provide "green experiences" in highly urbanized environments. And an adaptive management approach enables planners and managers to keep abreast of changing conditions in both the natural world (e.g. the effects of climate change) and the planning world (e.g. new regulatory tools for land acquisition).

4.7.1   HABITAT + CONNECTIVITY

Planning + Design

a)   Continue to use and implement an ecological network approach to conservation in planning Edmonton's green network.

b)   Maintain and enhance wildlife connectivity by preserving existing areas of natural land cover; minimizing disturbance and removing barriers in the River Valley and Ravine system and other connectivity corridors; and encouraging development on public and private land that maintains the connections between open spaces.

c)   Ensure that the Wildlife Passage Engineering Design Guidelines (WPEDG) are applied to evaluate potential wildlife conflicts and that avoidance or mitigation measures are implemented, including wildlife passage structures.

d)   Develop a strategy to identify and coordinate opportunities for the restoration of the City's ecological network. This work should employ the techniques of sustainable site planning and naturalization as well as restoration work.

e)   Continue to prioritize strategic planning for the North Saskatchewan River Valley and Ravine System that acknowledges its important geological, habitat, structural and functional connectivity. All future plans for the River Valley and Ravine System should include direction for the protection, enhancement, restoration, use and integration among Ecology, Celebration, and Wellness networks, and identify ecological and active transportation connections to the tablelands and citywide green network.

f)   Explore opportunities for daylighting to restore historic hydrological and habitat connections.

g)   Identify opportunities to acquire and enhance urban linear corridors (e.g. utility corridors, road greens, and greenways) to support ecological network connectivity and function, including restoration of habitat for resident and dispersing/ transient species.

h)   Establish a net gain policy for natural areas. Gains should be pursued in terms of increased natural area, size of wildlife population, improved connectivity, buffering or function, improved long-term management, and increased area under permanent protection.

i)   Align conservation of regionally important habitats (e.g. cores, corridors) with provincial and national planning frameworks, using watersheds as planning units to facilitate regional collaboration and management of ecological networks at larger scales.

j)   Protect and acquire biodiversity core areas, stepping stones and corridors in the River Valley and Ravine System and in the tablelands to ensure continued functional and structural connectivity on both sides of the North Saskatchewan River. Natural areas should be restored that have high potential to improve ecological network outcomes in terms of habitat or connectivity.

k)   Continue to support the Edmonton and Area Land Trust, and expand and develop other partnerships to acquire natural areas, especially those of large size, high quality or those which could serve as "stepping stones" between existing public lands.

l)   Develop a Hydrological Connections Strategy to sustain and improve the resiliency of the hydrological network (water bodies, wetlands, watercourses, drainage system) in response to climate change.

m) Develop and implement a variety of methods (e.g. partnerships, educational campaigns, naturalization program, regulations, development guidelines) to achieve at least 20% tree canopy coverage on public and private lands.

n) Should legal authority be granted under amendments to the *Municipal Government Act* or a City Charter, establish a bylaw for regulating the protection of trees on private property.

o) Encourage the protection, management, and integration of natural and constructed wetlands into new and existing urban developments.

Management + Operations

p) Enhance and restore smaller open spaces (e.g. pocket parks, vacant lots, road islands) or green infrastructure (e.g. bioswales) that act as critical habitat or provide connectivity for a specific species or group of species where such spaces are not habitat sinks. Prioritize the protection of isolated natural habitats, especially remnant native habitats, that are acting as critical habitat for sensitive, rare or at-risk species.

q) In partnership with community and environmental organizations, use a combination of incentives, education and regulation to protect ecological connectivity and habitat quality on private lands. Residents and property owners should be encouraged to incorporate "biodiversity in backyards". Provide clear guidelines on vegetation and structures that are beneficial for urban wildlife (e.g. birds, bees, butterflies), and discourage or prohibit planting of inappropriate vegetation (e.g. attractants for nuisance wildlife, invasive species).

r) Protect or restore habitat quality in municipal cemeteries and golf courses acting as critical habitat, and provide incentives for private cemeteries and golf courses to follow municipal recommendations for habitat protection and restoration.

s) Increase the proportion of native species within the urban tree canopy, and wherever possible leave standing dead wood in place to increase the amount of habitat provided in natural areas.

t) Collaborate with community and environmental organizations to strengthen communication about tree pest issues (e.g. Dutch elm disease, invasive native and exotic insect pests) on private and public lands.

u) Implement an updated naturalization program that incorporates an ecological network based approach to the selection and prioritization of naturalization sites. The program should integrate suitability recommendations from existing research and locally-specific naturalization projects, and should provide a framework for citizen involvement in accordance with **Strategic Direction 4.3 Community Engagement.**

v) The renaturalization of existing turf should be considered to reduce maintenance and upkeep costs, and provide more opportunities for wildlife movement through native vegetation.

w) Unless turf is required for the intended use of the open space (such as sports fields or relaxation lawns), native vegetation should be preferentially planted. Landscaping on public lands should use plant stock from local genetic sources wherever possible.

Engagement + Partnerships

x) Form cross-jurisdictional partnerships (Capital Region Board, adjacent First Nations, Government of Alberta) to acquire, secure and restore important biodiversity core areas and linkages outside the administrative limits of the City of Edmonton.

y) Work with the Government of Alberta and other landowners to restore and improve the ecological connectivity and functionality of the Transportation Utility Corridor and other transmission and utility corridors.

4.7.2 LAND MANAGEMENT + MONITORING

Planning + Design

a) Implement an ecological network approach to retain and restore a system of natural and semi-natural elements during the land use planning process. Identify the natural systems in a developing or redeveloping area to define a proposed open space network in advance of plan development, and work with development proponents, school boards, the Province and community stakeholders through the planning process to protect and strategically align open spaces, as feasible.

b) Require development proponents to provide sufficient information about the natural systems, ecological integrity and function of their lands to allow for informed decision making during the development planning process.

c) Use Conservation Reserve dedications to protect environmentally significant areas and significant natural areas within the tablelands and the River Valley and Ravine System (where Environmental Reserve criteria do not apply).

d) Use Environmental Reserve dedications to protect shoreline and riparian areas, as well as hazardous or erosional areas, below the Urban Development Line, and assess whether an additional buffer from urban development is required in new developments.

e) Adopt Dark Sky policies around natural areas to minimize light impacts upon nocturnal behaviours.

Management + Operations

f) Ensure that open spaces citywide are comprehensively managed using a multifunctional and integrated network approach, including activities related to restoration, weed control, maintenance, risk mitigation, etc.

g) Employ adaptive management techniques to incorporate into management decisions any changes in the ecological integrity and relative importance of cores, corridors and the matrix associated with climate change, urban development or restoration.

h) Improve air and water quality in open spaces by preventing contamination and implementing the air quality monitoring and management policies in the *Way We Grow* and the *Way We Green*.

i) Evaluate areas where dog walking is not appropriate due to environmental impacts (e.g. erosion, water contamination, damage to sensitive vegetation) and conflict with wildlife populations. Establish access regulations for ecologically sensitive or natural areas, and implement signage/communication campaigns to inform dog owners about appropriate locations for dog walking, managing waste, and appropriate behaviour during wildlife encounters.

j) Balance the needs of users with the protection of the natural environment by creating enforceable compatibility guidelines for events in public open spaces. Require that applications for permits to book open spaces adhere to permitted event types (e.g. guided nature walk, citizen science programs) in environmentally sensitive, significant and natural areas, and revoke the permit without compensation in the event of a breach of any laws, bylaws or conditions described in the Community Event Contract.

k) Restrict and manage user impacts on environmentally sensitive and natural areas in public open spaces, including penalties for inappropriate usage, pollution, and damage to ecosystems.

l) Establish a carbon neutral policy for City operations and facilities (including partner facilities) on public open space.

m) Ensure that recycling options are available in all new and replacement trash receptacles in public open spaces, and that disposal procedures are well communicated among the public and City maintenance personnel.

n) Expand recycling and compost education programs into open spaces throughout Edmonton.

o) Use City planting beds, community gardens and planters as demonstration opportunities for urban composting, naturalization and edible landscaping wherever possible, along with appropriate educational signage and programs.

Engagement + Partnerships

p) Collaborate with Indigenous communities in environmental stewardship to identify and protect plant and animal species significant for traditional and cultural uses, and address Treaty rights to harvest in areas where such species are identified as significant.

Analysis + Monitoring

q) Monitor wildlife use and movement through open spaces, including approaches such as wildlife tracking, motion-sensor camera arrays, and incidental observation records. These data will inform open space management to help minimize barriers and reduce negative human-wildlife interactions.

r) Ensure that the best quality information about the ecological integrity and function of open space is made available to decision makers, land managers and the general public. Management recommendations should be based on current, accurate information through research and review of up-to-date literature on the population dynamics, migration routing, and habitat preferences of local wildlife and plant communities.

s) Identify expected range or distribution shifts for native species, invasive species and diseases in the greater Edmonton region due to changing habitat suitability associated with climate change (e.g. temperature, moisture, vegetation types). In collaboration with the scientific community, monitor, identify and anticipate management challenges related to these changes.

t) Continually update and maintain the City's ecological assets data, and integrate data into local and regional network planning initiatives as part of an adaptive management approach to support monitoring and evaluation of the green network. Use ecological assets data to assess green infrastructure capacities and to identify future infrastructure needs that will help maximize City return on its investment in green infrastructure.

4.7.3 GREEN INFRASTRUCTURE

Planning + Design

a) Using an urban watershed planning approach, align open space (re)development with the City's water quality strategy to integrate green infrastructure and stormwater management planning to mimic hydrological systems. The proposed systems would retain, filter and evaporate stormwater close to its source, helping to manage urban runoff quality and quantity.

b) Align the City's wetland conservation, restoration, protection and management policies and strategies with those of the Alberta Wetland Policy.

c) Avoid or mitigate wetland impacts in accordance with the Alberta Wetland Policy and ensure that wetland replacement activities are carried out within City boundaries.

d) Ensure that constructed or replacement wetlands are well integrated into the ecological network.

e) Develop Low Impact Development standards for open spaces that adhere to and strengthen existing Low Impact Development design guidelines.

f) Incorporate gardens, green roofs and living walls into civic and public buildings throughout Edmonton to improve wellbeing, air quality and temperature regulation.

g) Ensure an integrated approach is taken to streetscape design and development. This approach should incorporate and value ecological function and services such as stormwater management, biodiversity and habitat connectivity.

Management + Operations

h) Encourage and provide incentives for green infrastructure initiatives to manage stormwater, improve air quality, support biodiversity and mitigate urban heat island effects.

i) Based on an approved risk management framework, harvest stormwater and reuse it to water open spaces such as sports fields and gardens to reduce operational costs, mitigate the effects of drought, reduce potable water use, and improve the condition of open spaces. The feasibility of stormwater harvesting should be examined as open spaces are (re)developed, or a stormwater harvesting feasibility study may be conducted to determine suitable sites citywide. A monitoring system should be established to mitigate potential contamination and measure improvements to water quality and quantity.

j) Support the City's water quality and flood mitigation initiatives by increasing the permeability and retention capacity of the urban landscape through public and private green infrastructure initiatives citywide (e.g. permeable pavement, dry ponds, bioswales, rain gardens, green roofs), particularly in communities services by a combined sewer system or at high risk of flooding.

k) Develop a green infrastructure grant system for community groups and organizations to fund projects that restore or improve habitat quality and connectivity in key locations.

Analysis + Monitoring

l) Consider the lifecycle requirements of green infrastructure from both planning and operational perspectives, in accordance with **Strategic Direction 4.10 Sustainable Funding.**

m) Monitor the contribution of green infrastructure to ecological services and benefits such as biodiversity, energy and potable water savings, air quality, water quality and climate regulation.

n) Support research and development of provincial guidelines for stormwater harvesting and reuse, particularly research into appropriate end uses for harvested waters.

4.8 ADAPTIVE MANAGEMENT + FLEXIBLE SPACES

Adaptively manage changing trends in growth, demographics and preferences.

Edmonton's population is growing and changing (doubling to nearly 2 million people), and with that growth come changes to the structure of the city itself. Not only do more people increase pressure on the existing spaces and amenities of the green network, but changing trends and demographics result in different open space needs. An increasing proportion of older adults might require more social open space opportunities while acknowledging persistent active lifestyles. Declining participation in organized sports and increased interest in individualized or alternative wellness activities might change the proportion of open space we dedicate to different amenities. Climate change might increase stress on local plants and animals, or might shift their habitat ranges into or out of Edmonton.

These factors and many more are considered by the City and its partners when planning the green network. This Strategy evaluated information ranging from provincial legislation to Edmonton's current land use and demographic profile, and establishes policies based on best available knowledge. However, what these examples have in common is that they are changing: the Municipal Government Act is undergoing amendments and implementation, new communities are being continually approved and constructed, and Edmonton evolves every day as its population grows, ages and moves.

Clearly, the City cannot create a new Green Network Strategy every year to account for changing conditions. Instead, an adaptive management approach allows open space planners and managers to anticipate and respond to challenges in a productive, structured manner. Adaptive management is a cycle of monitoring, evaluation and adjustment to improve decision making in conditions of uncertainty. The process emphasizes continuous learning as a means to keep abreast of changes and correct outdated understanding.

In the context of the green network, an adaptive management approach involves research, monitoring and reporting, collaborative knowledge building, and managing open spaces with an understanding of changing conditions. Part of that understanding includes acknowledgment that sometimes we are unable to predict changes, so designing and operating open spaces to be flexible and multifunctional can reduce the amount of resources expended on projects that may become outdated, and improve resiliency of the entire green network over time.

4.8.1   MANAGEMENT APPROACH

Planning + Design

a)   Update the *Green Network Strategy* at regular intervals, with a comprehensive review and report to Council to incorporate interim management adjustments and respond to emerging trends and needs. Both the interim report and the Strategy update should include a current inventory of open spaces and should address potential issues of surplus or deficit.

Management + Operations

b)   Train City employees to understand, value and apply principles of sustainability, adaptability and resilience. Communicate among City branches and sections to reinforce understanding of ecological concepts and functions as applied to Edmonton's natural systems.

c)   Promote a corporate culture of continuous learning so that City personnel responsible for open space planning are better able to remain aware of changing trends and best practices, including improvements in acquisition, funding and management processes. The City should develop an Open Space Research and Development Plan to establish priorities and coordinate actions on topics requiring further research.

d)   Encourage innovation and experimentation in open space planning, management and design, including the application of novel technologies and concepts.

Analysis + Monitoring

e)   Measure selected indicators to provide a complete and meaningful understanding about the condition of the green network. Indicators of demographic or spatial change should be used to establish thresholds that trigger (re)evaluation of open space planning or management. Indicators of open space and system performance should be used to measure progress toward targets and enable evaluation of outcomes.

f)   Using monitoring and measurement of indicators, report annually on the condition of the green network and progress toward the targets and actions identified in the Implementation Plan. The Report should be circulated to Administration and approved by Council prior to each business planning cycle, and the results communicated to internal and external stakeholders and the public at large.

g)   Engage City staff responsible for open space operations to explore how best to incorporate monitoring, data collection and reporting programs into work plans.

h)   Establish internal procedures, supported by policy or regulation where appropriate, to ensure that planning or management adjustments arising from monitoring and reporting activities are communicated and implemented.

i)   Increase capacity for data collection and information management to enable timely, accurate and organized monitoring of open space usage patterns and trends over time.

j)   Enhance the reporting standards for open space bookings, permitting and usage to accurately measure the usage patterns of parks and user groups.

k)   Ensure that open space decision making is based on best and most current available information, and that procedures are in place to identify, communicate and respond to critical information deficiencies.

Engagement + Partnerships

l) Collaborate with local Indigenous communities to gather and preserve traditional ecological knowledge (TEK) about open spaces, and explore ways to incorporate TEK into open space management and decision making in culturally and historically significant areas (e.g. the North Saskatchewan River Valley), as such decisions intersect with Indigenous rights and interests.

m) Collaborate with community partners, stakeholders and other jurisdictions to promote continuous issue identification, share in data generation and collection, incorporate local and traditional knowledge, build capacity to address changing conditions, and explore proactive means of response.

4.8.2 ADAPTABLE SPACES

Planning + Design

a) Design open spaces and their adjacent public realm to be flexible and adaptable wherever possible.

b) Encourage site design that anticipates future changes to physical assets or use, such as installing subsurface infrastructure within a sports field that can accommodate more intensive sports or event uses with minimal upgrades.

Management + Operations

c) Ensure that athletic fields accommodate multiple sports at different times of day or year.

d) Explore the potential to use streets, parking lots, alleys or other underused spaces as permanent, temporary, interim and/or pilot public open spaces in accordance with **Strategic Direction 4.5 Distribution + Supply.**

e) Animate open spaces with diverse activities, events and uses as an alternative to investment in fixed (immovable) assets with low adaptability over time. Criteria or guidelines should be developed to determine which open spaces or situations are appropriate for reduced capital expenditures in exchange for increased program/animation expenditures, and the appropriate balance between the two approaches.

f) Use movable furniture and games to animate civic spaces, including movable seating, tables, and giant chess/checker games.

Engagement + Partnerships

g) Partner with organizations or businesses (e.g. Edmonton Public Library) to create rentable activity kits to enable citizens to activate local open spaces on a flexible basis. Activity kits could include picnic kits, busking kits, sports kits, play kits, etc.

Analysis + Monitoring

h) Develop and maintain an inventory of City-owned and private assets that could be converted to open spaces, on a temporary or permanent basis, in response to population growth, including leased parking lots, vacant lots, brownfields, public rights-of-way (ROWs), and utility ROWs.
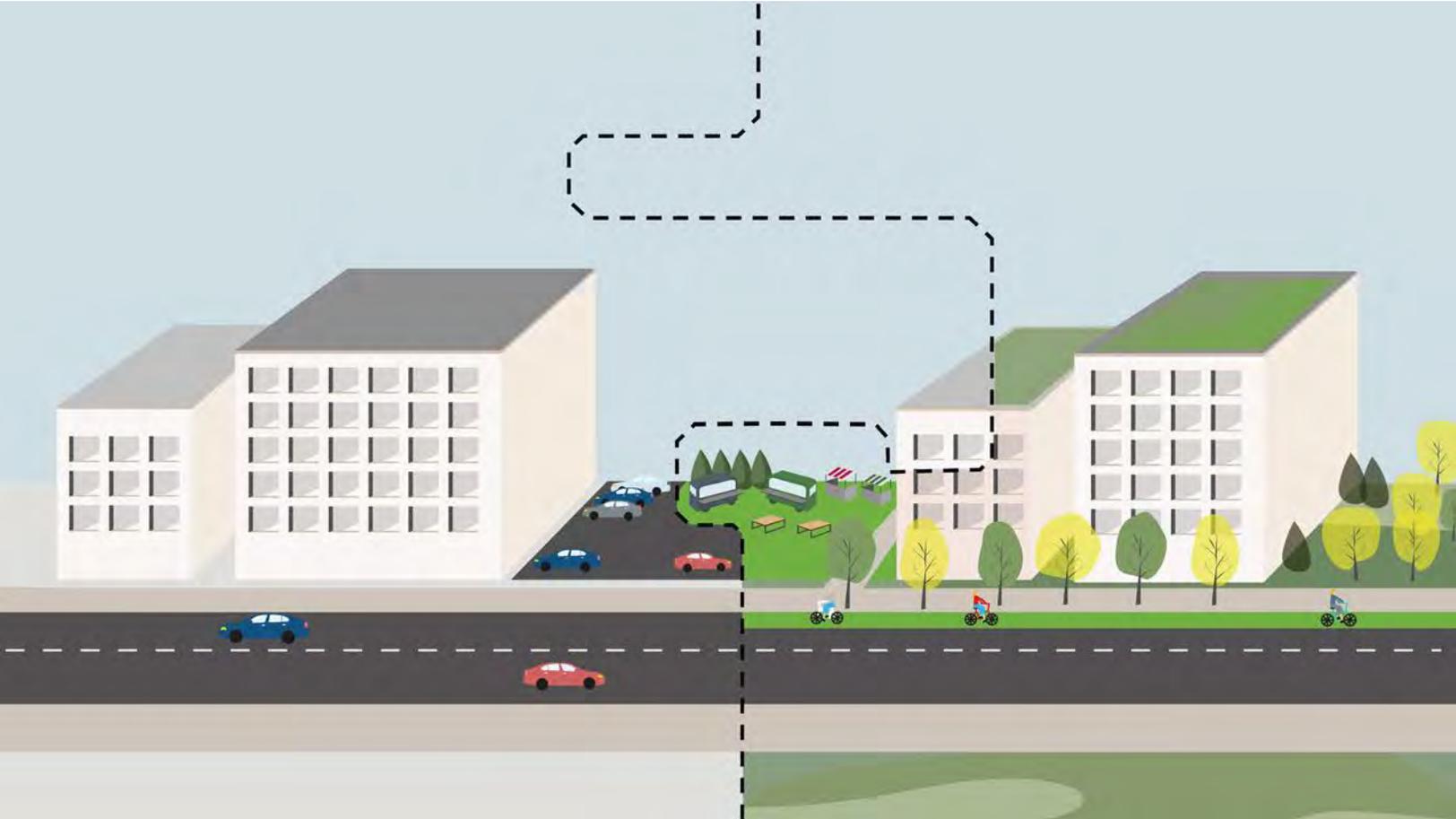
4.9 COLLABORATIVE PLANNING

Improve collaborative open space planning among City stakeholders, community partners and other jurisdictions.

The plans, projects and operations that guide life in Edmonton are often undertaken by many different City units, community and government partners, and individuals. The same holds true for the green network: developers provide land for open spaces in new communities, the City programs and maintains open spaces, school boards coordinate community use of school facilities and sports fields, and citizens help fund and construct amenities. The green network also benefits from collaboration with adjacent municipalities through the Capital Region Board and the River Valley Alliance, and with provincial and federal governments, to coordinate land use planning and environmental preservation, and to maintain an open dialogue about legislation and other changes that impact our mutual jurisdictions.

Communication among such diverse agents is important to keep projects aligned with the priorities of the Green Network Strategy, and to enable partners and citizens to carry out their own open space planning and operating responsibilities. For instance, open space functionality could be improved and the use of municipal resources optimized by enhancing partnership among City branches responsible for parks acquisition, development, programming, operation and animation. Interdepartmental dialogue could expose opportunities for multifunctional open spaces that accommodate stormwater management or transit uses in concert with recreational, social or ecological ones.

Review of land development applications by open space planners and planners of adjacent neighbourhoods could help coordinate connectivity of the green network at the transition between old and new neighbourhoods, and identify impacts on the green network citywide.

An important part of collaborative planning is creating the mechanisms and tools to support collaboration. The way communication is delivered through information management systems and reservation processes, for example, can strongly influence the efficiency of the partners involved. Edmonton entrusts its communities with significant independence to develop their own parkland, but the City must ensure that the development process is workable and effective. Likewise, participation and partnership with citizens, Indigenous communities and other organizations could be strengthened through strategic dedication to outreach, education, funding and administrative support for initiatives ranging from environmental stewardship to field maintenance.

4.9.1 CITY PROCESSES

Planning + Design

a) City branches and sections should work together to provide multifunctional open spaces in concert with transportation, drainage, neighbourhood renewal, and other infrastructure projects.

Management + Operations

b) Continually improve the site booking and permitting process to facilitate access to community gathering opportunities (e.g. park and picnic site bookings, event bookings, etc.) including such considerations as procedural complexity, communication options and cost. This process should involve consultation with community groups and partner organizations to identify priority service improvements, and a review of best practices in information management and communication.

c) Review community-driven park improvement and development programs to identify means of streamlining the application and development process; enhancing assistance to help communities navigate the process, including planning support and outreach to diverse participants; and increasing the flexibility of project timelines and documentation.

d) Identify and resolve communication and data gaps among City branches and sections responsible for open space planning, acquisitions and development, operations, programming/animation and funding. Communication should occur on a strategic, continuous and collaborative basis, and should encompass a variety of opportunities and media.

e) Coordinate City parkland development processes with community-driven improvement and development programs to generate resource efficiencies and ensure that parkland amenities are available to developing communities as soon as possible.

4.9.2 PLAN ALIGNMENT

Planning + Design

a) Through implementation of *BREATHE*, pursue opportunities to direct, support and align with other City strategies, plans, projects and initiatives, and maintain alignment through any revisions to this Strategy and subsidiary plans recommended by this Strategy.

b) Pursue opportunities to amend statutory area, neighbourhood and redevelopment plans that do not conform with this Strategy.

c) Coordinate plan and green network alignment, and address potential conflicts resulting from overlapping networks of transportation, drainage, land use, etc. Departments should identify areas where their proposed plans overlap with the plans of other departments from both geographic and jurisdictional perspectives, and should work collaboratively to balance diverse corporate priorities and determine how best to accommodate interaction among different uses in open spaces, including:
   › **Conflict:** In some cases the uses will conflict (e.g. a swimming beach and stormwater outfall) and a decision-making process establishes which one should take priority in any given location.
   › **Accommodation:** Sometimes conflict among different uses can be avoided or mitigated by supplying means of separating them as much as possible (e.g. building a wildlife passage where a transportation route crosses an ecological corridor).

> ⟩ **Compatibility:** Often uses can be combined to enhance the multifunctionality of an open space (e.g. a Light Rail Transit corridor and adjacent active transportation greenway).

d) Ensure that development proponents demonstrate how their project adheres to this Strategy and related City policies and procedures which promote an integrated network approach to land use planning. Develop and impose penalties on development proponents who fail to implement elements of their projects which were promised to support the green network, e.g. developing open spaces or amenities, locating or orienting land uses in accordance with an Ecological Network Report.

e) Develop master plans or management plans for any metropolitan or district parks that currently do not have one or where existing plans have become outdated.

4.9.3 REGIONAL COLLABORATION

Planning + Design

a) Ensure that open space acquisition and development supports the recommendations of the Edmonton Metropolitan Region Growth Plan for population growth, intensification and complete communities.

Engagement + Partnerships

b) Foster and support consultative, contributory, operational and collaborative partnerships with federal and provincial agencies and with other municipalities through the Capital Region Board regarding open space development and ongoing operations. Engage with adjacent municipalities, Indigenous communities and/or Alberta Environment and Parks to coordinate planning, development and operations of open spaces located near their shared jurisdictional boundaries.

c) Collaborate with the River Valley Alliance, Capital Region Board, senior levels of government and Indigenous communities to support the regional connection, expansion, protection and responsible development of the River Valley and Ravine system.

4.9.4 PARTNERSHIPS

Planning + Design

a) Continue to work with the development industry as key partners in open space development, through programs such as the Shared Park Development Program.

b) Provide sufficient funding, planning, design, management and programming support for community-driven park improvement and (re) development projects.

Evaluate the level of municipal contribution to community projects using the following criteria:
> ⟩ Community open space needs as determined through community needs assessment
> ⟩ Community ability to finance the project
> ⟩ Equity in open space financing and distribution
> ⟩ Synergy with other City programs and priorities

c) Work with school boards, community leagues and other community service providers to acquire, develop and operate open spaces in conjunction with recreation and community facilities.

d) Develop a Community Facility Requirements Strategy to better coordinate the open space needs of community organizations and service providers (e.g. community leagues, sports organizations, Indigenous or cultural groups) across the city. The Strategy should incorporate and update information and management approaches from existing facilities plans and policies.

Management + Operations

e) Work with community partners, where appropriate, to share in open space maintenance and stewardship, e.g. field or trail grooming, beautification initiatives, natural area monitoring, maintenance agreements.

f) Review agreements with community partners to better coordinate the programming and use of shared open spaces by interested stakeholders (e.g. community leagues, non profit organizations, heritage and cultural groups, sports and recreational groups, other levels of government, school boards, for profit service providers, general public). Investigate any other regulations and processes that may impede access to shared open spaces for stakeholders.

g) Sites where community facilities are planned but not yet developed may be maintained and operated by the City as public open space on an interim basis, and may be developed with limited improvements like non-irrigated sports fields. Should community partners identify such lands as surplus (oversupply) to their facility needs, engage in a community needs assessment to determine whether the lands should be formally designated and developed as public open space or released for other land uses, in accordance with **Strategic Direction 4.5 Distribution + Supply**.

Engagement +Partnerships

h) Collaborate with communities, stakeholders, the development industry, interest groups and the general public as key partners in open space planning and management.

i) Wherever possible, communicate opportunities for individuals and community groups to advance their open space (re)development and programming goals through alternative sources of funding and/or program support.

j) Actively advance reconciliation with Indigenous communities by providing open spaces that respect traditional values, provide spaces for traditional uses and culturally appropriate activities and observances, protect sacred sites and burial grounds, and respond to the needs of present and future Indigenous communities.

k) Explore opportunities for public-private partnerships to deliver large scale, complex open space projects where appropriate. Potential opportunities include financing and construction of major open space or partner facilities, or maintenance and operation of open spaces by non profit organizations or conservancies.

l) Actively pursue opportunities to establish or reinforce formal partnerships (e.g. private landowners, conservation organizations, land trusts, environmental non profit organizations, planning and advisory bodies, other jurisdictions) for watershed planning, stewardship and conservation.

m) Collaborate with other governmental agencies, institutions and private landowners to coordinate planning and improve public access to non-municipal open spaces, including publicly owned lands (e.g. provincial lands), quasi-public spaces (e.g. university lands) and private amenity spaces, where feasible and public access is not limited.

4.10 SUSTAINABLE FUNDING

Develop a sustainable funding model that responds to operational requirements, community capacity and local needs.

BREATHE recommends a series of actions that can address deficits in the green network, and improve open spaces to an ideal standard. However, many of those actions come with a price tag. Municipal governments nationwide are challenged to budget for competing civic priorities using a limited range of revenue tools. In Edmonton, most open space is acquired using land dedications obtained through the subdivision process, in accordance with the provisions of the *Municipal Government Act,* and funded on an ongoing basis through property taxes or funds in lieu of land dedication. But whenever the economy downturns, then unemployment increases, real estate development slows, and municipal revenues decline.

When the demand for green network improvements exceeds the availability of funding, then goals related to the supply, maintenance or programming of open spaces may be compromised. Edmonton is particularly challenged by a rapidly growing population that is locating in both developing and mature areas of the city. In new communities, the lands provided by developers through the subdivision process are required for many different uses: schools, community buildings, fire stations and other civic purposes, in addition to parkland. When open spaces are developed prior to the community's completion (i.e. full build-out), the City may be required to undertake substantial costs before it can reap the revenues of new property taxes.

In mature and established communities, by contrast, different issues prevail. Where population growth is anticipated, like Downtown or around transit nodes, there are few opportunities to acquire suitable lands for new open space development. Where populations are stagnant or declining, community partners may lose the support they need to operate facilities like schools or skating rinks, and the open space asset may be released for another, more efficient use. Older open spaces throughout the city require ever increasing expenditures on maintenance, redesign or replacement.

Given these realities, the City must allocate resources to the green network in a strategic fashion that takes advantage of efficiency, diversity and innovation. For example, investments in open spaces can yield 'more bang for the buck' when they provide multiple benefits (e.g. stormwater management and recreation). Investments can be further optimized when the planning process considers the long term impacts of both operating and capital costs. Creative solutions to acquisition, development and maintenance problems can leverage tools ranging from new land dedication regulations to community funding or stewardship. The Strategy and accompanying Implementation Plan identify funding considerations for the green network, and establish methods for ensuring a funding balance that remains sustainable into the future.

4.10.1 CAPITAL PLANNING

Planning + Design

a) Leverage funding for open space acquisition and upgrades through coordination with complementary projects across the City of Edmonton, including transportation, drainage and neighbourhood renewal, among others.

b) Identify future capital and maintenance upgrades early in the open space development process and establish an ongoing fund to pay for upgrades and renovations. A portion of taxes and development fees could be used for this fund.

c) Establish decision-making criteria and processes anchored in *BREATHE* for the following scenarios:

   › **Add:** Acquisition of open spaces or the development of new amenities, infrastructure or facilities
   › **Replace:** Replace aging open space amenities or infrastructure
   › **Redesign:** Improve the service capacity of existing open space or facilities
   › **Repurpose:** Change the existing use of open spaces or facilities
   › **Dispose:** Sale of surplus open spaces or removal of facilities

d) Revisit the current acquisition, maintenance and operations funding mechanisms and processes to look for opportunities for efficiencies:

   › **Reallocate:** Look for possible service delivery and budget efficiencies to find areas where budgets could be reallocated to under-served areas
   › **Redistribute:** Look across departments for opportunities to redistribute open space services to other areas

   › **Repurpose:** Consider repurposing underutilized or redundant open spaces or facilities to higher priority uses or uses with fewer service delivery requirements
   › **Shift:** Consider shifting resources from a lower priority area to a higher priority area
   › **Budget Increases:** Explore the impacts of modest capital or operating budget increases
   › **Economies of Scale:** Review opportunities for pooling resources and modest fee/charge increases

Analysis + Monitoring

e) Implement community needs assessments and a comprehensive monitoring and reporting program to proactively identify potential capital requirements, in accordance with **Strategic Direction 4.8 Adaptive Management + Flexible Spaces.**

4.10.2 ACQUISITIONS

Planning + Design

a) Investigate the feasibility and impacts of establishing a land acquisition fund tied to population to ensure open space provision grows with city growth.

b) Based on the direction provided in *BREATHE* and other municipal policies, develop a Green Network Implementation Financial and Reserve Strategy. The Strategy should address how reserve dedications (as land or cash in lieu) can best be leveraged for park acquisition and development, and the financial implications of various reserve management and parks funding scenarios.

c) In recognition that open space is a scarce asset and that conversion to other land uses is effectively irreversible, pursue options to maintain the existing green network intact whenever possible. Ensure

that community needs assessments are current in mature and established neighbourhoods, and exercise right of first refusal on school sites declared surplus wherever supported by such needs assessment and the provision guidelines established in this Strategy.

d) Ensure that conversions of open space (including undeveloped school sites being used as temporary public open space) to other land uses are supported by City policy and by a community needs assessment establishing that the open space in question is surplus to community needs, in accordance with **Strategic Direction 4.5 Distribution + Supply.** Where the open space is surplus to the needs of the community, release such land for other City uses or sale. Proceeds from the sale of surplus lands must be used for open space or amenity (e.g. trails, pathways) acquisitions.

e) In accordance with the provisions of the *Municipal Government Act*, Section 671, money collected in lieu of parkland must be paid into a reserve account and can only be used for land acquisition (for parks and other public recreation uses) or the development of parks and recreation facilities.

f) In discussion with the land development industry, require reserve dedication in accordance with the provisions of the *Municipal Government Act*, the details of which will be determined through the Open Space Development Guidelines, Procedures and Standards, as amended.

g) Investigate the feasibility of collecting land acquisition funds from density bonusing, community revitalization levies or redevelopment levies for use within the same community or towards a community investment fund. This fund could be used for either land acquisitions or for park and recreation capital improvements in the vicinity of the development site.

4.10.3 OPERATIONS + MAINTENANCE

Management + Operations

a) Highlight operations, maintenance and administration efficiencies and cost savings as a key consideration in the design process. City Operations staff should be involved in the planning, design and (re)development of open spaces from the beginning of a project through completion.

b) Establish a maintenance classification system and categorize parks based on that system:

> **Natural Spaces:** Restore or preserve the open space in its natural state
> **Nature Focus:** Maintain trails and trail heads but restore or preserve other areas in their natural state
> **High:** Special, high-visibility areas like metropolitan parks and special purpose facilities
> **Average:** Average standard of maintenance acceptable for community and district parks
> **Low:** Reduced frequency of maintenance, which is primarily safety focused, for low priority areas

c) Identify the maintenance responsibility for all existing and planned open spaces and facilities.

d) Coordinate with other City branches and sections to share the maintenance burden where possible and practical.

e) Investigate the feasibility and impacts of requiring a 20 year maintenance and capital reserve fund for new open spaces in Developing or Urban Growth Areas.

f) In accordance with the policies of **Strategic Direction 4.7 Ecological Integrity,** the City should consider expanding the naturalization program to reduce maintenance costs.

4.10.4 GRANTS + COMMUNITY INITIATIVES

Management + Operations

a) Further invest in community grants to support community programs, festivals, public art and other community building activities.

Engagement + Partnerships

b) Take advantage of provincial or federal infrastructure funding programs to renew parks, open spaces and the facilities within them.

c) Explore opportunities to expand private philanthropy, partnerships and sponsorships to supplement traditional sources of funding.

d) Build capacity and develop partnerships with Indigenous communities, community groups and other organizations to program open spaces, co-manage or steward open spaces, and assist with maintenance through volunteerism or funding support.

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