

THE MEEWASIN TRAIL STUDY

Connecting People to Places

A World Class Corridor, Naturally Beautiful, Uniquely Ours

Building a Healthier City for Healthier People



Photograph courtesy Gary Houlder

2014

THE

MEEWASIN

TRAIL STUDY

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November 2014

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THE MEEWASIN MANDATE

CONSERVE. EDUCATE. DEVELOP

A World-Class Corridor, Naturally Beautiful, Uniquely Ours

To ensure a healthy and vibrant river valley, with a balance between human use and conservation by providing leadership in the management of its resources, promoting understanding, conservation and beneficial use of the Valley, and undertaking programs and projects in river valley development and conservation, for the benefit of present and future generations.

EXECUTIVE SUMMARY

Connecting People to Places

For more than 30 years, the Meewasin Valley Authority (Meewasin) has built trail along the river bank (Figure 1 – Trail Construction). This trail connects neighbouring communities to an exceptional resource while providing a trail network that is accessible to everyone.

The development of the Meewasin Trail began in 1982 with the first 10 kilometres of trail. The trail was built on both sides of the South Saskatchewan River in the centre of Saskatoon, and instantly it became a *'hit'* with residents. The Meewasin mandate is such that the primary trail is meant to be suitable for users of all abilities. The Meewasin Trail is designed to be a route for non-motorized mode choice that weaves through an urban core connecting people to places.

In 2014, there are more than 30 kilometres¹ of the primary trail and more than 70 kilometres in total that connect people to the many cultural and ecological destinations within the Meewasin Valley.

"I love the trails, great for the city! I bike, walk & run. I use it a lot!"

–Meewasin Trail User Survey 2013

The Meewasin Trail is easily one of Saskatoon's busiest attractions, serving over one million visitors a year and dubbed Meewasin's *'flagship'*. Although not the only component of Meewasin, it is the most recognizable asset of Meewasin with more users every year, across all seasons. On any given day, there are many activities happening in the Meewasin Valley such as walking, jogging, cycling, skateboarding, cross-country skiing, snowboarding and bird watching.

Being one of the most popular attractions in the city is terrific, but with it brings many infrastructure challenges that require attention: quality, safety, carrying capacity and funding sources for maintenance and future development.

The Trail Study

Recognizing the trail's popularity and a corresponding need for infrastructure funding, Meewasin embarked on a thorough review of the existing trail system. Over a two-year period, 2013 to 2014, Meewasin collected data about the trail and its users, creating a snapshot to help assess the current and future state of the Meewasin Trail. The team working on the data collection noted the following information:

1. quality and condition of the trail;
2. missing trail sections (gap assessment);
3. safety concerns;
4. usage, volume and capacity;

¹ See Appendix-Trail Distances. The scope of this Trail Study does not include rural trails built by Meewasin that are not yet connected to the primary Meewasin Trail, such as those at Beaver Creek Conservation Area and Cranberry Flats.

5. trail widths;
6. accessibility of the trail for people with mobility challenges; and
7. donor amenities, including the condition and location of site furnishings related to Meewasin's donations programs.

Current Issues

These findings revealed that much of the existing infrastructure is in need of some repair ranging from vegetation management to complete trail replacement, widening or twinning of the trail.

The Meewasin Trail will continue to expand and change as the city grows. The trail design should meet, at the very least, a basic service level by pursuing design principles with respect to the width (minimum 3.0 metres), slope (maximum 5%) and surface treatment (accessible). This will help to ensure that the trail can accommodate all users with all abilities.

Summary of the findings:

1. There are critical gaps in the current trail system. Approximately 7 kilometres of additional trail are needed to complete the system with its current end points;
2. Many sections of the Meewasin Trail are 30 years old and at the end of their service life²;
3. Many sections of the Meewasin Trail are in need of repair due to vegetation overgrowth and slope erosion;
4. Many sections of the Meewasin Trail have major cracking with vegetation and tree roots breaking through the asphalt;
5. Over two-thirds of the Meewasin Trail does not meet Meewasin's current standard of a minimum 3.0-metre width;
6. Sections of the Meewasin Trail do not meet Meewasin's current guideline for a maximum 5% grade;
7. The busiest location along the Meewasin Trail has been identified as the section from Meewasin Riverworks (Weir) to the Mendel. This area will become more congested as Saskatoon's population continues to grow;
8. The suite of site furnishing is at the end of its current service life. Approximately 30% of waste receptacles and over 50% of the benches are in need of repair or replacing; and
9. River views and visual connections have been compromised due to vegetation growth over the years.

Future Challenges

Meewasin engaged consultants Alta Planning + Design (Alta), one of the foremost industry specialists in pedestrian and cycling planning in North America, to assist with a thorough count and intercept survey of trail users. Alta used this data to prepare three reports³ for Meewasin

² Because core samples of the asphalt were not taken to determine the construction of the trail, further testing may be required to verify the recommendations for complete replacement.

³ Appendix A – Three reports produced by Alta to help determine future projections of the Meewasin Trail and understand how the Meewasin Trail compares to other trails across North America.

and provide some key findings that included projected volume of trail use, trail capacity and recommended trail widths.

The overall goal of this trail study is to improve the Meewasin Trail system, while continuing to work with the City of Saskatoon to build a trail system that is non-motorized, encourages active living and provides trail users with the best experience possible. The trail study outlines a framework for maintaining the integrity of the Meewasin Trail for current and future use.

Projecting the future can be challenging, but with the help of Alta the future usage and design of the Meewasin Trail was taken into account. The study anticipates use over the next 10, 20 and 30 years. The following are some of the findings for the 18 sections of trail during the evening peak travel time (4:00 pm to 6:00 pm) where count data was collected:

1. Within ten years (2023) four locations will exceed 200PPH (people per hour);
2. Within twenty years (2033) seven locations will exceed 200PPH; and
3. Within thirty years (2043) ten locations will exceed 200PPH.

The cost opinions continued in this report were based on the following design guidelines for shared-use path widths⁴:

1. Less than 200PPH - minimum 3.0-metre wide trail
2. 200PPH to 300PPH – 4.0-metre wide trail
3. 300PPH to 600PPH – 6.0-metre wide trail or separated trails totalling 6.0 metres
4. Over 600PPH - Separated trails at 4.5 metres each

Estimated Costs

Planning and upgrading the trail infrastructure to improve safety and building a trail that will accommodate future use is challenging as Meewasin's limited funding has not kept pace with today's infrastructure maintenance needs or future development needs. To meet proposed standards for the present and future, additional resources are required.

A summary of estimated costs associated with upgrading the trail infrastructure for 2023 and 2043 as per the findings in this report are:

1. **2023 Projection:** to upgrade the overall infrastructure the opinion of cost is \$15,703,854* – includes increasing minimum trail widths to meet growth and capacity (4.0 metres in particular locations);
2. **2043 Projection:** to upgrade the overall infrastructure the opinion of cost is \$22,306,412* – includes increasing trail widths to meet projected population growth and capacity (6.0 metres in particular locations);
3. to complete the gaps in the trail system, the opinion of cost is \$7,967,620*; and
4. to upgrade site amenities the opinion of cost is \$500,000*.

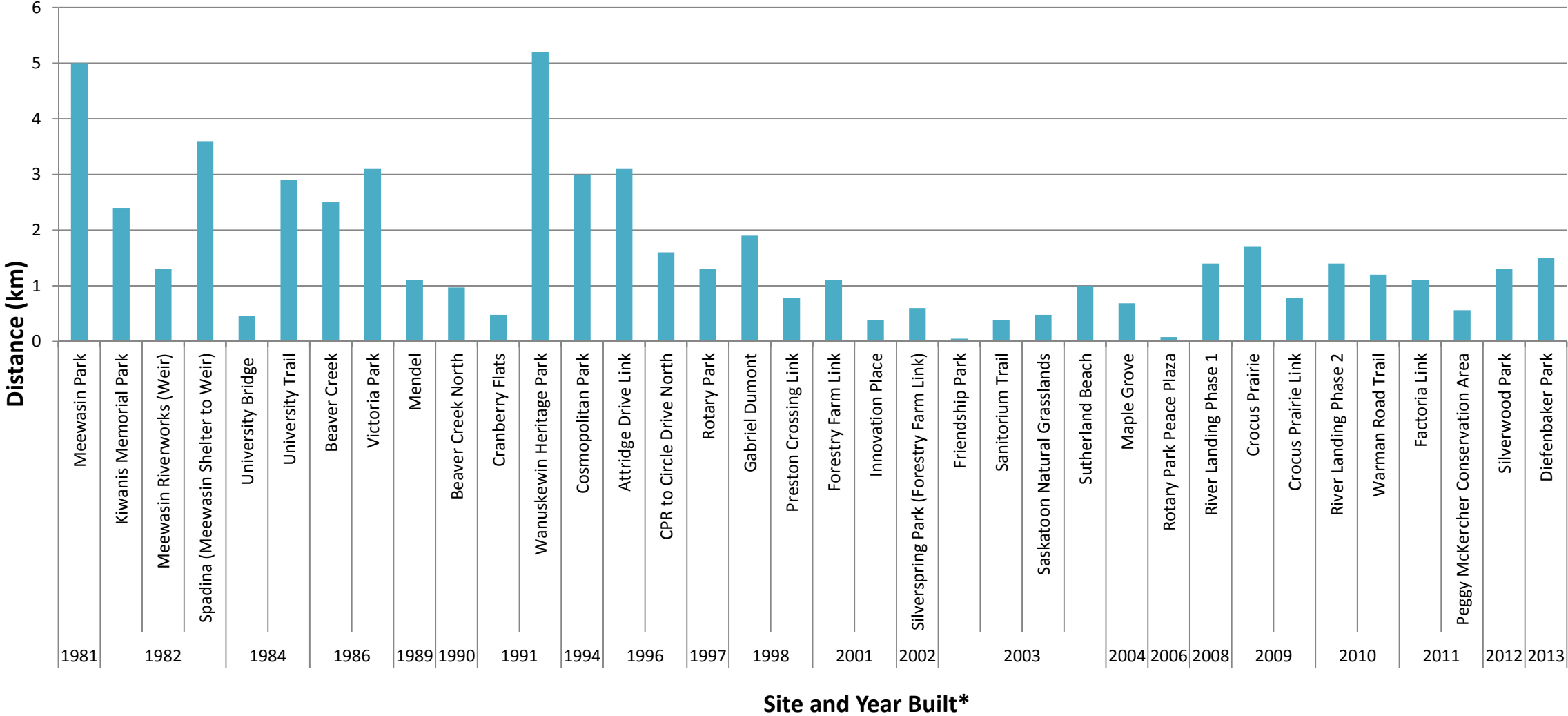
⁴ Based on recommendations from Alta Planning + Associates Count Report.

*2014 dollars with no inflation added

To understand how this will affect Meewasin budgets, two scenarios were explored. Meewasin used an annual capital budget allocation of \$500,000 and \$1,000,000 with inflation factors to model an implementation strategy with a ten-year time horizon. For instance, at \$500,000 annually Meewasin can attend to over half of the top ten critical projects. With an increase to \$1,000,000 annually over 90% of the top ten critical projects can be completed. These numbers are based strictly on a cyclical capital replacement program. The cost assessment for the annual maintenance program is suggested, but no annual funding has been assessed in this report.

In closing, throughout Meewasin's strategic planning process the clear, consistent message from the public and stakeholders was that the Meewasin Trail should be the primary focus over the next ten years. Emphasis should be placed on "improving and refreshing" the existing infrastructure to "optimize the carrying capacity" of the trail network for today and into the future (Meewasin Valley Authority 2014). With every passing season, the degradation of the Meewasin Trail will become more extensive and costly to repair. Overall, this study provides an approach to address and improve this cherished asset while providing a framework to prevent failing infrastructure for future trail expansion.

Trails Built by Meewasin



* This is an approximation of years. Note some sections of trail were built over a number of years. This table shows the completed trail data with the information available to Meewasin. Rural trail distances are an estimation.

INTRODUCTION

OBJECTIVES

The Meewasin Valley Authority (Meewasin) began this trail study as a way to track and record information about site amenities in the Meewasin Valley. With the increased use of the trail, the scope was expanded to include an assessment of the existing trail system with a focus on safety.

A large portion of the Meewasin Trail was built decades ago and in a manner that does not meet current design standards. This has led to maintenance issues and failing infrastructure. There is currently no consistent system in place to assess or manage trail maintenance, rehabilitation and future upgrades. Through this study, we will propose methods to track and share information, intervene and operate the trail in an effort to maintain a reasonable service level.

More specifically, this study considered safety, accessibility, view protection and sightlines, trail regulations, user enjoyment and recreation, asset documentation and management, wayfinding and branding, trail types, users and volume of use. This study will look at emerging trends (e.g. active transportation, recreation) to understand how to accommodate these safely. This study will provide recommendations regarding improvements – changing standards, life-cycle replacement, response to existing demands, projection growth and future requirements. It will provide an overall plan that addresses how to manage the balance between improving the quality of life for Saskatoon residents and continuing to develop the trail as a tourist attraction while offering users a safe, shared pathway system that connects to the larger city-wide trail network.

The objectives of this trail study are to:

- Review the overall trail network and provide recommendations to complete infrastructure gaps within the existing network;
- Categorize and identify high priority projects for implementation;
- Recommend actions to address failing infrastructure such as holes and major cracking throughout the system;
- Recommend sections for widening or twinning of the existing trail based on population projections and trail counts;
- Examine non-accessible routes that exceed a maximum grade of 5%;
- Assess safety concerns such as blind corners and recommend tools to support safety;
- Recommend a plan for view protection throughout the Meewasin Valley;
- Aid in developing an ongoing operations and life-cycle maintenance and replacement plan;

- Provide cost opinions and implementation strategies;
- Investigate communication strategies and educational programs for shared pathway systems;
- Work with the City of Saskatoon to improve neighbourhood/backshore connections to the Meewasin Trail; and,
- Encourage active living by working with external organizations to promote trail usage.

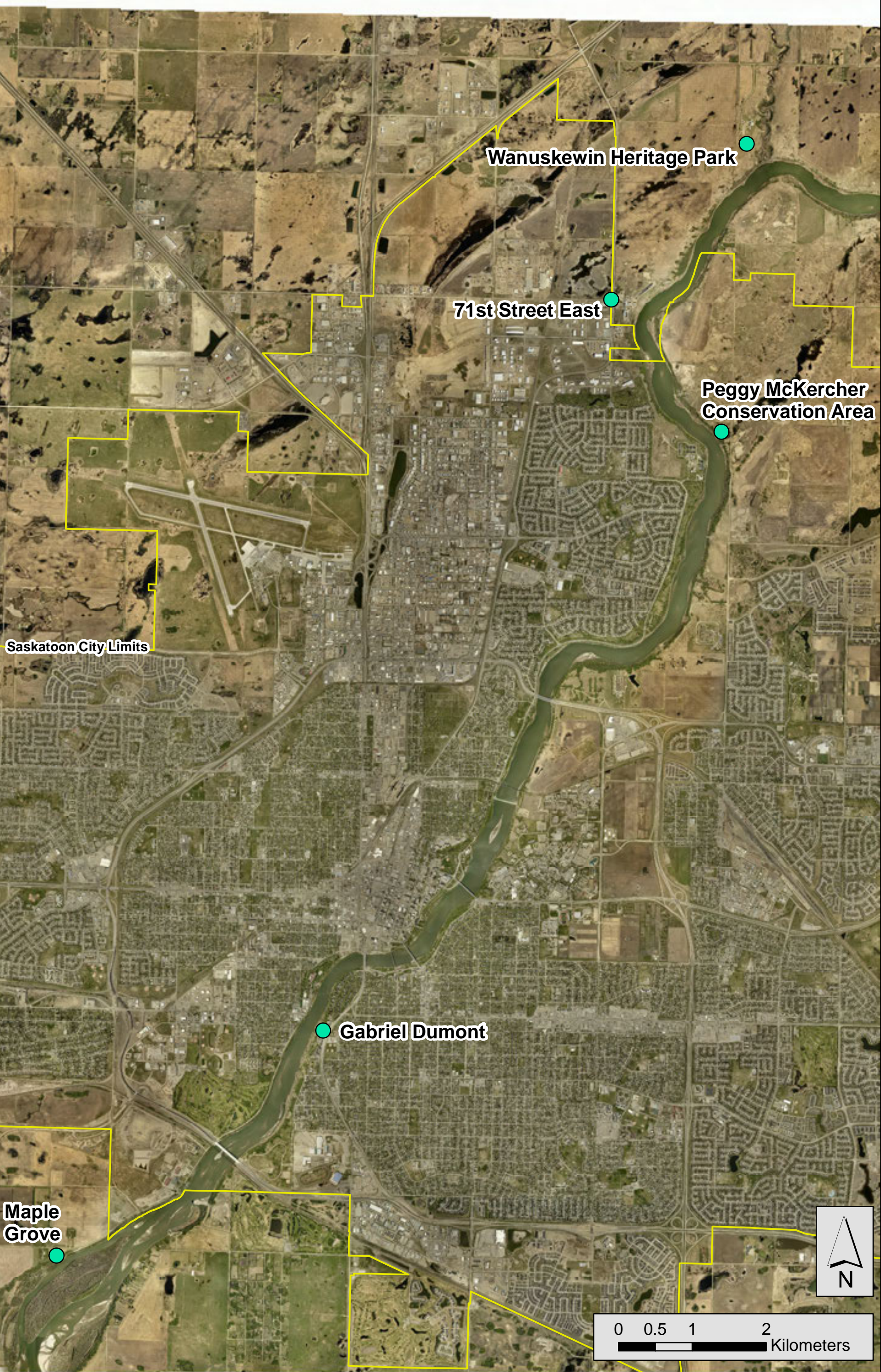
AREA OF STUDY

The area under review is the entire trail system⁵ and backshore links with a focus on the primary trail along the east and west sides of the South Saskatchewan River in Saskatoon (Map 1: Area of Study). The primary trail is defined as a shared-use path accessible to all. It is continuous along the east and west bank from north to south. It is constructed of asphalt, concrete, paving stone or crusher dust. It is a four-season trail, however, the majority of the crusher dust surface is not cleared in the winter. Although this study was mainly focused within Saskatoon city limits, the trail systems outside of this area were included for future assessment and management needs.

The review area extended from Gabriel Dumont Park through to Peggy McKercher Conservation Area on the east bank and from Maple Grove through to 71st Street on the west bank.

⁵ See Appendix - Trail Types for a description of trail definitions.

Map 1: Area of Study



BACKGROUND

The Meewasin Valley stretches over 25 kilometres within Saskatoon city limits and into the surrounding community for a distance of almost 80 kilometres. This unique resource of the natural and built environment is the reason citizens and visitors to Saskatoon continue to flock to the river valley. Saskatoon's identity is defined by the South Saskatchewan River running through its core. It is the heart of the city. Protecting and making this a place accessible to all is one of Meewasin's overarching goals.

The original plan for the Meewasin Trail was to “develop an orderly approach to trail linkage development along the river valley as it passes through the City of Saskatoon and Rural Municipality of Corman Park to provide a continuous river bank circulation system as a major recreation resource for the residents of Saskatoon and area” (Crosby Hanna & Associates 1981).

In 1981, with the assistance of a grant from the Devonian Gardens, Meewasin built the first ten kilometres of trail. Instantly, the Meewasin Trail became the crowning jewel of the city. As with all great attractions, there was a variety of users with different recreational purposes on the trail. This prompted Meewasin to engage consultants Hilderman Witty Crosby Hanna & Associates in 1990 to provide a comprehensive review, *The Meewasin Valley Trail System Plan*, of the existing trail system and develop an “orderly approach to future development of the Meewasin Valley Trail System” (Crosby Hanna & Associates 1981, 2).

The Meewasin Valley Trail System Plan identified two major objectives:

1. “To provide an integrated network of linkages, throughout the length of the Meewasin Valley, which provides reasonable access (for all residents of, and visitors to, Saskatoon area) to recreational and interpretive opportunities in and near the valley (The recreation and interpretation goal)” (Crosby Hanna & Associates 1981, 2).
2. “To provide trail linkages of types and in locations that will assist in the conservation (or preservation, as appropriate) of the natural and cultural heritage resources and areas in the valley. (The resource protection goal)” (Crosby Hanna & Associates 1981, 2).

These objectives were met and are still relevant in today's discussion about the trail.

In 1995, a recreational pathway users' survey was conducted by (Adventure 1995). The survey involved a small sample size, limiting Meewasin's ability to extrapolate information from the survey. The goal of the survey was to understand trail safety concerns, a topic still relevant today, especially with Saskatoon's fast-paced population growth. Concerns identified in the 1995 survey are still being expressed today: cyclists speed and behaviour around pedestrians, cyclists' failing to warn pedestrians of their approach, people travelling two plus abreast, blind corners and overall general dismay with the condition of the trail. In 1995, trail users reported feeling safer riding their bikes on the trail than on the adjacent streets and roadways. This is a similar sentiment in today's society. Today's statistics suggests an average of 1.3% of commuter's cycle to work in Canada, and 2% in Saskatoon (Turcotte 2013).

Beginning in the early 2000s Meewasin began counting trail users using active infrared counters.⁶ From 2004 to 2009 only two sites were consistently counted - under the Broadway Bridge on the west bank and at Meewasin Riverworks (Weir) on the west bank. These trail counts, excluding errors, showed a significant increase in the number of trail users over this period.⁷

The continual growth and popularity of the trail, once again, prompted Meewasin to undertake a comprehensive review of the existing trail system to ensure Meewasin is meeting the parameters set out in previous plans such as the *Meewasin Valley Trail System Plan* (Crosby Hanna & Associates 1981) and the *Meewasin Valley Project: 100 Year Master Plan* (Raymond Moriyma Architects and Planners 1978).

The Meewasin Trail Study brought to light the limited resources spent on the existing infrastructure over the past few decades. The trail is now in dire need of major rehabilitation and upgrades to meet the demands of today and into the future.

In the mid-1990s, Meewasin and the City of Saskatoon set up a cost shared maintenance budget totalling \$30,000 per year. The work is typically undertaken by the City of Saskatoon. The City of Saskatoon and Meewasin review the Meewasin Trail on a yearly basis and recommendations are made for patching and/or overlaying sections of the Meewasin Trail where needed. These recommendations for allocation of funds are determined primarily to address imminent safety concerns, such as holes in the asphalt and major tripping hazards. This method of trail maintenance is a band-aid type solution, typically costing more than a proactive approach.

Over the past five years, the average amount spent on trail repair (asphalt patching and overlay) has consistently been over \$50,000 per year, overextending budgets significantly (Figure 2 – Trail Maintenance Actual Budget 2009 - 2013). In 2013, the amount spent on trail repairs was over \$65,000. In 2012 patching and overlaying were completed in Kiwanis Memorial Park. Two years later cracking and water pooling is occurring. All signs indicate that the asphalt is under structural distress (Image 1). Based on the current condition of the entire system, the budget is not sufficient to repair the existing trail network or any newly added infrastructure. While the City of Saskatoon staff does their best to keep the Meewasin Trail in good working condition, it is evident the existing infrastructure is falling behind and in need of major repair.



Image 1 – Kiwanis Memorial Park

⁶ Infrared trail counters are two-piece systems consisting of an infrared transmitter placed at a reasonable height off the ground. When the beam is broken by those passing through it, it counts as one person. This type of counter can be unreliable because something as simple as a blade of grass can break the beam resulting in inaccurate counts.

⁷ Counts of users for the Broadway Bridge and the Meewasin Riverworks (Weir):
2004 – 160,965 Broadway Bridge and 151,088 Meewasin Riverworks (Weir); and
2009 – 225,000 Broadway Bridge and 251,000 Meewasin Riverworks (Weir).

| Trail Maintenance Actual Budget 2009 - 2013 | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|
| Location | 2009 | 2010 | 2011 | 2012 | 2013 |
| East Bank | | | | | |
| Cosmopolitan Park Overlay | | \$ 2,798.00 | | | |
| East Bank Patching | | | \$ 7,675.00 | \$ 14,663.00 | |
| Saskatchewan Crescent Patching | | | \$ 493.00 | | |
| Diefenbaker Park Roadway Reconstruction | | | | | \$ 61,595.00 |
| West Bank | | | | | |
| Weir fishing platform | \$ 14,469.00 | | | | |
| Boardwalk Weir - Patching | | | | \$ 420.00 | |
| South Sewage Treatment Plant overlay | \$ 23,730.00 | | | | |
| South Sewage Treatment Plant overlay and slurry | | \$ 43,288.00 | | | |
| Sanatorium Pathway Patching | | | \$ 798.00 | | |
| North of Mendel pathway patching | | | \$ 28,636.00 | | |
| South of Water Treatment Plant overlay | | | \$ 14,222.00 | | |
| Ravine to Pembina - Overlay and Patching | | | | \$ 41,816.00 | |
| Kiwanis Memorial Park Patching and Overlay | | | | | \$ 2,789.00 |
| Combined | | | | | |
| Trail East and West bank - patching | | \$ 8,951.00 | | | \$ 697.00 |
| Subtotals | \$ 38,199.00 | \$ 55,037.00 | \$ 51,824.00 | \$ 56,899.00 | \$ 65,081.00 |

Note: this information is provided by the City of Saskatoon and follows their site description. If further clarification is required contact Meewasin Valley Authority.

Figure 2 - Trail Maintenance Actual Budget 2009 - 2013

The trail is a key recreational and alternative transportation amenity in Saskatoon, providing free public access year round. Maintaining it is crucial. The amount of dedicated maintenance

funding has not kept pace with the increased cost of construction. In the mid-1990s both the City of Saskatoon and Meewasin each contributed \$15,000 annually to fund maintenance. Almost twenty years later the amounts are still the same.

Based on the data collected in this study, over 44% of the trail is in need of some type of repair or upgrade (Figure 3 – Meewasin Trail Conditions).

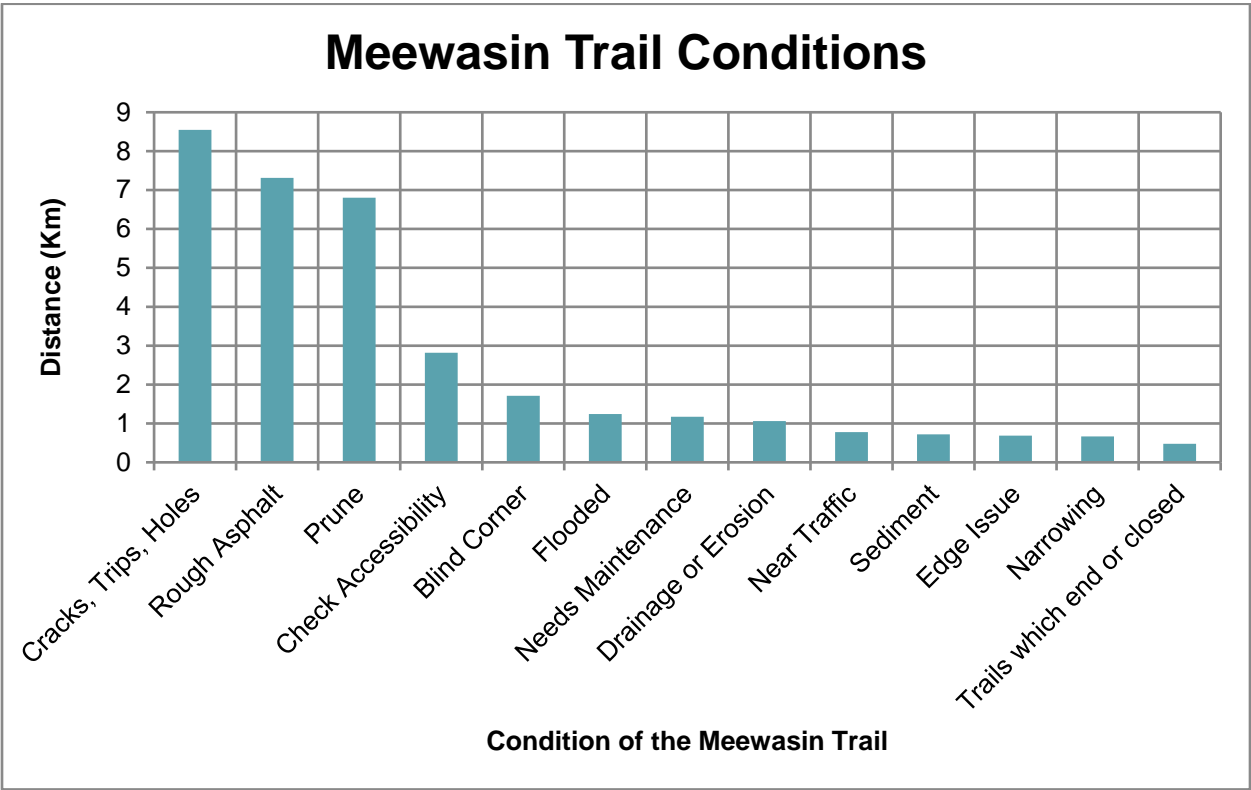


Figure 3 - Meewasin Trail Conditions

When the trail was originally constructed, it was designed and built at a width of 2.0 metres or less. This was a sufficient width in the early 1980s when Saskatoon’s population was 154,210. The population of Saskatoon (Census Metropolitan Area) was 248,700 in 2013 and the projected growth is expected to reach 387,742 in the next 20 years. A framework for future funding must accommodate the projected increase in trail users over the next 10, 20 and 30 years.

METHODOLOGY

This data is comprehensive and reproducible so that the results can be updated and compared to earlier versions to assist monitoring, maintenance, progress and future planning (For more information see [Criterial for Assessment](#)).

Trail data collected during this study includes the trail condition (asphalt quality, trail edges, erosion, vegetation creep), amenities (drinking fountains, washrooms), site furniture and donor

features (benches, waste receptacles), signage (interpretive, regulatory, trail head and wayfinding) and other additional features (light standards, bike racks, picnic areas). The data used in this study was captured during the 2013 and 2014 summer seasons using a handheld GPS device. Two devices were used, a Trimble R6 GPS with Survey Controller TSC2 and a Trimble Geo 7X. This data was captured predominantly with 1cm accuracy, but at times ranges up to 5cm. The data captured has been compiled into an updatable Geographic Information System (GIS) geodatabase.

A two-part trail survey was conducted. The first part contained a count of trail users used to determine volumes, density and user types. The second part was an intercept survey that was used to determine the frequency of use, entrance points to the trail, user experience and safety concerns (Appendix C). Volunteers helped conduct the trail survey and count information in 2012 and 2013. This survey helped create an overall snapshot of the trail system.

To ensure consistent results, the data collection always involved Meewasin staff members Sarina Gersher and/or Nola Stein. They developed the criterion for data collection. Observations of the physical condition can be subjective and in order to provide consistency of the review, a set of standard questions were asked while walking the trail and capturing data. (Appendix D)

TRAIL STAKEHOLDERS

Moving forward from this Study, it is recommended that a Trail Master Plan be undertaken. Stakeholders that will help inform the next steps are listed below:

Trail Users – passive recreation (pedestrians), low-speed active recreation (runners/joggers), high-speed active recreation (cyclists, skateboarders), families, dog walkers, and tourists.

Donors – individual, corporate, and grantors.

Funding Partners – City of Saskatoon, University of Saskatchewan, Government of Saskatchewan, Trans Canada Trail, and Government of Canada

Owners – City of Saskatoon, University of Saskatchewan, Meewasin, and other land owners.

Regulator – Meewasin Valley Authority, City of Saskatoon

Developer – Meewasin Valley Authority

TRAIL ASSESSMENT

Meewasin staff undertook a comprehensive review of safety to identify all the existing concerns within the Meewasin Trail system. Below is a description of elements that were found to affect the safety and potentially impact trail users' comfort and enjoyment on the Meewasin Trail.

SHARED-USE PATH

The Meewasin Trail (Primary Type 1 and 2 – See [Trail Types](#)) is for everyone, with the exception of motorized vehicles that are not used by individuals with a mobility disability.⁸ This is a wide-ranging audience to accommodate. Meewasin and the City of Saskatoon are responsible for addressing safety concerns such as width and condition of the trail while every trail user is responsible for making the trail safe for themselves as well as other trail users. Education and signage are essential components ensuring users are well informed on how to behave safely on a shared-use path.

USER CONFLICT AND INTERACTION

Conflict can often be described as a problem of success, an indication of a trail's popularity. User conflict and interaction can be directly related to trail experience, which in turn relates to safety. Understanding what creates conflict aids in addressing user concerns and future trail design. No physical contact needs to occur among users for conflict to be observed or felt. As a result, conflict is considered asymmetrical where one group can be offended by another, but the reverse may not be true (Moore 1994). The following are examples of user conflict:

- Collisions and near misses;
- Overcrowding;
- Reckless or irresponsible behaviour;
- Unsafe conditions related to trail use (deep ruts, winter clearing);
- Unsafe conditions not related to trail use (weather, crossings);
- Poor trail design, construction, maintenance and management;
- Crime; and
- Interaction with traffic.

As managers of the Meewasin Trail, the following are areas that can be controlled by Meewasin and the City of Saskatoon to enhance user experience:

- Increase the comfort of trails by widening or twinning;
- Upgrade the trail to minimum widths based on industry (and Meewasin) standards;
- Improve sight lines;
- Improve surface quality;
- Educate the public with respect to shared-use paths;
- Control and enforce speeds;
- Manage expectations;
- On-site visual presence (e.g. trail ambassadors or valley stewards);
- Ease of navigation through wayfinding;
- Provide information about distances; and
- Ensure all entry points are visible to oncoming vehicular traffic.

⁸ Devices used for mobility challenges, such as wheelchairs and other devices are accepted modes of transportation on the Meewasin Trail.



Image 3 - Meewasin Riverworks (Weir) Trail -
Adjacent to Spadina Crescent



Image 2 - Near SpadinaCrescent & Queen
Street

Mendel to Meewasin Riverworks (Weir) (Image 2 and 3) – the busiest and narrowest sections of the Meewasin Trail.

Objections to cyclists and their speed are the most common complaints Meewasin receives. Cyclists are singled out because they can travel at higher speeds than most other users with the potential of causing more damage if a collision occurs. **Education and enforcement** on the trail will help address this problem. It is important to inform the public of trail etiquette and the different uses on the trail through the development of an education program or a media blitz. Separation or widening of the trail are other possible solutions, especially in the high traffic areas.

TRAIL CONDITION

The surface of the trail is important in creating a pleasing experience on any trail system. The Meewasin Trail is aging and showing signs of structural distress (Images 4, 5, and 6). The condition of the trail was evaluated based on the following parameters:

- Excellent – relatively new asphalt or crusher dust;
- Good – no broken surface (e.g. no vegetation in the trail, minor hairline cracks, minor repairs needed such as pruning); and
- Needs Repair – overhanging vegetation, broken surface, holes and divots in the surface, drainage problems, accessibility concerns, major cracking, rough and old asphalt.

A report, *Preventative Maintenance for Recreational Trails*, published by the Local Road Research Board (Minnesota) indicates after 30 years asphalt needs to be replaced (Wood, et al. July 2009). Much of the Meewasin Trail is nearing 30 years or surpassed this time frame (Figure 1 – Trail Construction).



Image 4 - Pitted Asphalt (Meewasin Park)



Image 5 – Pitted Asphalt (Meewasin Park)



Image 6 – Block Cracking (University of Saskatchewan)



Image 7 - Ravaling (Friendship Park)

GRADE

One of Meewasin's overarching goals is to make the primary trail accessible for everyone. Meewasin's current guideline is to build the primary trail to a 5% grade or less. This is the maximum grade allowed before railings and landings are required as part of the CSA Accessibility Standards. Meewasin's goal is to build less than, or equal to 5% rather than have the addition of railings and landings.

This study reviews the entire trail system and identifies where the trail exceeds 5% grade. The most common locations which did not meet grade were at entrances to the primary trail and near bridges. It is important to address these areas as soon as possible as they are the access points to the primary trail.

WIDTH

Width is important as it relates directly to safety and the trail user's experience. If a trail is too narrow for the volume of trail users in any given area it becomes a safety concern. Overcrowding can be viewed from a trail user's perspective as conflict, creating a potentially negative experience and reducing their desire to continue to use the trail. Meewasin's current standard is to build trail width to a minimum of 3.0 metres. This trail study identified all the locations where the trail does not meet this minimum (more than 60% of the trail does not meet Meewasin's standard – Figure 4 – Width Assessment), as well as high usage areas of the trail where increased width will enhance safety.

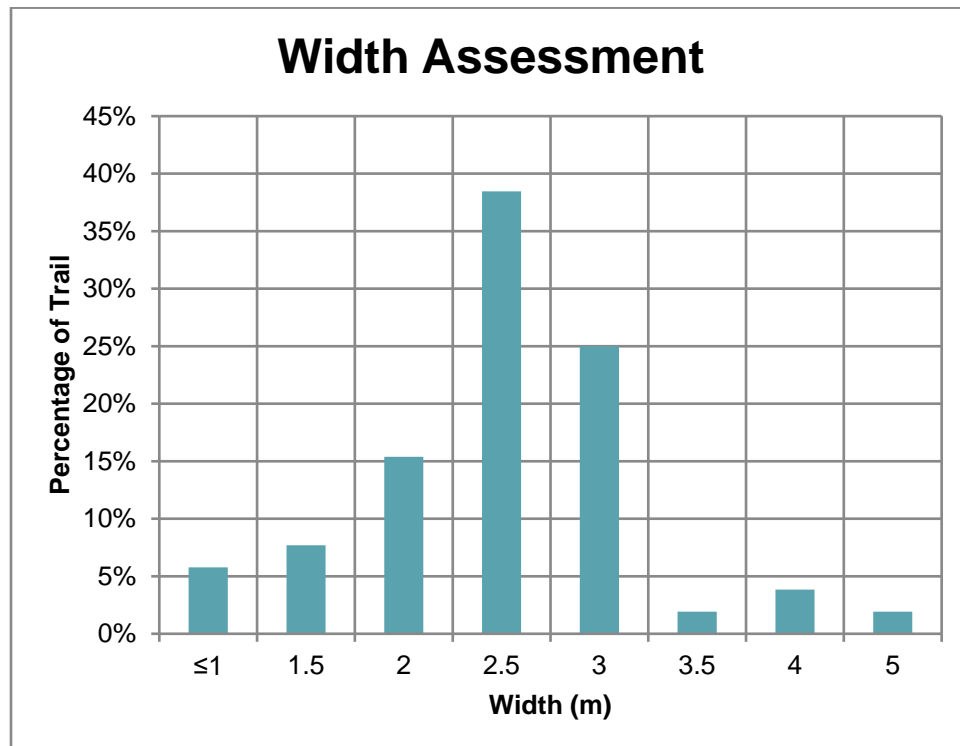


Figure 4 - Width Assessment
(44km of trail were assessed and close to 30km were found to be less than 3m.)

According to Alta Planning + Design (Alta), one of the industry specialists in pedestrian and cycling planning in North America, a shared-use path with bi-directional travel, experiencing over 200PPH (people per hour) is a candidate for widening and/or separation (Alta Planning + Design 2014, 17).

It is becoming more common to develop shared-use paths to a minimum of 3.0 metres. The American Association of State Highway Transportation Officials (AASHTO) and most state Departments of Transportation in the United States recommend a minimum trail width of 3.05 metres (10 feet - up from 8 feet) on shared-use paths. It is suggested that pathways with heavy volumes should range from 3.0 to 6.0 metres (12 feet to 14 feet) (Beneficial Designs, et al. 2001 September).

Meewasin's primary trail varies in width throughout the Valley ranging from just under 2.0 metres to as wide as 5.0 metres. In recent years Meewasin's standard construction practice is to build trail to a minimum of 3.0 metres wide.

Alta⁹ recommend the following guidelines for trail widths in Saskatoon based on capacity (Figure 5 – Trail Width):

Less than 200PPH – 3.0 metre shared-use path (no separation)

- “3.0 metre pathways are well-suited to outlying areas with lower active travel volumes. Trails of this nature do not effectively accommodate passing movements, side-by-side riding, or significant speed differentials between users (e.g. a pedestrian pushing a stroller versus a commuter cyclist)” (Alta Planning + Design 2014, 19); and
- “Volumes will first exceed 200PPH in the peak hours, and conflicts will be most acute in these time periods” (Alta Planning + Design 2014, 19)”.

200PPH–300PPH – 4.0 metre shared-use path (no separation)

- “This design provides an additional metre of operating space beyond a standard 3.0 metre shared-use path” (Alta Planning + Design 2014, 20); and
- “This can often be accomplished without substantial changes to path alignment and for relatively low cost” (Alta Planning + Design 2014, 20)”.

300PPH–600PPH – 6.0 metre shared-use path (no separation) or two separated paths (6.0 metre total)

- “Twin three-metre paths are one option, but the divider can also be shifted to allocate additional space to either path depending on the profile of path users (e.g. 2.0 metres + 4.0 metres = 6.0 metres)” (Alta Planning + Design 2014, 21); and
- A divider is recommended if the surface is the same.

Over 600PPH – Two, 4.5 metre separated paths

⁹ Meewasin engaged consultants, Alta Planning + Design, one of the industry specialists in pedestrian and cycling planning in North America, to assist with a thorough count and intercept survey of trail users. Meewasin's count and intercept survey was based on the National Bicycle and Pedestrian Documentation (NBPD) model. To read the completed reports see Appendices A, B, and C.

- Around the Mendel to Meewasin Riveworks (Weir) is the busiest section of trail and will exceed 600PPH in 2023 (Alta Planning + Design 2014);
- “Beyond 600PPH, a shared-use path is inadequate to address potential conflicts between active travelers” (Alta Planning + Design 2014, 23);
- The best method is a vertical barriers for separation (Alta Planning + Design 2014, 23); and
- Education, wayfinding, and signage are needed to ensure safety of trail users.

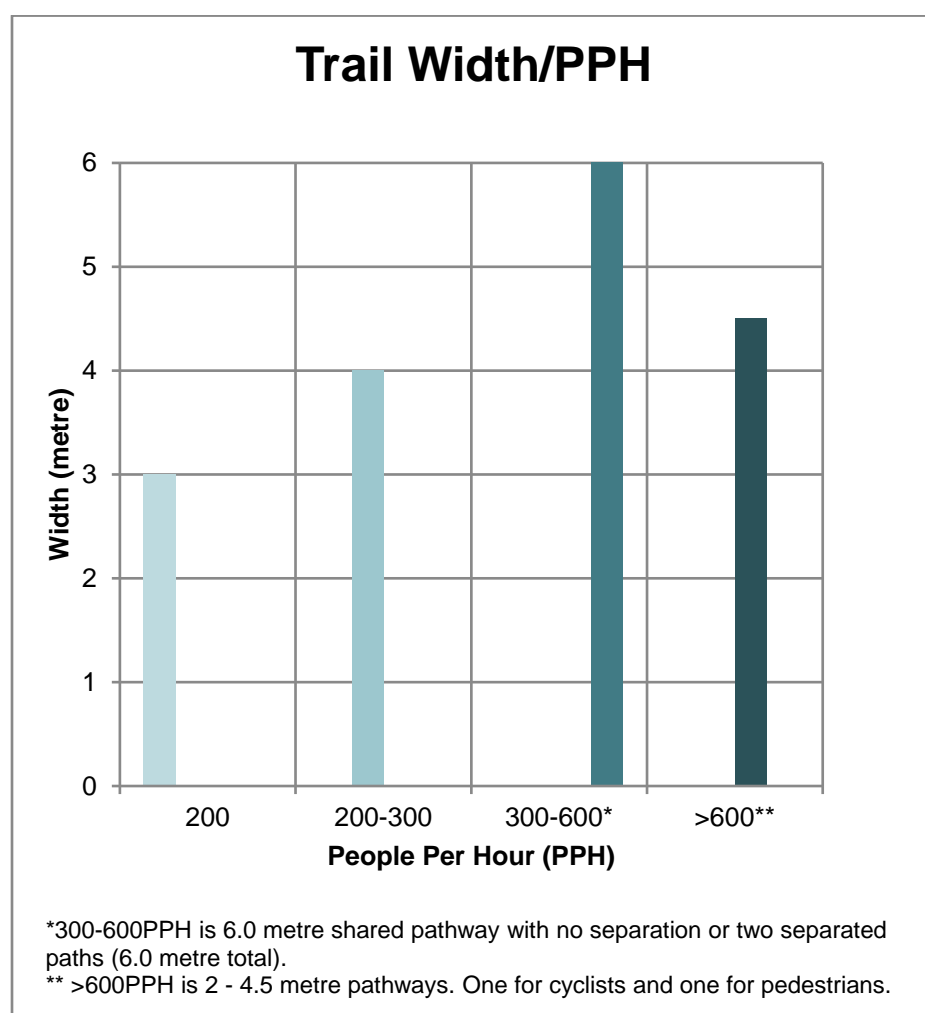


Figure 5 – Trail Width

Considering the recommendations above it was important to understand how to plan for the future. The trail counts and surveys assessed by Alta helped put perspective on the existing trail use and projected future use.¹⁰ Working with Alta, Meewasin can better project what to expect over the next 10, 20 and 30 years. Alta’s report indicates that several locations along the

¹⁰ With the help of volunteers and staff, 66 two-hour samples of active traffic volumes were accumulated, 11,597 trail users were counted and 875 were surveyed at 18 different locations throughout the Valley providing a snapshot of the overall trail. This data is essential in understanding the types of users (e.g. commuters/recreational users) to help inform the Meewasin Development Plan for immediate and future trail planning which will be balanced against trail safety.

Meewasin Trail will experience peak volumes of 400 users (200PPH) over time creating capacity problems and concerns during the evening peak hours and weekends (Alta Planning + Design 2014, 17).

- By 2023, four of the count locations are projected to exceed 200PPH in the evening peak period (4:00 pm – 6:00pm) and three on the weekend;
- By 2033, this will increase to seven locations exceeding 200PPH in the evening peak period and five on the weekend; and
- By 2043, ten of the twelve locations¹¹ surveyed in the evening peak period will have more than 200PPH and eight will exceed 200PPH on the weekend.

OBSTRUCTIONS

The obstructions identified are items such as tree roots in the trail, guy wires crossing the path, vegetation too close to the path or vegetation infringing on the path, both above and next to the trail. The standard practice in trail development is to keep plant material 2.0 metres back from the trail's edge with an overhead vegetation clearance of a minimum of 3.05 metres above the trail's surface.

Over 6,800 lineal metres of the Meewasin Trail were identified as having some type of safety concern. This is ongoing maintenance that must be attended to on an annual basis to ensure the safety of trail users.

One obstruction along the busiest section of trail (Mendel to Meewasin Riverworks Weir) has been identified by both Meewasin and the City of Saskatoon: the guy wires at Queen Street and Spadina Avenue East. This should be a high priority as this section of trail exceeds capacity for its current width (parts are as narrow as 1.7 metres) creating a major pinch point between two destination points, Meewasin Riverworks (Weir) and the Mendel Art Gallery (future home of the Saskatoon Children's Discovery Museum).

VISIBILITY, VIEWS, AND SIGHTLINES

This section addresses both safety and the trail user's experience. It is important that trail users know what is around the corner. It is also important to create an experience for the trail user by connecting them to the scenery around them. To achieve this, sightlines are opened up, blind corners are identified and views and vistas are created.

Blind spots are hazardous and create an uncomfortable experience for the trail user. Areas with high traffic and blind corners were identified as being a priority for widening or installation of 'Slow' markings on the pavement. Using upright signage and paint on the trail will warn users of a blind corner, junctions and narrowing trails.

¹¹ Not enough data was collected at all 20 sites to project future use. It is recommended more counts be conducted to understand long term trail use along the Meewasin Trail.

A view is the extended vision or prospect looking out from a site, which is often more beautiful than the site itself. "A sight or prospect, typically of attractive natural scenery, that can be taken in by the eye from a particular place: a fine view of the castle". (Dictionary n.d.)

Safety, of course, is a priority for Meewasin, but creating an experience is also crucial, which requires that views be protected. The Meewasin Valley has an abundance of natural beauty and distinctive sightlines. The scenery is implicit to the overall quality of the river valley and over time scenic vistas are often overgrown or not maintained. Identification, establishment, re-establishment and protection of these assets are an important component to the Meewasin Valley. During the trail assessment, it was apparent that many important views of the river were overgrown, limiting the user's connection to the river.

A policy should be in place to protect identified views, so they are maintained. This should be reviewed every five years to add new views or change parameters of existing views already in place.

Views that must be protected include: previously identified locations; views as laid out in the City Centre Plan; seating nodes that are shrouded by plant material; interpretive areas and lookouts; architectural features (e.g. the historic Delta Bessborough Hotel); and roads that are perpendicular to the river.

As part of regular maintenance, annual pruning, re-painting and signage replacement will be necessary to maintain the safety of the trail and create an exceptional experience for the trail user. A list of views and vistas to be protected can be found in Appendix E.

LIGHTING AND DARK SKY COMPLIANCE

Lighting is another common concern for trail users on the Meewasin Trail. Lighting is associated with the perception of safety, but it has not typically been Meewasin's practice to light the trail. Information about lighting was captured along the entire trail system to help assess and understand these concerns. The proximity to ambient light and whether or not the volume of trail users warrants more light to increase safety were taken into consideration. The trail was not assessed during the night and a future study should be considered.

It is important when lighting pathways to light effectively. The purpose is to promote safety, but lights that are too bright can be ineffective in pursuit of this goal. An overly lit area can interfere with the eyes' ability to adapt to darker areas. Lit pathways are considered movement predictors, where if only certain paths are lit, the paths of pedestrians can more easily be predicted (McCormick 2007). There is a delicate balance of too much light and not enough light. Light has the potential to curb bad behaviour as well as increase and encourage bad behaviour such as site tagging.

Lighting considerations at night are a concern for many users particularly during the darker months of winter. It is important to review trail use at night and develop a policy for trail lighting

to consider night time use. Some trail agencies have a policy to operate the trail from “dawn to dusk” to address the risk involved with allowing use during the darker hours of the day. Because the Meewasin Trail is an urban trail, restricting use will be hard to manage due to the size and the many access points. Lighting may increase night use of the trail but it needs to meet dark sky regulations (Appendix F). Meewasin currently has no regulations in place. This is an opportunity to develop lighting standards along the trail and for sensitive ecosystems adjacent to or intersecting the trail. Research is ongoing in an effort to find suitable solar lighting fixtures for the trail.

It is important to understand the capital costs and operating impacts as they will be significant when considering the entire trail. Lighting may need to be considered in the future, if the trail continues to be active during the darker hours of the day.

GRAFFITI AND VANDALISM

Graffiti and vandalism are expensive to repair and considered crimes under the criminal code of Canada under Section 430(1). Every dollar spent repairing broken pieces of site furniture or removing graffiti is funding not used to build better trails and programs. The best defence against graffiti and vandalism is to repair the site immediately. If it is not addressed immediately, it can send a message that this is an area that is uncared for, which is thought to lead to more vandalism (Saskatoon Police Services 2014).

"Citizens establish territoriality over crime by being present in an area and making their presence known. Crime takes over an area when it gains territoriality through graffiti or other means."

- Joel McCormick (McCormick 2007)

In recent years, the City of Saskatoon launched an anti-graffiti unit through Saskatoon Police Services to curb bad behaviour. This is an incredible responsibility and undertaking for city staff to ensure vandalism is removed throughout the entire city. The Meewasin Valley covers a huge territory and vandalism (e.g. tagged benches) often goes unreported, leaving the impression no one cares about the Valley.

City staff cannot tackle this massive endeavour alone, and it is recommended Meewasin consider re-instating the Valley Steward positions or Trail Ambassadors to inspect and report on sites weekly. This recommendation has an impact on operating for Meewasin as these positions are not currently funded.

To maximize the use of these positions, the Valley Stewards will not only report on vandalism and graffiti but also be able to attend to necessary improvements, enforcements and provide information to trail users throughout the year.

Recommendations for Valley Stewards/Trail Ambassadors:

1. Inspect trail weekly to help keep the trail tidy;

2. Standardized reporting method (paper or smart phone application);
3. Provide information as to which agency is responsible for what;
4. Encourage the public to report and provide information. This should be a dedicated email, not the general meewasin@meewasin.com;
5. Once reported, remove graffiti promptly and repair broken site furnishings within a reasonable time frame;
6. Develop community education programs and media blitz; and
7. Report and address unwanted or illegal behavior.

Nothing is vandal-proof, but streamlining a process to report and fix issues will assist in keeping the Valley and surrounding area in good working order and encourage legitimate use.

INTERSECTIONS AND CROSSINGS

The City of Saskatoon's policy for pedestrian crosswalks is to install the white rectangular sign at all crosswalks on both sides of the road facing traffic in both directions (Image 7). The yellow sign is used when early warning is needed at busy intersections (Image 8). The City of Saskatoon's crosswalk road marking is the basic (standard) crosswalk for most intersections in the city. This is defined by two painted lines that are perpendicular to traffic and signed with a standard white crosswalk sign (City of Saskatoon 2004).

The trail study revealed locations where signs are hidden by plant material; they do not follow the City of Saskatoon's policy; or the signs do not exist. It is important to ensure crosswalk signs are clearly visible because more than 50% of trail users arrive at the trail by walking (e.g. crossing a street) and over 75% arrive by active means (e.g. biking and walking) (Alta Planning + Design 2014).



Image 8 – White Rectangular Crosswalk Sign



Image 9 – Yellow Early Warning Crosswalk Sign

Cities across North America are launching major campaigns to reduce accidents between pedestrians and cyclists and motorized vehicles. These accidents are typically concentrated in heavy traffic areas. Examples of effective campaigns creating awareness around un-signalized marked crosswalks include, Best Foot Forward (Bike/Walk Central Florida 2013), Watch For Me NC (Watch for Me North Carolina n.d.), and Atlanta PEDS (PEDS n.d.). Bike/Walk Central Florida launched the “Best Foot Forward” initiative in 2012 with the goal of increasing yield rates to 70% in crosswalks and reducing pedestrian injuries/deaths by 50% in five years (Bike/Walk Central Florida 2013, 5).

This type of educational campaign helps encourage active living by making the pedestrian and cyclist feel safer knowing that enforcement will happen if motorists do not abide by the law. The handbook for Saskatchewan Government Insurance (SGI) states motorists “must yield the right of way to any pedestrians who are crossing the street” (Saskatchewan Government Insurance 2015, 45). Without enforcement, this does not always happen.

Recommendations for Intersections and Crossings:

1. Complete a crosswalk study at trail entrances to address conflict and provide necessary recommendations;
2. Complete regular inspections. These inspections will alert maintenance crews to missing signs or needed maintenance for crosswalk signs;
3. Install crosswalk signs at all intersections entering the trail;
4. Make sure all crosswalks meet the City of Saskatoon’s policy;
5. Clear plant material a minimum of 2.0 metres back from signs;
6. Develop an educational or awareness campaign in conjunction with Saskatoon Police Services to increase the safety of cyclists and pedestrians; and
7. Use the zebra cross walk at all entrances to the trail (Image 9).



Image 10 – Zebra Crosswalks

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

The trail has not undergone a thorough CPTED review to date. Below is a summary of CPTED strategies with respect to the Meewasin Trail.

- **Territoriality** – The trail is busy with legitimate users who have adopted ownership of the trail. Organizations such as the Saskatoon Road Runners Association have dedicated time and money to creating a space that everyone can enjoy by funding seating nodes and drinking fountains. Individuals who donate to seating nodes throughout the entire trail tend to keep a watchful eye over the trail.
- **Access Control** – Landscaping elements such as plant material and signage are used at entrance points to the trail to define the public space. These landscaping features require continual maintenance to make sure entrances do not become dangerous.
- **Image** – It is important to maintain the trail image. This relates mainly to garbage. The annual Meewasin Affinity Clean-Up Campaign brings people from all over the city to clean the area surrounding the Meewasin Valley. The trail condition is also important when considering image. If the trail is decrepit and falling apart, trail users may assume it is not cared for. This is a similar sentiment when graffiti and vandalism are visible and not removed or repaired in a timely fashion.
- **Natural Surveillance** – The trail is popular and well used. Creating an image of public space that is inviting, feels safe, and encourages use is important. The more users on the trail, the more natural surveillance exists.
- **Activity Support** – General use of the trail will displace unwanted activity. This may also have a negative impact with more users. If the trail becomes overcrowded with multiple user groups some users may stop visiting the trail due to congestion.
- **Movement Predictors** – The trail is a defined path, which is both good and bad. Users know where they are going easily, yet it can also be a way to predict where users will be.
- **Land Use** – Connecting the trail to shopping districts, neighbourhoods and cultural and ecological destinations is important. This in turn supports the various user groups in getting them to their destinations.
- **Connectivity** – Using a formal platform to educate the public on such things as media and educational institutions creates a connection between the various types of trail users. This relationship helps trail users understand the different uses and how to be safe on the trail.
- **Capacity** – Capacity can be discussed in relation to the tipping point. If the trail is overcrowded and uncomfortable trail users will find other places to experience nature or exercise. There needs to be a balance between building trails wide enough to accommodate the volume of users now and into the future.

TRAIL COUNTS AND SURVEY¹²

With the help of volunteers and staff, 66 two-hour samples of active traffic volumes were accumulated, 11,597 trail users were counted and 875 were surveyed at 18 different locations (Map 2: Count Locations) throughout the Valley providing a snapshot of the overall trail use (Map 3 :Average Meewasin Trail Use). This data is essential to understand the user types, frequency and time of use (e.g. commuters versus recreational users) to help inform the Meewasin Development Plan for immediate and future trail planning which will be balanced against trail safety.

¹² To read Alta's complete reports see the appendices.

The general overview of the Meewasin Trail shows volumes are relatively balanced on both the east and west banks with the central portion of the trail (Downtown and the University) experiencing the highest average volumes overall. The majority of cycling traffic is in the north and near the University, while the south and central portions are more heavily used by pedestrians. The results from the sample data collected suggest that active volumes on the trail can be expected to double roughly over the next 30 years (Alta Planning + Design 2014, 17).

A summary of Alta's findings:

- The evening peak time (4:00 PM to 6:00 PM) is the busiest time on the trail (Alta Planning + Design 2014, 10), which can possibly be attributed to users having more leisure time in the afternoon than the morning (Map 4: Meewasin Trail Use – Weekday Evening Peak). It is suggested weather patterns may also play a role in the evening being busier than the morning;
- “57% of human visitors were pedestrians and 43% were cyclists” (Alta Planning + Design 2014, 2);
- Dogs accounted for 8% of all trail traffic counted (Alta Planning + Design 2014, 8);
- Volume at a few locations during the evening peak time is nearing capacity. This is the ratio of the volume of trail users to the width of the trail;
- By 2043, a number of locations are expected to have almost 1,000 users during the evening peak time (4:00 pm – 6:00 pm). Planning the infrastructure around this growth will continue to make the Meewasin Trail a destination for locals and visitors to Saskatoon (Map 5: Future Trail Use Projections) (Alta Planning + Design 2014, 17);
- At this time, the focal point of activity is the central portion of the trail from Sutherland Beach to Victoria Park (on the east and west banks) (Alta Planning + Design 2014, 12);
- Trail users are frequent users with roughly 63% using the trail 3 or more times a week. Almost 90% of trail users visit the trail on a weekly basis (Alta Planning + Design 2014, 15);
- Trail widening, separating, expanding, improving maintenance, better bathrooms and more drinking fountains were all cited, almost equally, as things that should be addressed on the trail (Alta Planning + Design 2014, 26);
- Nearly 100% rated Meewasin as “important” or “very important” (Alta Planning + Design 2014, 27);
- Both surveys saw roughly 95% of trail users support increased trail funding (Alta Planning + Design 2014, 28);
- People feel safe on the trail but continue to raise concerns for lighting, night safety and collisions with cyclists (Alta Planning + Design 2014, 22-23); and
- For the most part, trail users’ experiences are good. Any less than satisfactory answers recorded were related to bathrooms (e.g. cleanliness, quality and quantity) (Alta Planning + Design 2014, 24-25).

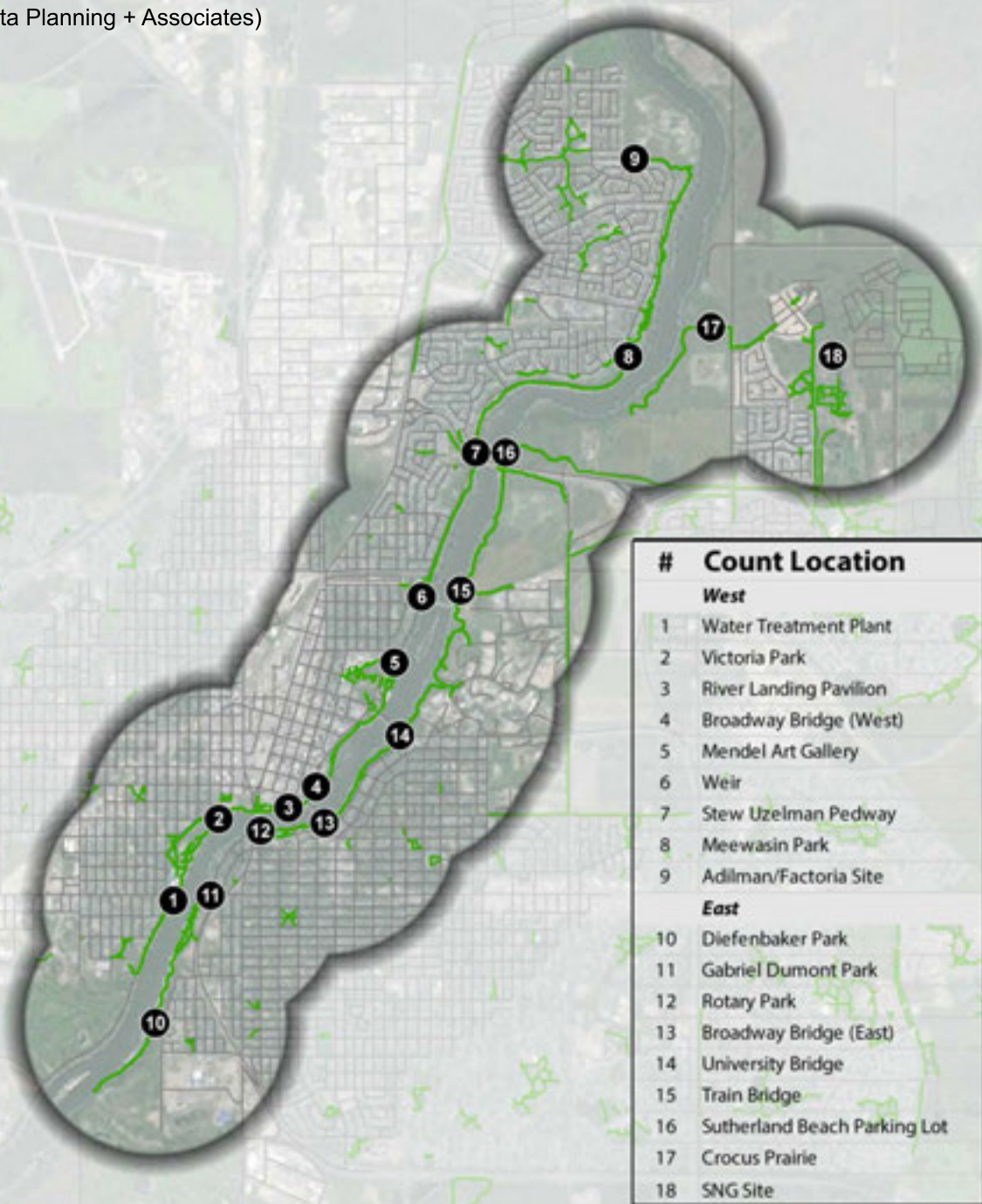
In 2014, the Mendel Art Gallery area was the busiest location during both time periods (morning and evening). This area is expected to see over 450 users per hour by 2043 during the evening hours (Alta Planning + Design 2014, 17). Conducting these trail counts and intercept surveys has helped identify a number of pinch points along the trail. Locations that

will continue to see increased uses are Mendel Art Gallery, Broadway Bridge (West) and the Stew Uzelman Pedway (Circle Drive North Bridge) (Alta Planning + Design 2014, 17). These trails sections need to be monitored and given priority upgrades by widening and/or separating .

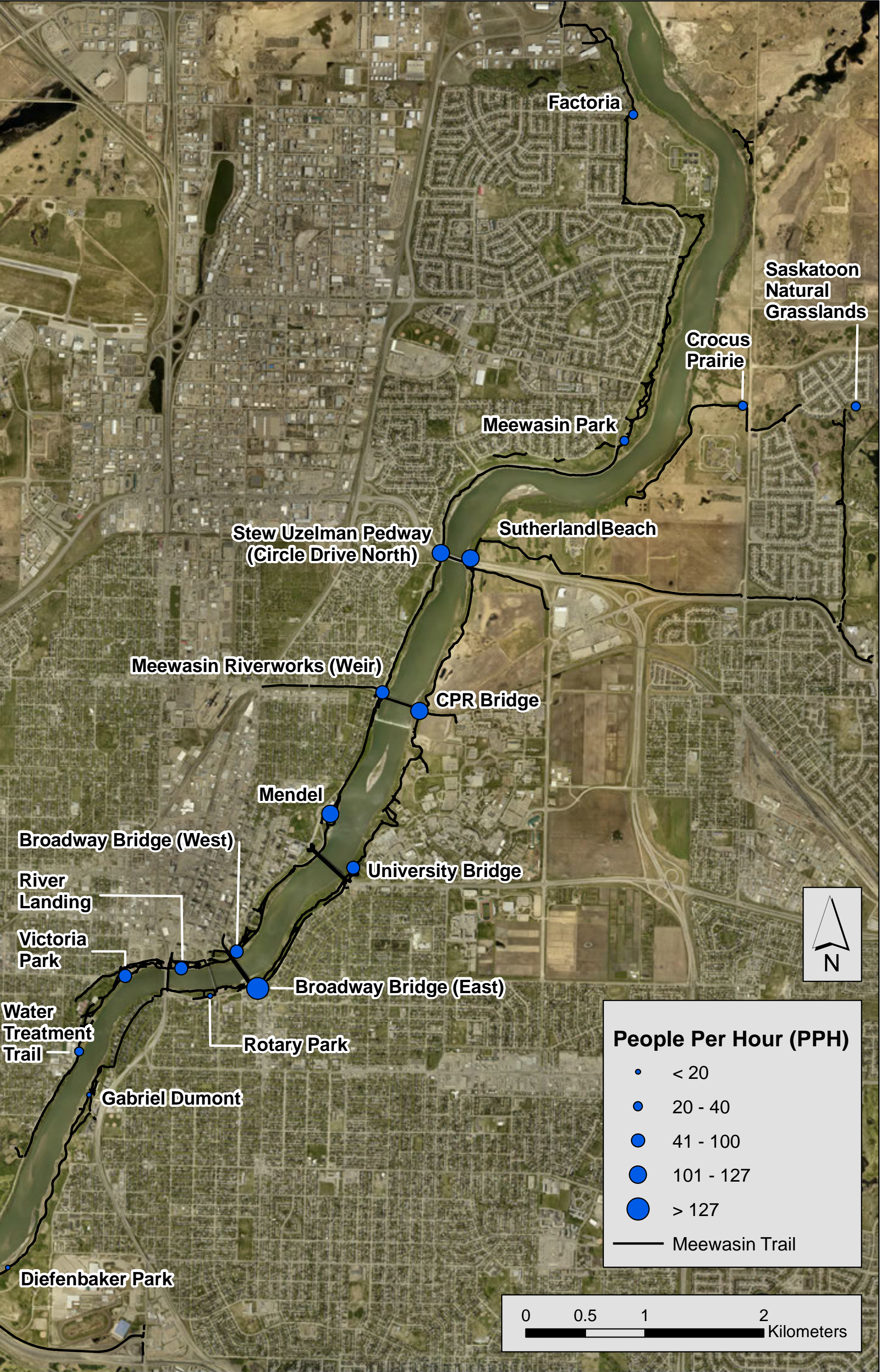
The population growth in Saskatoon has a direct impact on trail infrastructure that requires addressing to keep trail users safe and continuing to use the trail.

Map 2: Count Locations

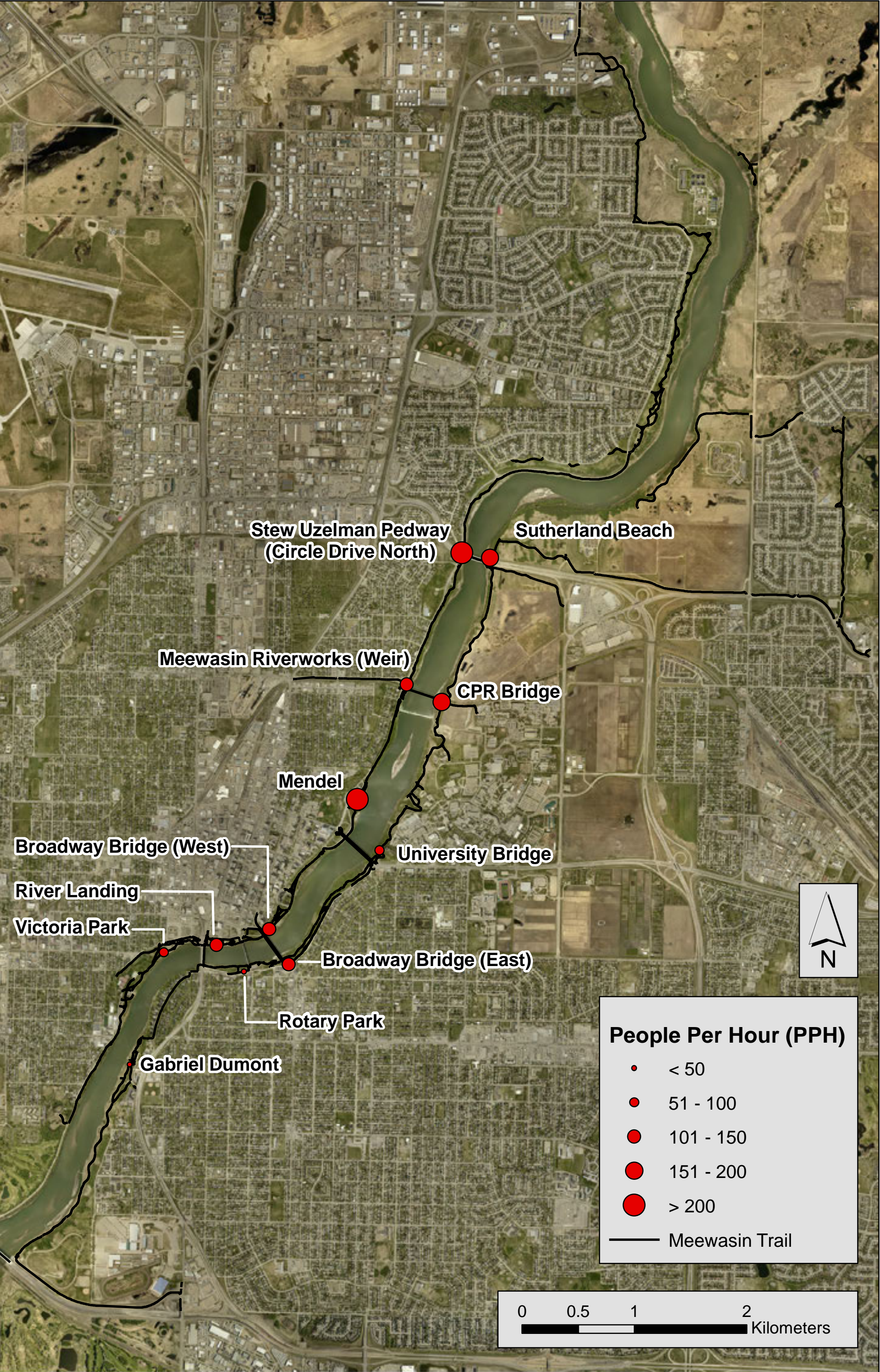
(Alta Planning + Associates)



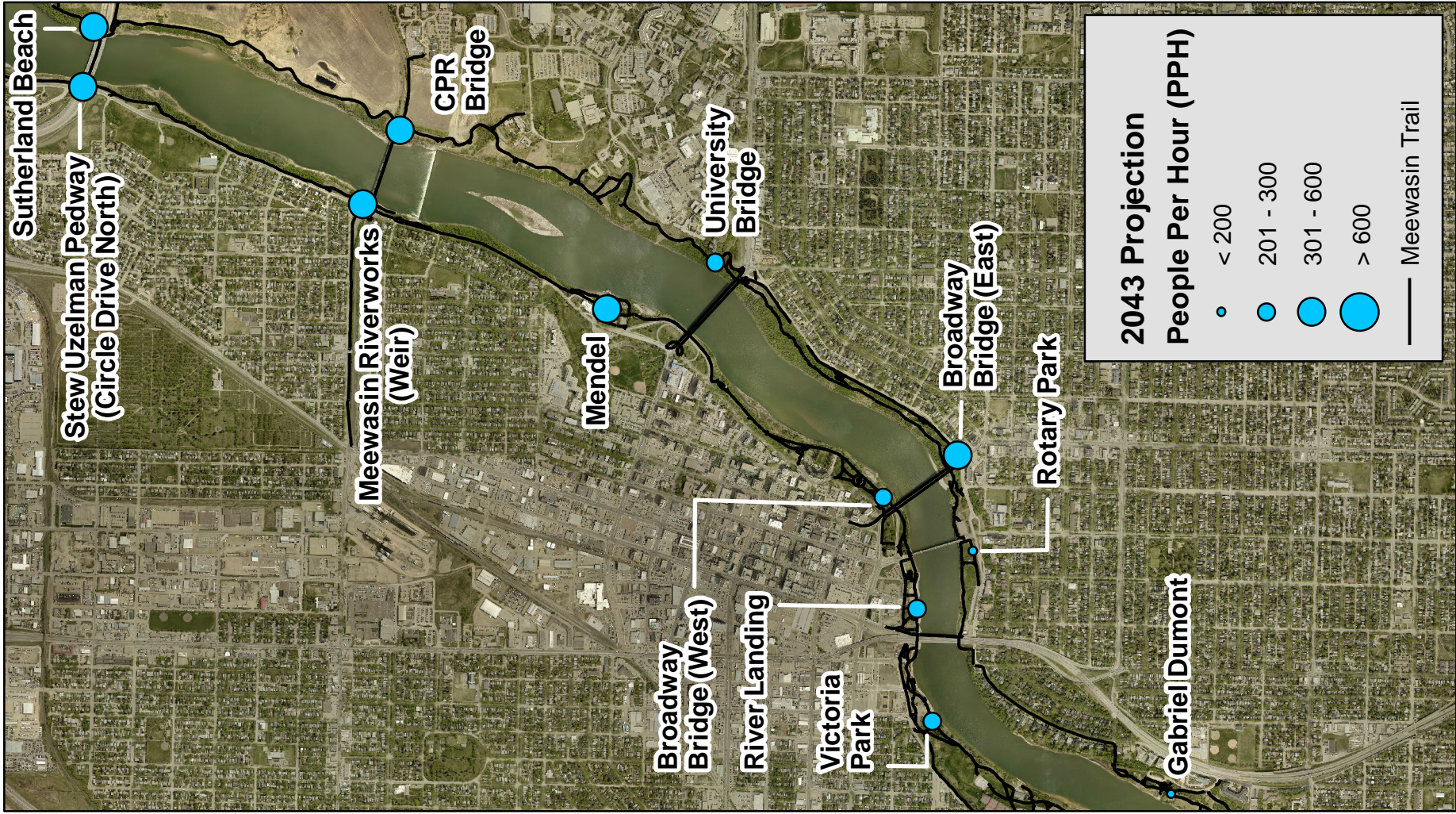
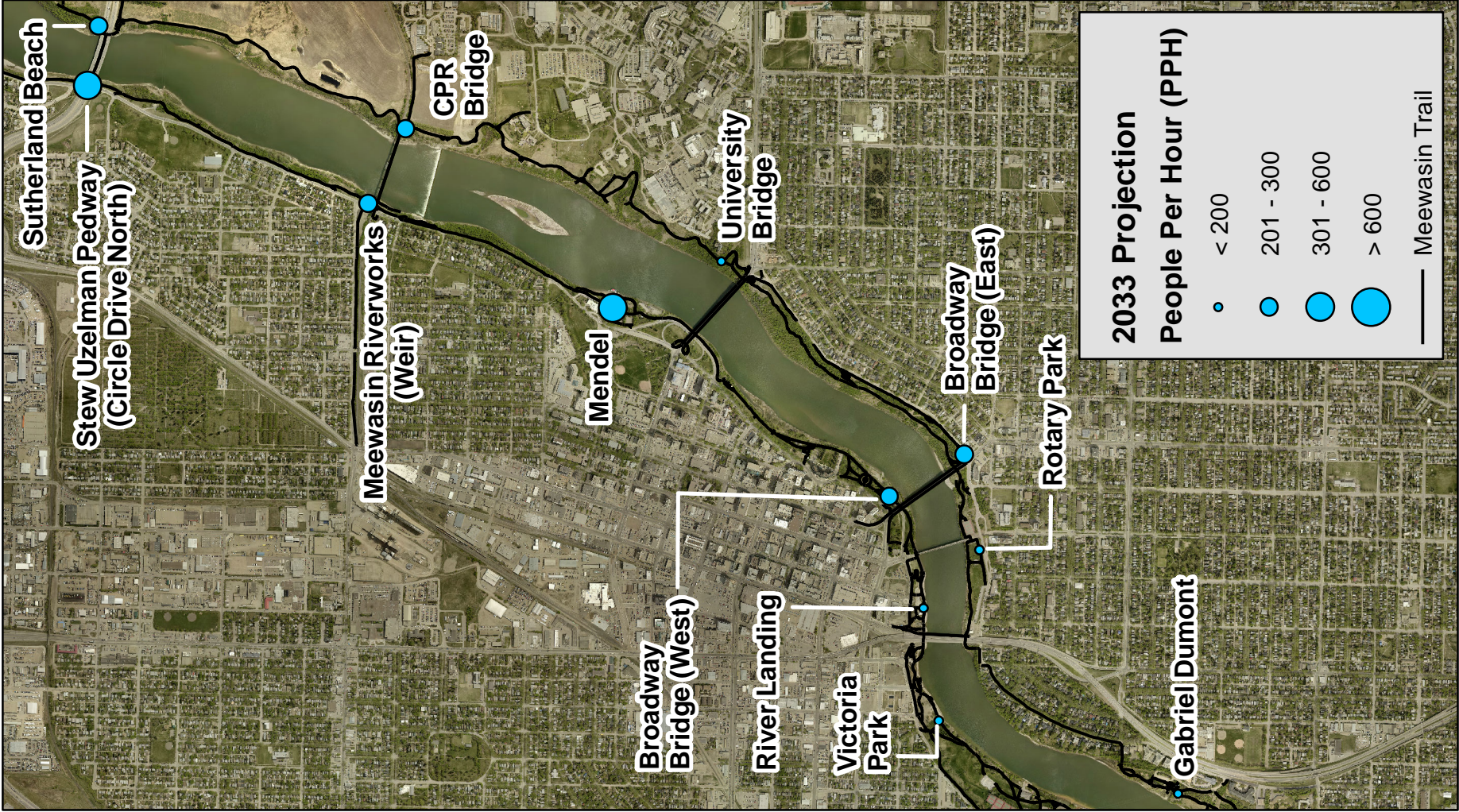
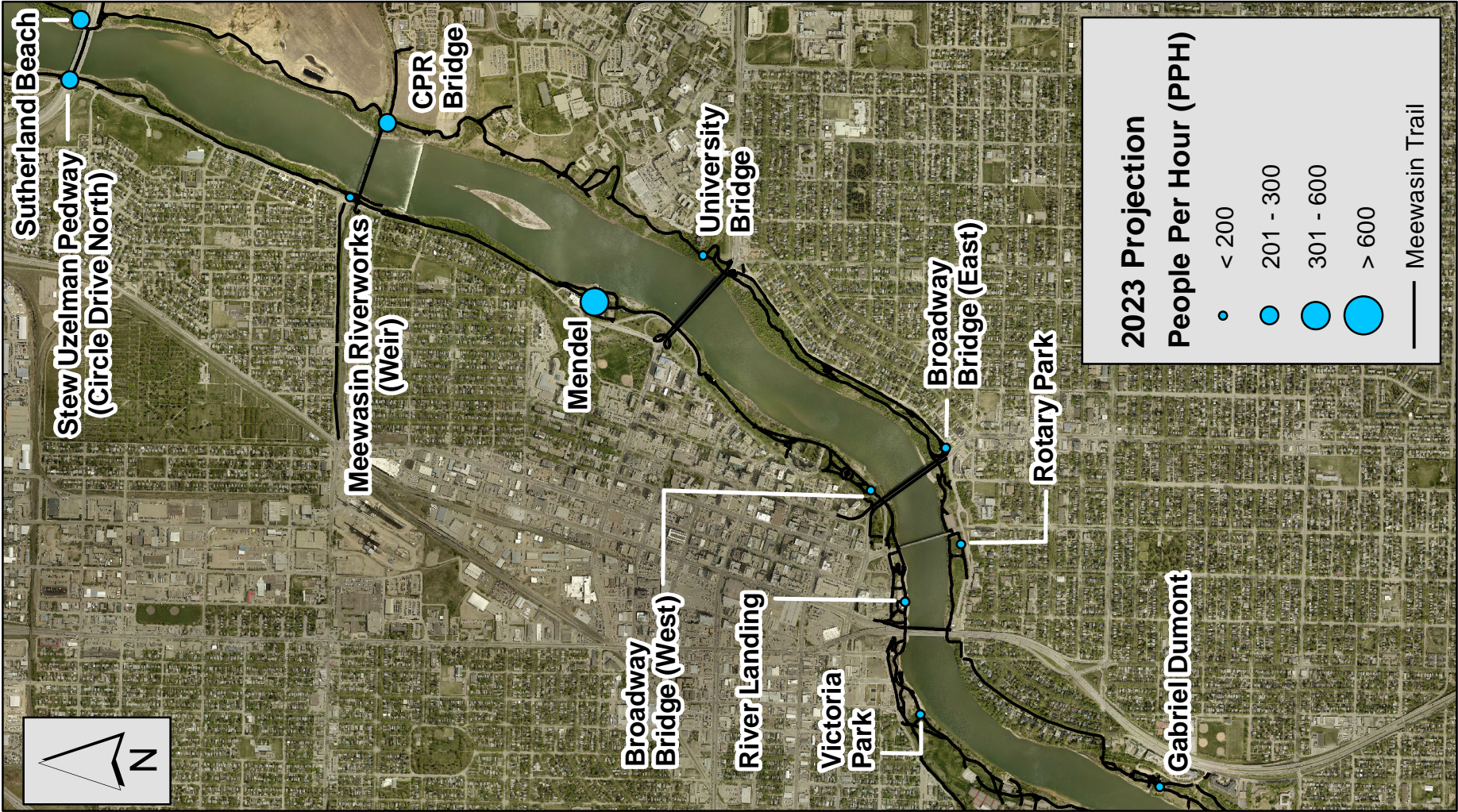
Map 3: Average Meewasin Trail Use



Map 4: Meewasin Trail Use - Weekday Evening Peak



Map 5: Future Trail Use Projections



CRITERIA FOR ASSESSMENT

The following is based on the trail data collected which defined sections of trail in need of repair (Figure 6). The needs repair assessment was based on a number of parameters such as safety (cracks, tripping, holes), asphalt condition (raveling, pitting, block cracking), pruning needs, blind corners, low spots (previously flooded due to high water), drainage concerns, and trails narrowing due to vegetation overgrowth (Figure 7).

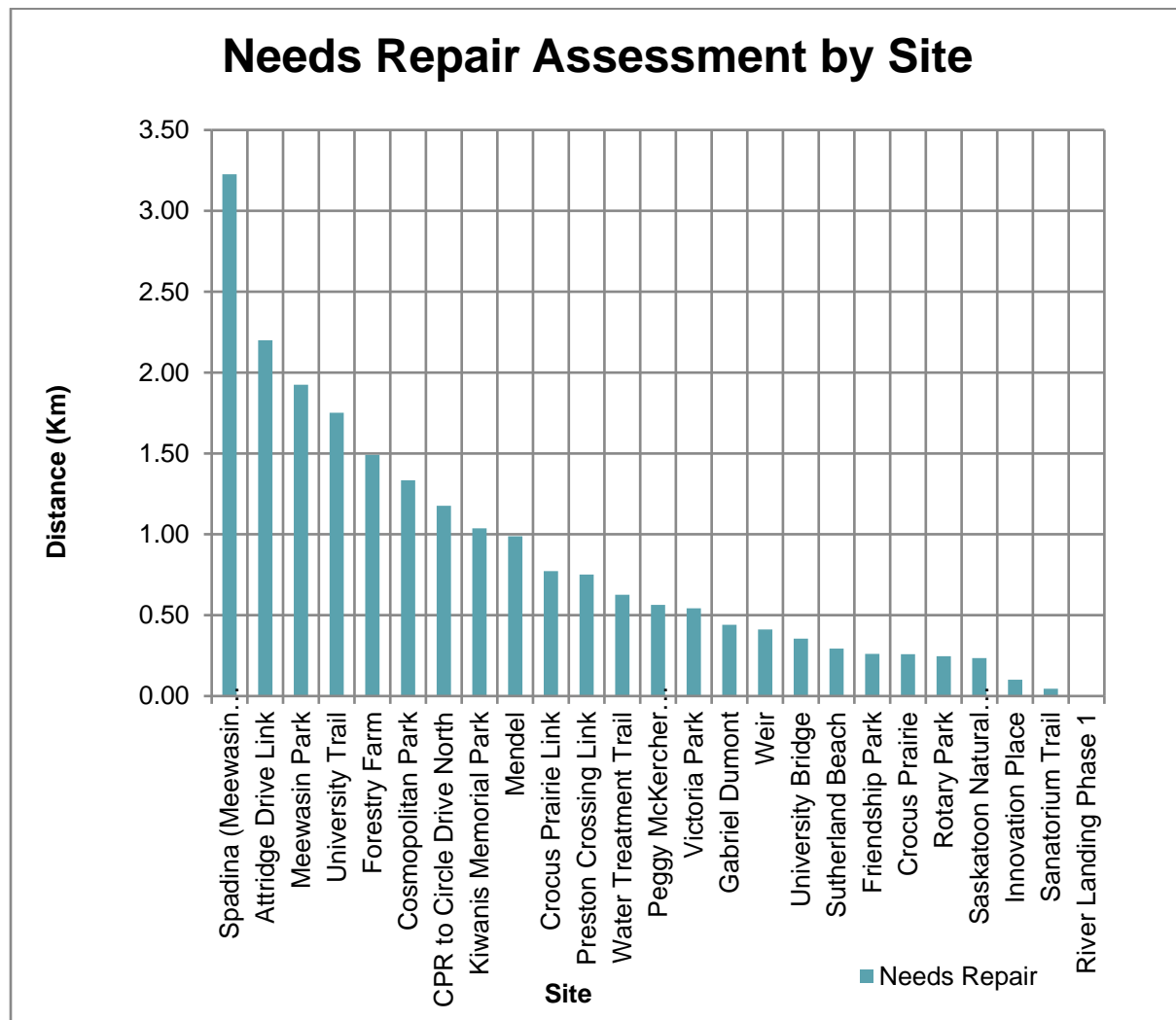


Figure 6 – Needs Repair By Site

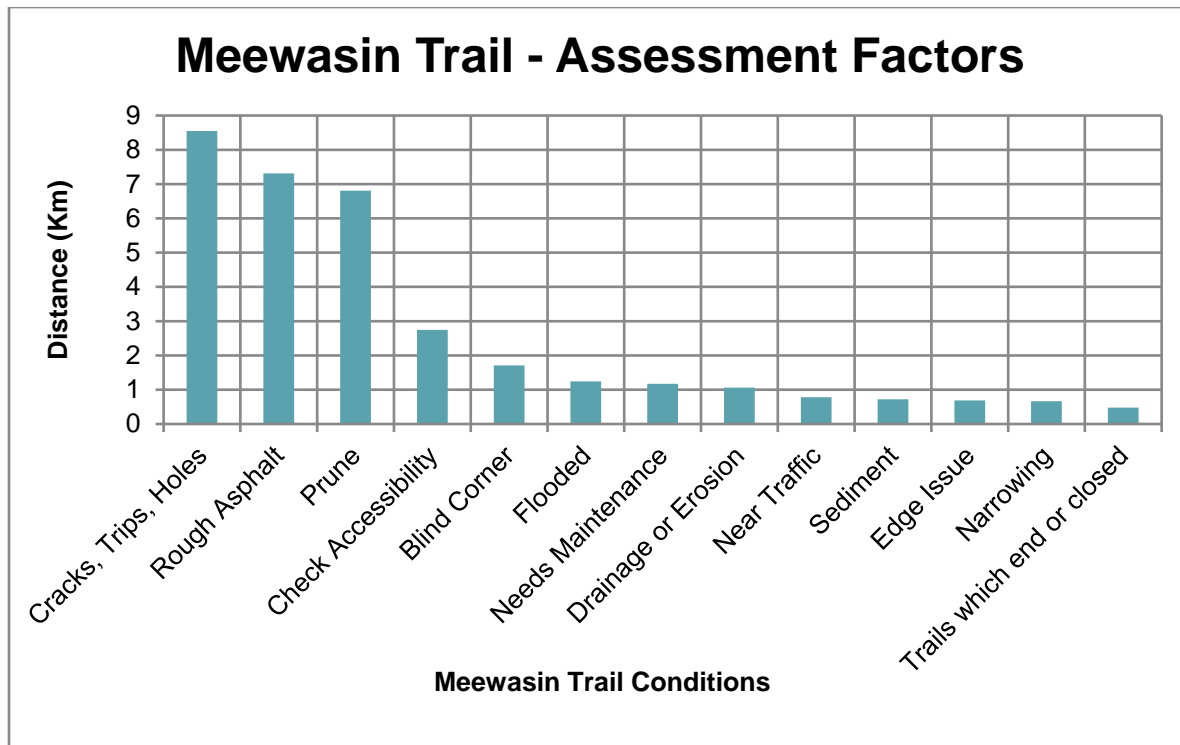


Figure 7 – Meewasin Trail - Assessment Factors

Based on the findings from the Trail Study, approximately 45% of the trail is in need of some type of repair. The most common problems are cracks, tripping hazards, holes, asphalt condition, and pruning. This review allowed Meewasin to be critical in its assessment and determine at what point is it important to switch from the current band-aid type repair to a complete replacement strategy.

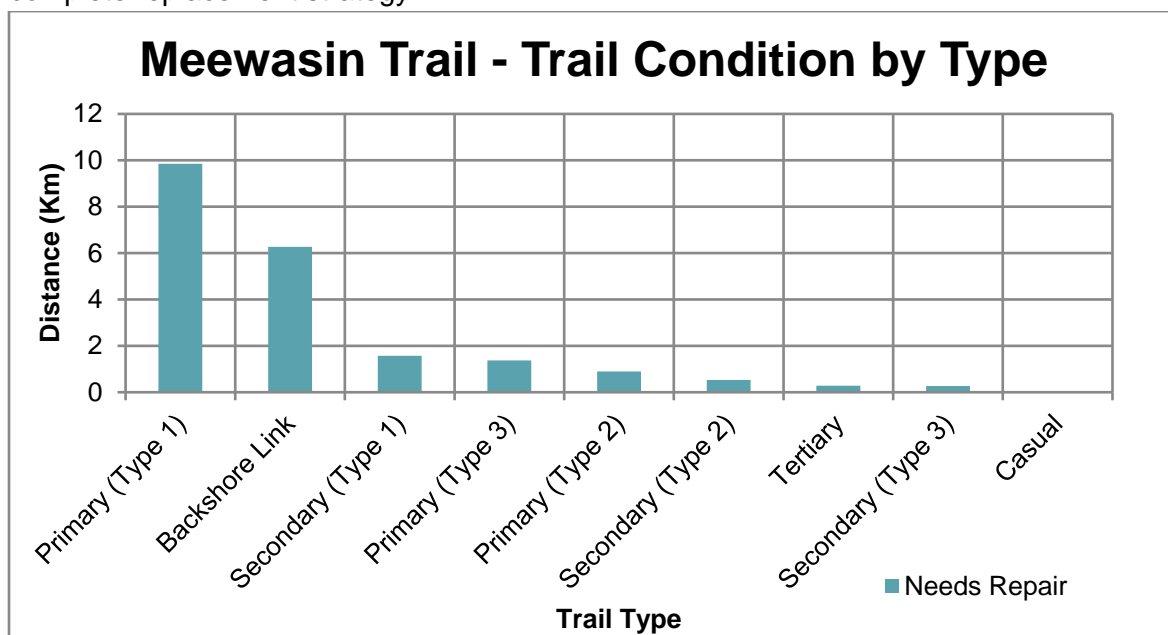


Figure 8 – Meewasin Trail - Trail Condition By Type – See [Trail Types](#) for definitions.

The majority of concerns were found on the Primary (Type 1) and Backshore Link sections of the trail (Figure 8 – Meewasin Trail - Trail Condition By Type).

The site with the most work needed, based on the trail study findings, is the Mendel. This was determined by prioritizing each assessment factor shown in Figure 7 – Meewasin Trail – Assessment Factors. Trail conditions were rated on a scale from 1-5 based on the study parameters with 5 being the most critical factor. Other smaller factors also played a part in determining which section of trail is in need of the most work. As a result, a scoring system was developed (See Figure 9 – Meewasin Trail & Existing Infrastructure Conditions (2014)):

- Accessibility (5)
- Rough or Old Asphalt (4)
- Cracks, Trips or Holes (4)
- Blind Corner (4)
- Width (4)
- Narrowing (3)
- Pruning Required (3)
- Edge Issue (3)
- Crosswalk Signs (3)
- Needs Maintenance (3)
- Drainage or Erosion (2)
- Sediment or Flooding (2)
- Near Roadways (1)
- Trail which ends or is closed (1)

Capacity was rated on a similar scale from 1-5. Sites with more than 200 people per hour during the evening hours were given the highest rating (e.g. 5). Capacity directly relates to conflict and user safety. See below for scoring:

- >200 PPH (5)
- 150–199 PPH (4)
- 100–149 PPH (3)
- 50–99 PPH (2)
- 0–49 PPH (1)

Based on this system and criteria a priority list was developed where the highest score equals the greatest priority (Figure 10 – Priority List for Meewasin Trail). For an overview of each site see Appedix L - Supplementary Package – Site Overview.

Figure 9 - Meewasin Trail Existing Infrastructure Conditions (2014)

(Measurement in metres)

| Site Name | Year Built | AF* | Priority | Width/Capacity (4) | AF* | PM Peak | AF* | Blind Corner | AF* | PM Peak |
|--|-----------------|-----|----------|--------------------|-----|---------|-----|--------------|-----|---------|
| Mendel | 1986-1989 | 5 | 51 | ≤ 2.5 | 4 | 236 | 5 | × | 4 | × |
| Cosmopolitan Park | 1993-1994 | 4 | 48 | 2.5 | 4 | 147.5 | 3 | × | 4 | × |
| Kiwanis Memorial Park | 1982 | 5 | 45 | 4.0 | | 100 | 3 | × | 4 | × |
| Spadina (Meewasin Shelter to Weir) | 1982 | 5 | 41 | 2.5 | 4 | 204.5 | 5 | × | 4 | × |
| University Trail | 1981-1984 | 5 | 40 | 2.5 | 4 | 172 | 4 | × | 4 | × |
| Rotary Park | 1996-1997 | 3 | 38 | 2.5 | 4 | 45.5 | 1 | × | 4 | |
| Meewasin Park | 1981 | 5 | 38 | 2.5 | 4 | | | × | 4 | |
| CPR to Circle Drive North | 1995-1996 | 3 | 37 | 2.5 | 4 | * | | × | 4 | × |
| Meewasin Riverworks (Weir) | 1982 / 2003 | 5 | 37 | ≤ 3.0 | 4 | 236 | 5 | | | |
| Victoria Park | 1985-1986 /2010 | 5 | 36 | 2.5 | 4 | 98 | 2 | × | 4 | × |
| Attridge Drive Link | 1995-1996 | 3 | 31 | ≤ 2.0 / 2.7 | 4 | * | | × | 4 | |
| Gabriel Dumont | 1998 | 3 | 30 | 3.0 | | 34.5 | 1 | | | |
| University Bridge | 1981-1984 | 5 | 31 | ≤ 1.5 / 3.0 | 4 | 236 | 5 | | | |
| Forestry Farm Link | 2000-2001 | 3 | 29 | 3.0 | | * | | × | 4 | × |
| Silverspring Park (Forestry Farm Link) | 2002 | | 29 | 2.0 | 4 | * | | × | 4 | × |
| Sutherland Beach | 2003 | 2 | 26 | 3.0 | | 173.5 | 5 | × | 4 | |
| Crocus Prairie | 2009 | 1 | 23 | 3.0 | | | | × | 4 | |
| Saskatoon Natural Grasslands | 2003 | 2 | 19 | 2.5 | 4 | | | × | 4 | |
| Peggy McKercher Conservation Area | 2010-2011 | 1 | 16 | 2.0 | 4 | * | | | | |
| Sanatorium Trail | 2003 | 2 | 14 | 3.0 | | | | | | |
| Preston Crossing Link | 1998 | | 13 | 2.5 | 4 | * | | | | |
| Crocus Prairie Link | 2009 | 1 | 13 | 3.0 | | * | | | | |
| Innovation Place | 2001 | | 7 | 2.5 | 4 | * | | | | |
| River Landing Phase 1 | 2008 | 2 | 6 | ≥ 4.5 | | 107 | 4 | | | |
| River Landing Phase 2 | 2010 | 1 | 5 | ≥ 4.5 | | 107 | 4 | | | |
| Diefenbaker Park | 2013 | 1 | 4 | 3 | | | | | | |
| Friendship Park | 2003 | 2 | 2 | - | | * | | | | |
| Rotary Park Peace Plaza | 2006 | 2 | 2 | - | | * | | | | |
| Factoria Link | 2011 | 1 | 1 | 3.0 | | | | | | |
| Silverwood Park | 2012 | 1 | 1 | 3.0 | | | | | | |
| Warman Road Trail | 2010 | 1 | 1 | 3.0 | | * | | | | |

*Assessment Factor (AF) - Trail conditions were rated on a scale from 1-5 based on assessment factors (see Meewasin Trail Study - Criteria for Assessment) with 5 being the most critical factor.

PM Peak is 4:00 pm to 6:00 pm daily.

Figure 9 - Meewasin Trail Existing Infrastructure Conditions (2014)

(Measurement in metres)

| Site Name | AF* | Blind Corner | AF* | Crack Trip Hole | AF* | Prune | AF* | Crosswalk | AF* | Check Accessibility |
|--|-----|--------------|-----|-----------------|-----|-------|-----|-----------|-----|---------------------|
| Mendel | 4 | x | 3 | x | 4 | x | 3 | x | 3 | x |
| Cosmopolitan Park | 4 | x | 3 | x | 4 | x | 3 | | | x |
| Kiwanis Memorial Park | 4 | x | 3 | x | 4 | x | 3 | | | x |
| Spadina (Meewasin Shelter to Weir) | 4 | x | 3 | x | 4 | x | 3 | | | x |
| University Trail | 4 | | | | | x | 3 | | | x |
| Rotary Park | | x | 3 | x | 4 | x | 3 | | | x |
| Meewasin Park | 4 | x | 3 | x | 4 | x | 3 | | | x |
| CPR to Circle Drive North | 4 | | 3 | x | 4 | x | 3 | | | x |
| Meewasin Riverworks (Weir) | 4 | | 3 | x | 4 | x | 3 | | | |
| Victoria Park | 4 | x | 3 | x | 4 | x | 3 | | | x |
| Attridge Drive Link | | | | x | 4 | x | 3 | x | 3 | |
| Gabriel Dumont | | | | x | 4 | x | 3 | | | x |
| University Bridge | | x | 4 | x | 3 | | | x | 3 | |
| Forestry Farm Link | | | | x | 4 | x | 3 | x | 3 | x |
| Silverspring Park (Forestry Farm Link) | 4 | | | x | 4 | x | 3 | x | 3 | |
| Sutherland Beach | | x | 3 | x | 4 | x | 3 | | | |
| Crocus Prairie | | | | x | 4 | x | 3 | | | x |
| Saskatoon Natural Grasslands | | | | | | x | 3 | | | |
| Peggy McKercher Conservation Area | | x | 4 | x | 3 | | | | | |
| Sanatorium Trail | | | | x | 4 | x | 3 | x | 3 | |
| Preston Crossing Link | | | | x | 4 | | | | | |
| Crocus Prairie Link | | | | x | 3 | x | 3 | x | 3 | |
| Innovation Place | | | | x | 3 | | | | | |
| River Landing Phase 1 | | | | | | | | | | |
| River Landing Phase 2 | | | | | | | | | | |
| Diefenbaker Park | | | | | | | | | | |
| Friendship Park | | | | | | | | | | |
| Rotary Park Peace Plaza | | | | | | | | | | |
| Factoria Link | | | | | | | | | | |
| Silverwood Park | | | | | | | | | | |
| Warman Road Trail | | | | | | | | | | |

*Assessment Factor (AF) - Trail conditions were rated on a scale from 1-5 based on assessment factors (see Meewasin Trail Study - Criteria for Assessment) with 5 being the most critical factor.

PM Peak is 4:00 pm to 6:00 pm daily.

Figure 9 - Meewasin Trail Existing Infrastructure Conditions (2014)

(Measurement in metres)

| Site Name | AF* | Narrowing | AF* | Drainage / Erosion | AF* | Needs Maintenance | AF* | Road Entrance | AF* |
|--|-----|-----------|-----|--------------------|-----|-------------------|-----|---------------|-----|
| Mendel | 5 | x | 3 | x | 2 | x | 3 | x | 1 |
| Cosmopolitan Park | 5 | x | 3 | x | 2 | x | 3 | x | 1 |
| Kiwanis Memorial Park | 5 | x | 3 | x | 2 | x | 3 | x | 1 |
| Spadina (Meewasin Shelter to Weir) | 5 | | | | | | | x | 1 |
| University Trail | 5 | x | 3 | x | 2 | x | 3 | x | 1 |
| Rotary Park | 5 | | | x | 2 | x | 3 | | |
| Meewasin Park | 5 | | | | | x | 3 | x | 1 |
| CPR to Circle Drive North | 5 | x | 3 | x | 2 | | | | |
| Meewasin Riverworks (Weir) | | | | | | x | 3 | x | 1 |
| Victoria Park | 5 | | | | | | | | |
| Attridge Drive Link | | x | 3 | x | 2 | x | 3 | x | 1 |
| Gabriel Dumont | 5 | x | 3 | x | 2 | x | 3 | x | 1 |
| University Bridge | | x | 3 | | | | | | |
| Forestry Farm Link | 5 | | | x | 2 | x | 3 | x | 1 |
| Silverspring Park (Forestry Farm Link) | | | | x | 2 | x | 3 | x | 1 |
| Sutherland Beach | | | | x | 2 | | | | |
| Crocus Prairie | 5 | x | 3 | x | 2 | | | | |
| Saskatoon Natural Grasslands | | x | 3 | x | 2 | | | | |
| Peggy McKercher Conservation Area | | x | 3 | | | x | 1 | | |
| Sanatorium Trail | | | | | | | | x | 1 |
| Preston Crossing Link | | | | x | 2 | | | x | 1 |
| Crocus Prairie Link | | | | | | | | x | 1 |
| Innovation Place | | | | | | | | | |
| River Landing Phase 1 | | | | | | | | | |
| River Landing Phase 2 | | | | | | | | | |
| Diefenbaker Park | | | | | | | | | |
| Friendship Park | | | | | | | | | |
| Rotary Park Peace Plaza | | | | | | | | | |
| Factoria Link | | | | | | | | | |
| Silverwood Park | | | | | | | | | |
| Warman Road Trail | | | | | | | | | |

*Assessment Factor (AF) - Trail conditions were rated on a scale from 1-5 based on assessment factors (see Meewasin Trail Study - Criteria for Assessment) with 5 being the most critical factor.

PM Peak is 4:00 pm to 6:00 pm daily.

Figure 9 - Meewasin Trail Existing Infrastructure Conditions (2014)

(Measurement in metres)

| Site Name | Other Trail | AF* | End Or Close | AF* | Graffiti | AF* | Near Traffic | AF* | Sediment | AF* |
|--|-------------|-----|--------------|-----|----------|-----|--------------|-----|----------|-----|
| Mendel | | | | | | | x | 2 | | |
| Cosmopolitan Park | x | 1 | | | x | 1 | x | 2 | | |
| Kiwanis Memorial Park | x | 1 | x | 1 | | | | | | |
| Spadina (Meewasin Shelter to Weir) | x | 1 | | | | | x | 2 | x | |
| University Trail | x | 1 | | | | | | | | |
| Rotary Park | x | 1 | x | 1 | | | | | x | |
| Meewasin Park | | | x | 1 | x | 1 | | | | |
| CPR to Circle Drive North | x | 1 | | | | | | | | |
| Meewasin Riverworks (Weir) | x | 1 | | | | | x | 2 | x | |
| Victoria Park | x | 1 | x | 1 | | | | | | |
| Attridge Drive Link | x | 1 | | | | | x | 2 | | |
| Gabriel Dumont | x | 1 | | | | | | | | |
| University Bridge | | | | | x | 2 | | | | |
| Forestry Farm Link | x | 1 | | | | | | | | |
| Silverspring Park (Forestry Farm Link) | x | 1 | | | | | | | | |
| Sutherland Beach | x | 1 | x | 1 | | | | | | |
| Crocus Prairie | x | 1 | | | | | | | | |
| Saskatoon Natural Grasslands | x | 1 | | | | | | | | |
| Peggy McKercher Conservation Area | | | | | | | | | | |
| Sanatorium Trail | | | | | | | | | | |
| Preston Crossing Link | x | 1 | x | 1 | | | | | | |
| Crocus Prairie Link | | | | | | | | | | |
| Innovation Place | | | | | | | | | | |
| River Landing Phase 1 | | | | | | | | | | |
| River Landing Phase 2 | | | | | | | | | | |
| Diefenbaker Park | | | | | | | | | x | 2 |
| Friendship Park | | | | | | | | | | |
| Rotary Park Peace Plaza | | | | | | | | | | |
| Factoria Link | | | | | | | | | | |
| Silverwood Park | | | | | | | | | | |
| Warman Road Trail | | | | | | | | | | |

*Assessment Factor (AF) - Trail conditions were rated on a scale from 1-5 based on assessment factors (see Meewasin Trail Study - Criteria for Assessment) with 5 being the most critical factor.

PM Peak is 4:00 pm to 6:00 pm daily.

Figure 9 - Meewasin Trail Existing Infrastructure Conditions (2014)

(Measurement in metres)

| Site Name | Flooded | AF* | Stairs | AF* | Retaining Walls | AF* | Railing | AF* | Priority |
|--|---------|-----|--------|-----|-----------------|-----|---------|-----|----------|
| Mendel | | | x | 1 | x | 1 | | | 51 |
| Cosmopolitan Park | | | x | 1 | x | 1 | x | 1 | 48 |
| Kiwanis Memorial Park | | | x | 1 | x | 1 | x | 1 | 45 |
| Spadina (Meewasin Shelter to Weir) | x | 2 | | | | | | | 41 |
| University Trail | | | x | 1 | | | | | 40 |
| Rotary Park | x | 2 | x | 1 | x | 1 | | | 38 |
| Meewasin Park | | | | | | | | | 38 |
| CPR to Circle Drive North | | | | | x | 1 | | | 37 |
| Meewasin Riverworks (Weir) | x | 2 | x | 1 | x | 1 | | | 37 |
| Victoria Park | | | | | | | | | 36 |
| Attridge Drive Link | | | | | | | | | 31 |
| Gabriel Dumont | x | 2 | x | 1 | x | 1 | | | 30 |
| University Bridge | | | | | | | | | 29 |
| Forestry Farm Link | | | | | | | | | 29 |
| Silverspring Park (Forestry Farm Link) | | | | | | | | | 29 |
| Sutherland Beach | | | | | x | 1 | | | 26 |
| Crocus Prairie | | | | | | | | | 23 |
| Saskatoon Natural Grasslands | | | | | | | | | 19 |
| Peggy McKercher Conservation Area | | | | | | | | | 16 |
| Sanatorium Trail | | | | | x | 1 | | | 14 |
| Preston Crossing Link | | | | | | | | | 13 |
| Crocus Prairie Link | | | | | | | | | 11 |
| Innovation Place | | | | | | | | | 7 |
| River Landing Phase 1 | | | | | | | | | 6 |
| River Landing Phase 2 | | | | | | | | | 5 |
| Diefenbaker Park | | | x | 1 | | | | | 4 |
| Friendship Park | | | | | | | | | 2 |
| Rotary Park Peace Plaza | | | | | | | | | 2 |
| Factoria Link | | | | | | | | | 1 |
| Silverwood Park | | | | | | | | | 1 |
| Warman Road Trail | | | | | | | | | 1 |

*Assessment Factor (AF) - Trail conditions were rated on a scale from 1-5 based on assessment factors (see Meewasin Trail Study - Criteria for Assessment) with 5 being the most critical factor.

PM Peak is 4:00 pm to 6:00 pm daily.

Figure 9 - Meewasin Trail Existing Infrastructure Conditions (2014)
(Measurement in metres)

| | | | | | | | | | |
|-----------------------|--|--|--|--|--|--|--|--|---|
| Southwest Trail | | | | | | | | | 0 |
| * No Counts Conducted | | | | | | | | | |

*Assessment Factor (AF) - Trail conditions were rated on a scale from 1-5 based on assessment factors (see Meewasin Trail Study - Criteria for Assessment) with 5 being the most critical factor.
PM Peak is 4:00 pm to 6:00 pm daily.

Priority List for Meewasin Trail

| Site Name | Priority | Site Name | Priority |
|--|----------|-----------------------------------|----------|
| Mendel | 51 | Crocus Prairie | 23 |
| Cosmopolitan Park | 48 | Saskatoon Natural Grasslands | 19 |
| Kiwanis Memorial Park | 45 | Peggy McKercher Conservation Area | 16 |
| Spadina (Meewasin Shelter to Weir) | 41 | Sanatorium Trail | 14 |
| University Trail | 40 | Crocus Prairie Link | 13 |
| Rotary Park | 38 | Preston Crossing Link | 13 |
| Victoria Park | 36 | Innovation Place | 7 |
| Meewasin Park | 34 | River Landing Phase 1 | 6 |
| CPR Bridge to Circle Drive North | 34 | River Landing Phase 2 | 5 |
| Meewasin Riverworks (Weir) | 32 | Diefenbaker Park | 4 |
| Attridge Drive Link | 31 | Friendship Park | 2 |
| University Bridge | 31 | Rotary Park Peace Plaza | 2 |
| Gabriel Dumont | 30 | Factoria Link | 1 |
| Forestry Farm Link | 29 | Silverwood Park | 1 |
| Silverspring Park (Forestry Farm Link) | 29 | Warman Road Trail | 1 |
| Sutherland Beach | 26 | Southwest Trail | 0 |

Figure 10 – Priority List for the Meewasin Trail

TRAIL TYPES

Trail types were defined in the 1990 Meewasin Valley Trail Plan (Crosby Hanna & Associates 1981). This review has redefined the trail types based on the 1990 definitions with a further breakdown of types. The following categories of trail types will help with management, maintenance, and planning (Map 6: Meewasin Trail Maps and Map 7: Meewasin Trail Types – Example Cosmopolitan Park).

These definitions will improve consistency within Meewasin and this data will be shared with the City of Saskatoon. All parties will be using the same dataset making it easier to calculate trail totals by type, material, and other attributes.

Primary (Type 1)

- Minimum width 3.0 metres;
- Shared-Use Path;
- Hard surface (asphalt, concrete, paving stone);
- All season;
- Maximum grade 5%;
- Continuous path from north to south along the river;
- Lighting is not mandatory;
- Developed on the east and west banks; and
- Trails within the urban centre.

Primary (Type 2)

- Minimum width 3.0 metres;
- Shared-Use Path;
- Crusher dust surface;
- All season trail – trail is open to the public in the winter, but the crusher dust surface is not typically cleared during the winter months;
- Maximum grade 5%;
- Continuous path from north to south along the river;
- Lighting is not mandatory;
- Developed on the east and west banks; and
- Trails outside of the urban centre or within sensitive ecological zones.

Primary (Type 3)

- Shared-Use Path;
- Hard or soft surface (asphalt, concrete, paving stone, crusher dust);
- Maximum grade 5%;
- All season trail – crusher dust surface is not cleared in winter;
- Entryways to the Primary Trail (Type 1 and 2) connecting to the city-wide transportation network of trails, sidewalks, and bike lanes; and
- Lighting is not mandatory.

Secondary (Type 1)

- Typically narrower than the primary trail;
- Minimum width 2.4 metres;
- Shared-Use Path;
- Variable surface;
- Maximum grade 5%;
- All season trail – crusher dust surface is not cleared in winter;
- These are connecting trails between the primary trails and other circulation networks and open space systems; and
- Lighting is not mandatory.

Secondary (Type 2)

- Typically narrower than the primary trail;
- Minimum width 2.4 metres;

- Shared-Use Path;
- Maximum grade 5%;
- All season trail – crusher dust surface is not cleared in winter;
- These are connecting trails circulation networks or alternate routes to connect to interpretive nodes, seating nodes, plazas and/or other amenities primary trail; and
- Lighting is not mandatory.

Secondary (Type 3)

- Shared-Use Path;
- Hard or soft surface (asphalt, concrete, paving stone, crusher dust);
- Maximum grade 5%;
- All season trail – crusher dust surface is not cleared in winter;
- Entryways to the Secondary Trail (Type 1 or 2) connecting to the city-wide transportation network of trails, sidewalks, and bike lanes; and
- Lighting is not mandatory.

Backshore Links

- Shared-Use Path;
- Variable surface (hard and soft surfaces);
- Minimum width 3.0 metres;
- Maximum grade 5%;
- Typically all season trail – crusher dust surface is not cleared in winter; and
- Backshore connections to the primary trail. These lead from the Primary Trail (Type 1) connecting back to the city-wide transportation network of trails, sidewalks, and bike lanes.

Tertiary (Hiking/Foot Trails/Interpretive)

- For a restricted user group;
- Primary user group is pedestrian or cross-country skiers;
- Variable grade;
- All season trail – not cleared in winter;
- Surface treatment is woodchip or crusher dust;
- Generally single track trail;
- Developed in ecologically sensitive areas (e.g. next to wetlands or native prairie or in rural areas); and
- Lighting is not mandatory.

Casual Trails

- Trails not formally developed created by repeated use;
- No surface treatment;
- Restricted user group;
- Single track trails;
- These trails offer something the main system cannot;
- Not typically accessible; and
- There is no management set up for these trails.

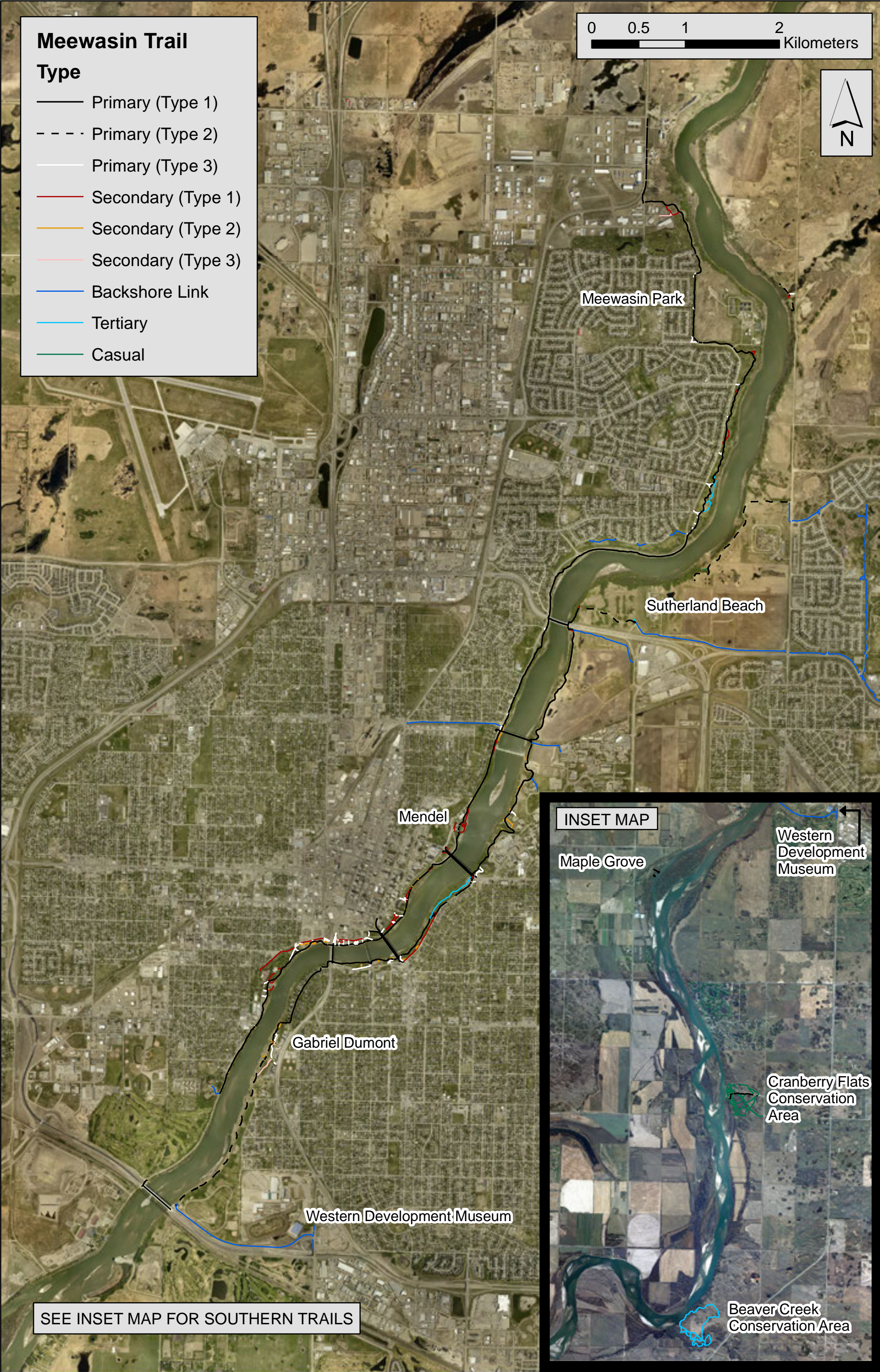
Specialty Trails

- Surface treatment is natural or woodchip;
- Restricted user group: equestrian/wagon use;
- Wider than general purpose trails; and

Ski Trails

- For a restricted user group;
- 1 season – winter; and

Map 6: Meewasin Trail Types



Map 7: Meewasin Trail Types - Example Cosmopolitan Park



INFRASTRUCTURE ASSET MANAGEMENT

Over the past two years, Meewasin staff collected information about all physical assets (trail, benches, drinking fountains, waste receptacles, etc.) along the trail in the Meewasin Valley. This collected data will be used to manage these assets to maintain a level of service in the most cost-effective manner over the life-cycle of the asset.

Meewasin's funding over the past 30 years has not increased and is no longer adequate. This has made it challenging to manage existing infrastructure that is at the end of its service life or to add new infrastructure.

This section sets out parameters to manage this failing infrastructure over the next 10 years to be in line with Meewasin's 10-year planning process. This assessment was based on the visual inspection of the physical assets (e.g. trail, benches, waste receptacle).

OPERATIONAL MAINTENANCE

Currently, inspections happen on a yearly basis. Typically this is undertaken by City of Saskatoon staff. In 2014, Meewasin joined the City of Saskatoon on their trail inspection. The typical methodology is for maps of the entire trail to be printed, and the area of concern noted on the paper map. For overlays or patches, the asphalt is painted to identify areas in need of repair.

Inspections need to be regularly performed - weekly, monthly, quarterly, seasonally and after major storm events. General inspections include such things as unsafe conditions (e.g. trip hazards, general debris and trash pick-up), vandalism, vegetation overgrowth, erosion, drainage, and condition of site furnishings. It is important to implement a proper tracking and inspection system to effectively address the needs of the trail system to provide a safe and smooth surface for trail users.

PREVENTIVE MAINTENANCE PROGRAM

The majority of trail development across North America has focused on new trail development with minimal dollars being put into trail preservation and maintenance. The Minnesota Local Road Research Board (LRRB) realized little effort was being put toward maintenance and preservation of recreation trails in North America which prompted them to fund research on the best way to extend the service life of trails as well as develop a workshop on corridor management for paved trails to help agencies, like Meewasin, extend the service life of recreational trails (Wood, et al. July 2009). Much of the following information is based on their findings, as it is the most extensive research in regard to maintenance and preservation of recreational trails with reference to asphalt.

Significant segments of the Meewasin Trail system are nearing the end of its service life as much of the trail was constructed in the 1980s. Construction standards have changed over time suggesting much of the trail was not built to current construction standards. This assessment was based on a visual inspection of the trail to determine the condition of the trail. Based on LRRB's description of failing asphalt, visually much of the Meewasin Trail is experiencing structural distress of some magnitude (longitudinal and horizontal cracking, divots, depressions, crack blocking, pitting and raveling) (Wood, et al. July 2009).

Based on the research and what is known of asphalt roads for vehicles, the LRRB applied this knowledge to trails and found the same to be true. Long term exposure to ultraviolet radiation, oxygen, and water degrades asphalt making the pavement more susceptible to becoming brittle, cracking and thereby decreasing its service life (Wood, et al. July 2009). The more structural distress (cracking, divots) the asphalt is under, the more oxygen and moisture can infiltrate the surface expediting the overall deterioration of the trail.

As mentioned, much of the Meewasin Trail is almost 30 years old and visibly beginning to show its age. Many of the assets along the trail are equally as old. The City of Saskatoon has worked diligently to maintain the trail throughout this period without adequate funds to deliver an adequate program.

Moving forward a new tracking, inspecting, and reporting system is recommended to help both the City of Saskatoon and Meewasin better track and attend to the assets in the Meewasin Valley. This information will be shared between the two parties to better support one another to keep the trail safe for all users.¹³

There are many different methods to track and report, such as paper or the use of new technology to record information in the field. LRRB has developed a sample inspection template that is based on the paper method. This is a very thorough and easy to follow reporting system but it requires the inspector to record the data in the field and later input the data into a database once back in the office (Wood, et al. July 2009). A potentially more efficient method is to use a digital product such as *Histree*. This asset management program was developed by a construction company out of Edmonton, Alberta that allows tracking of all assets including trail condition, donor trees, and benches. It uses smartphones or tablet technology and instantly uploads to a database that is accessible immediately. Further research is needed to determine which method is the best fit for Meewasin and the City of Saskatoon.

Regardless of which method is used, a standardized system will help Meewasin and the City of Saskatoon better track, inspect, and report on everything in the Valley. Work orders can be developed from this type of management system while maintaining an overall database of all assets.

The recommendation is to implement a monitoring program. It is important to note that a monitoring program (review assets in the Meewasin Valley) will have an impact to operating budgets and will need to be considered when moving forward. Things to consider are staff time to implement a monitoring program which requires updating the existing GIS database and conducting site visits.

ASPHALT MAINTENANCE PROGRAM

The asphalt trail is the largest and most costly asset to maintain and preserve. The LRRB has reviewed and tested a number of these methods and provides a recommended method to

¹³ Included in this report is a sample inspection template from the Minnesota workshop that was conducted by SRF Consulting and Local Road Research Board on the maintenance of recreational trails. (See Appendix G) Using a standardized template will help future planning to be more cost effective in maintaining all the assets in the Meewasin Valley.

preserve the longevity of asphalt maintenance programs. The following recommendations are proposed for the Meewasin Trail to treat the following issues (some of which are based on LRRBs findings):

Recommendations to treat cracks:

1. Use root barrier;
2. Plant vegetation a minimum of 2.0 metres from the trail unless it is of the Poplar species. Poplars should not be planted near asphalt trails;
3. Full-depth patching; and
4. Use crack filling treatments (Wood, et al. July 2009).

Recommendations to treat surface deterioration:

1. Fog seal (Wood, et al. July 2009, A-14);
2. Sealcoat (chipseal) (Wood, et al. July 2009, B-16);
3. Slurry seal (Wood, et al. July 2009, 4);
4. Micro surfacing (Wood, et al. July 2009, 4); and
5. Overlay (Wood, et al. July 2009, A-14).

Recommendations to treat potholes and depressions:

1. Temporary patching; and
2. Permanent patching.

LRRB recommends using a fog seal or slurry seal on all new trails to help protect against water infiltration, ultraviolet radiation and reduce raveling as the asphalt ages. It has shown to extend the life of the trail when applied at the time of construction. Fog seals can be applied at different rates. It is important to know what works for different climates and users. Rejuvenators have been applied to trails that have experienced light raveling to extend the life of the asphalt. These cannot be applied once structural distresses are present. Chip and sand sealing after a few years will reseal the asphalt from water and ultraviolet radiation as well as increase the surface friction. If cracks are present it is important to fill them or do a full-depth patch. A full-depth patch is recommended if the crack exceeds 25 mm (1/2") (Wood, et al. July 2009).

The data Meewasin staff collected revealed much of the trail is patched and some portions are overlaid. According to LRRB, if patching is the recommended action it has moved beyond preventative to reactive (Wood, et al. July 2009, B-11). The extensive patching that is performed along the trail would indicate that the Meewasin Trail is beginning to experience structural distresses suggesting a complete failure.

For the first time, in 2014, Meewasin and the City of Saskatoon, rode the entire system together to determine what areas are most in need of repair. The areas identified for work in 2014 were areas considered a safety hazard to trail users. This combined review revealed that patching is recommended before overlaying as overlaying is generally more expensive limiting how much of the 'needs repair' work can be completed. Patching can address emergent issues such as

tripping hazards in the trail to keep trail users safe. This is a reasonable method considering the limited capital funds and the lack of a systematic approach to trail maintenance.

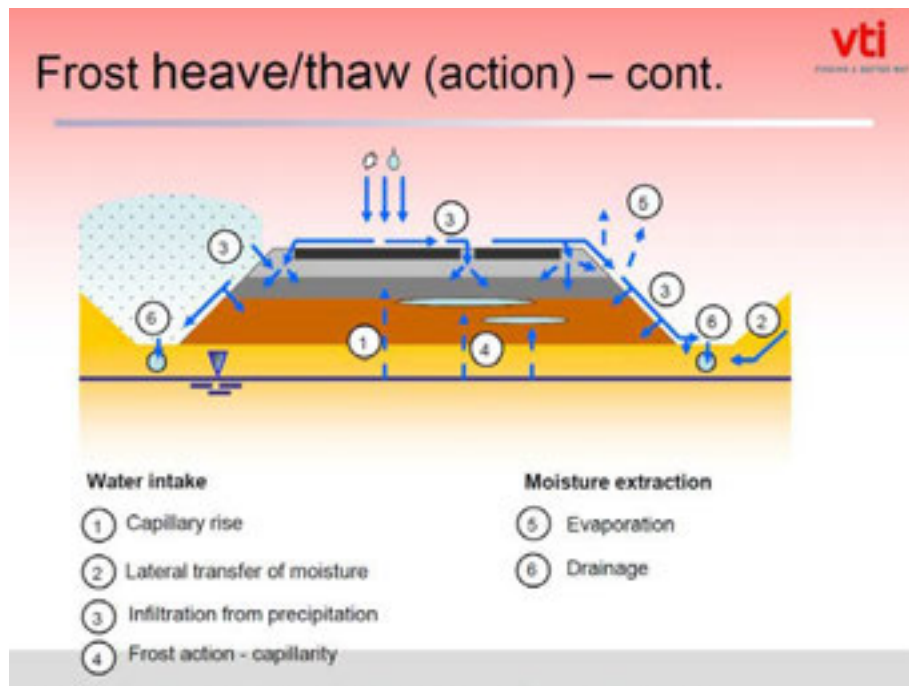


Image 11 – Frost Heave/Thaw Illustration (Erlingsson 2013)

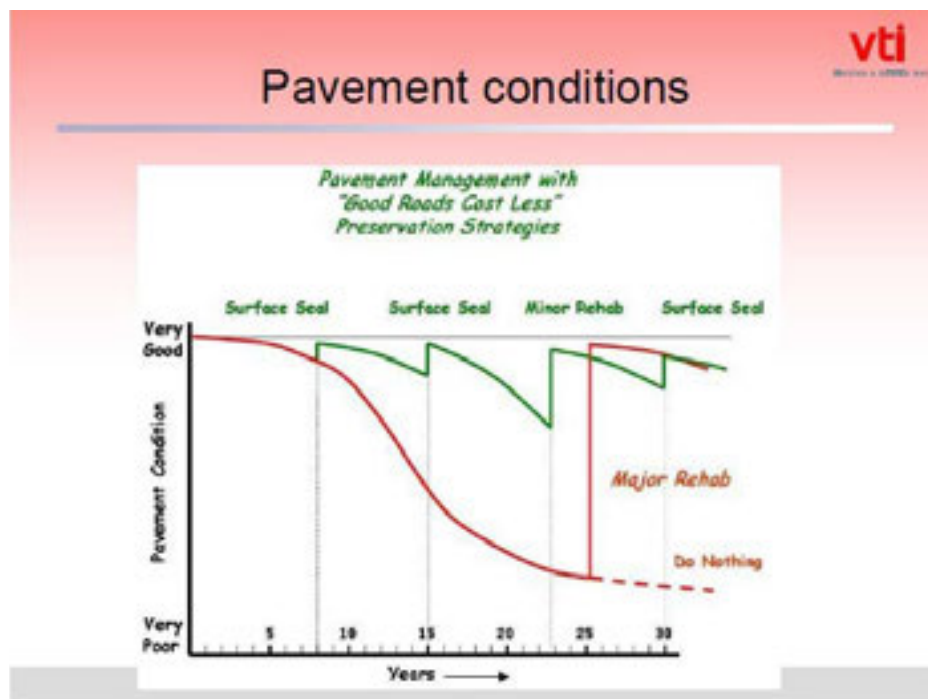


Image 12 – Pavement Conditions (Erlingsson 2013)

Figure 11 is a sample Maintenance schedule from the LRRB and the Minnesota SRF Consulting Group Inc.

| Sample Maintenance Schedule | |
|-----------------------------|------------------------|
| Year 0 | – Pave Trail/ Fog Seal |
| Year 2 | – Crack Seal |
| Year 6 | – Crack Seal |
| Year 8 | – Slurry Seal |
| Year 10 | – Crack Seal |
| Year 14 | – Crack Seal |
| Year 18 | – Crack Seal |
| Year 20 | – Overlay |
| Year 22 | – Crack Seal |
| Year 24 | – Slurry Seal |
| Year 26 | – Crack Seal |
| Year 30 | – Reconstruct |

Figure 11 – Sample Maintenance Schedule (SRF Consulting Group 2012) (Preventative Maintenance for Recreational Trails LRRB 2013)

As with any construction, building the trail correctly the first time will save costs throughout the life of the trail. A cost effective trail preservation and maintenance program that will keep the trail in good working order and meet the expectations of the community will cost less and perform longer.

All trail construction should meet the standards as laid out by the City of Saskatoon's specifications.

WINTER SNOW CLEARING AND SANDING

Responsibility for snow clearing falls under the Transportation & Utilities, Public Works Department of the City of Saskatoon, who do an excellent job of snow clearing on the trail. There is no policy in place on clearing but the standard timeframe to clear the trails in the Valley is within 48 hours of a snowfall. Other communities in Canada, where snow is a factor, follow a similar standard and clear trails as time and budgets are available.

Sanding is not performed on the trail and, for the most part, is not necessary except during the shoulder seasons of freeze thaw. Sanding should be a consideration during the shoulder seasons.

Trail sweeping does not occur most likely because sanding does not happen. Nonetheless the trail would benefit from sweeping every spring to remove leaf litter, clean up the edges, and remove the gravel that builds up in various locations throughout the trail network.

If winter usage continues to rise, the recommendation is to clear trails within 24 hours to encourage winter recreation and commuting in the Valley as the trail is well used throughout all seasons. It is recommended to install more trail counters to provide 24 hour counts to better gauge what is happening during the winter season.

Conducting winter inspections will help with the clearing in warmer spring conditions. There are numerous locations each spring that need more care and attention to help drain the trail and limit the hazards during the spring melts (Images 12 and 13). These ongoing inspections will aid in mitigating the build-up of ice on the trail.



Image 13 – Kiwanis Memorial Park



Image 14 – Kiwanis Memorial Park

Winter conditions show water pooling with no escape route. This is common along much of the trail during the shoulder seasons, particularly in spring. It is important to develop a maintenance plan to clear a drainage path to prevent water building up and freezing in the cooler hours of the day during the shoulder seasons.

To encourage active living, winter policies for trails should be developed. This is a priority for safe and accessible operating conditions for cyclists and pedestrians throughout the winter months.

ASSET REPLACEMENT COSTS

Similar to the trail, all assets need replacing over time.

Meewasin introduced an urban style of furniture (bench and waste receptacle) in 1982. This furniture is at the end of its service life with over 60% in a state of disrepair, and the replacements parts for these site furnishings are no longer available. In 2011, Meewasin piloted a new urban style of bench and waste receptacle. The initial plan was to replace all the benches and waste receptacles in the Valley over a five year plan but due to funding constraints this program can only be administered as funds become available.

Over the years, Meewasin has replaced the drinking fountains in the Valley to meet today's health standards. There are still two drinking fountains that need replacing, but without sufficient funds projects like these only happen through donations or when funding becomes available.

To assess the cost of these programs, a complete asset replacement costing was completed (Appendix H).

GAP ANALYSIS

The previous sections address asset replacement and preservation but after analyzing the collected trail data it became apparent there are crucial connections missing within the current trail system (Map 8). The information provided in the gap analysis chart (Figure 12) allows Meewasin to prepare, plan and prioritize for future trail development, connection and expansion.

It is important to understand this cost opinion does not take into account any site anomalies such as extreme steep slopes, sites where slope failures are a known concern, or underground utilities. Preliminary design funds are needed to assess these sites to determine in more detail the construction costs for each area. In addition, this analysis does not take into account trail that is part of the Meewasin Matters Campaign (9 kilometres to Chief Whitecap Park and 4 kilometres to Wanuskewin Heritage Park for a total of 13 kilometres) or repairs to the existing trail system.

Map 8: Meewasin Trail Gap Assessment

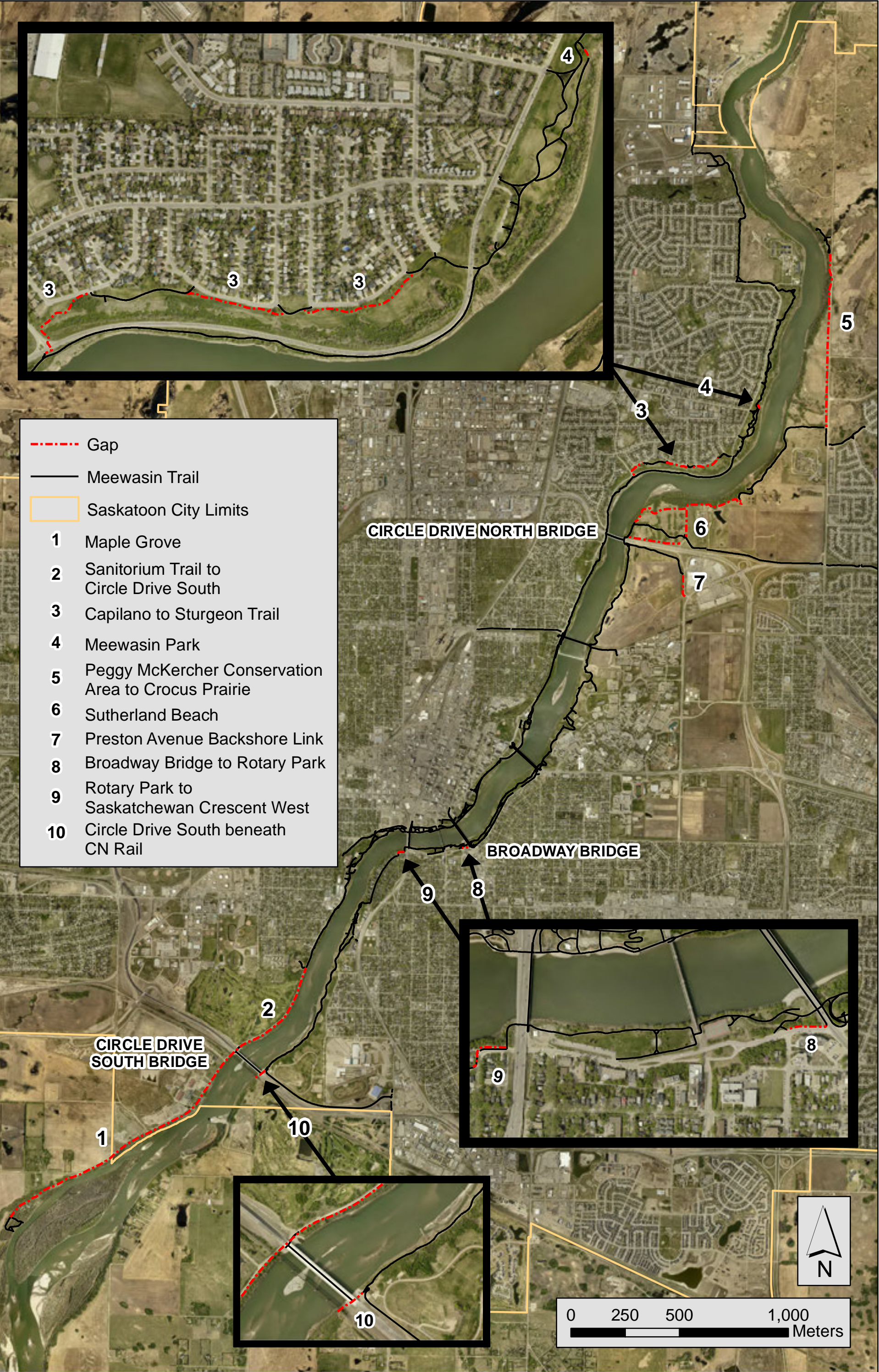


Figure 12

Trail Infrastructure - Gap Analysis (Projecting to 2043)

| Gap Analysis - July 2014 | Distance (meters) | Priority | Material | Replacement Cost* |
|---|-------------------|----------|--------------|-------------------|
| West of Idylwyld - Rotary to Sask Cres** | 120 | 1 | Asphalt | |
| Sanatorium Site Trail to CDS | 1400 | 2 | Crusher Dust | \$ 2,223,200.00 |
| Meewasin Park | 30 | 3 | Crusher Dust | \$ 10,140.00 |
| CDS Under CN Rail South to MVA Trail*** | 160 | 4 | Crusher Dust | \$ 250,880.00 |
| Sutherland Beach Primary Trail | 1500 | 5 | Crusher Dust | \$ 507,000.00 |
| Rotary Park to Broadway Bridge | 100 | 6 | Asphalt | \$ 38,600.00 |
| Sutherland Beach bypass - south | 300 | 7 | Crusher Dust | \$ 86,400.00 |
| Sutherland Beach bypass - north | 600 | 7 | Crusher Dust | \$ 172,800.00 |
| Preston Crossing - Backshore Link along Preston | 300 | 8 | Asphalt | \$ 101,400.00 |
| Peggy McKercher to Crocus Prairie | 2100 | 9 | Crusher Dust | \$ 3,292,800.00 |
| Capilano - Sturgeon Trail | 900 | 10 | Asphalt | \$ 304,200.00 |
| Maple Grove | 2900 | 11 | Crusher Dust | \$ 980,200.00 |
| | | | | |
| Total Missing Trail Length | 6610 | | Varies | \$ 7,967,620.00 |

*These are based on 2014 \$\$\$

**This section is being constructed by the City of Saskatoon

/ funded. Challenging section with known slope failures in the area

Meewasin Matters Trail Campaign is not part of this gap analysis

HEALTH AND FITNESS

COMMUTING

According to the 2011 National Household Survey, approximately 4 out of 5 Canadians commute to work in private vehicles (Turcotte 2013, 2). This is a staggering number of vehicles on the road.

On a national level 74% of people drove in a vehicle while only 5.6% of people commuting to work were passengers (Turcotte 2013, 2) in 2011. The national average for commuting via cycling was 1.3% and walking was 5.75%. Compared to 2006 census data walking has dropped from 6.4% and cycling remained the same at 1.3% (Turcotte 2013, 2).

In 2006, more than 78% of people commuted in a vehicle while 8% of people commuting were passengers. Cycling and walking were 2.4% and 6.2% respectively (Canada 2013). In 2011, the National Household survey suggests 80% of people commuted in a vehicle while 6% were passengers. Cycling and walking declined slightly (5.1% walking and 2% cycling) (Canada 2013) (Turcotte 2013) ¹⁴ Cycling in Saskatoon, as a mode of transportation, is above the national average for both the 2006 Census and the National Household survey in 2011. In 2011, 2.0% and in 2006, 2.4% cycled to work compared to the national average of 1.3% (Turcotte 2013, 5-6).

By providing better cycling and pedestrian networks, Saskatoon can not only reduce the emissions being released into the environment but offer an active route to work.

ACTIVE LIVING

Active living and active transportation are at the forefront of today's discussions.

The extensive Meewasin Trail system directly contributes to Saskatoon's quality of life, social benefits, reduced air emissions, and the health of Saskatoon residents by providing free public access.

"If exercise could be packaged into a pill, it would be the single most widely prescribed and beneficial medicine in the nation."

- Robert N. Butler, M.D. Former Director, National Institute on Aging (in motion n.d.)

The World Health Organization defines health as "a state of complete physical, mental and social well-being, and not merely the absence of disease and infirmity" (World Health Organization 1948). This text comes from the preamble to the Constitution of the World Health

¹⁴ "Comparability between estimates from the 2006 Census long form and the 2011 National Household Survey estimates: When comparing estimates from the 2006 Census long form and estimates from the 2011 National Household Survey (NHS) users should take into account the fact that the two sources represent different populations. The target population for the 2006 Census long form includes usual residents in collective dwellings and persons living abroad whereas the target population for the NHS excludes them. Moreover, the NHS estimates are derived from a voluntary survey and are therefore subject to potentially higher non-response error than those derived from the 2006 Census long form" (Turcotte 2013, 11).

Organization as adopted by the International Health Conference, which has not been amended since 1948. This means that the concept of health is also about how the community is designed. Collectively designing neighbourhoods to encourage healthy behaviours and offer healthy choices increases one's state of physical, mental and social well-being. Health and fitness are a shared responsibility and by providing equitable access a healthier community is created.

A recent study from the University of British Columbia (2012) indicates obesity rates across Canada have climbed to historic highs since 2001 (Gotay, et al. 2013). More recently Global News reported in May 2014 that Saskatchewan received a 'D-' when it came to the health of its population, in particular, the health of children.

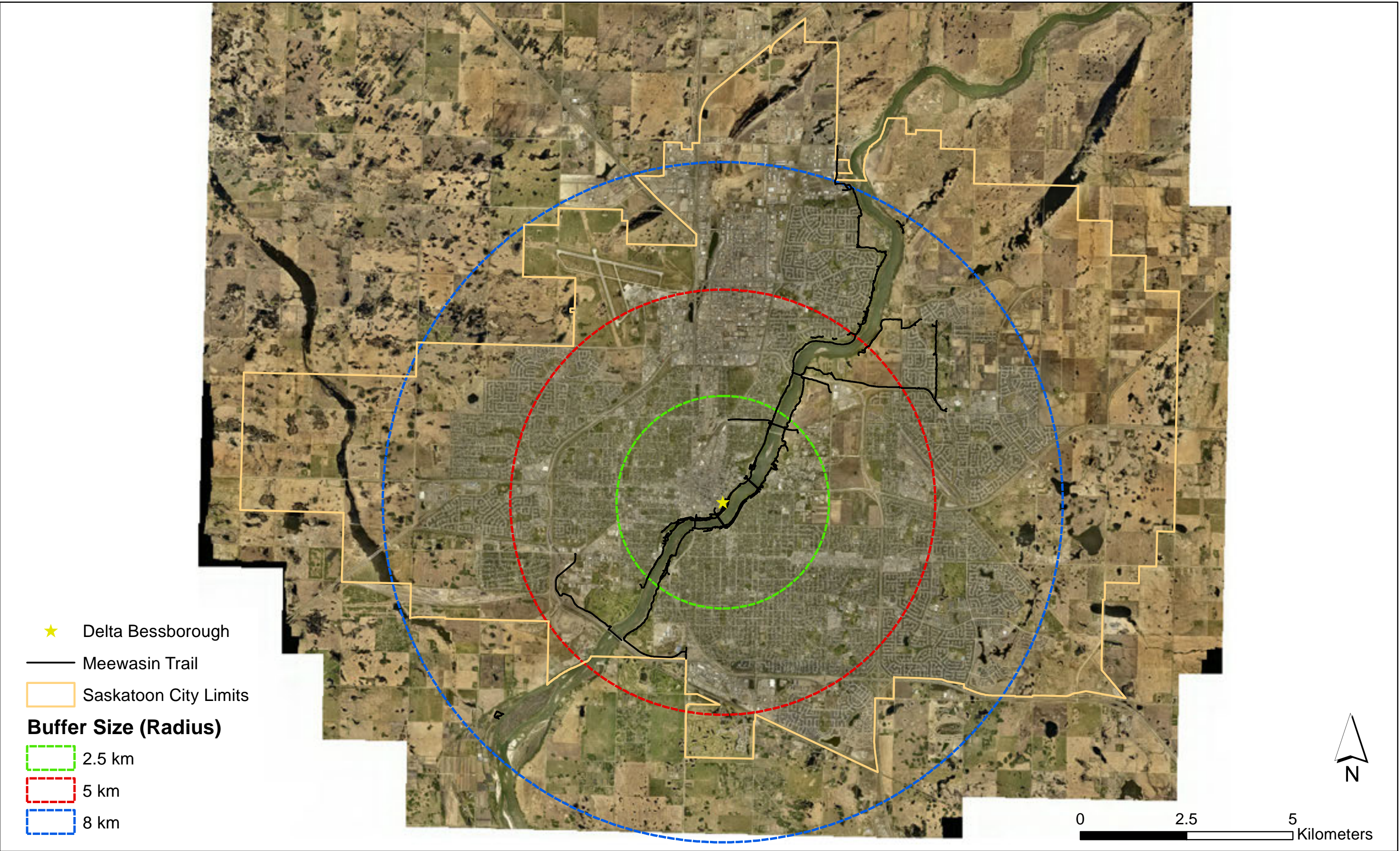
There is strong scientific evidence that suggests regular physical activity, even at moderate levels reduces premature mortality, and the development of chronic diseases. Regular exercise is proven to improve psychological well-being, productivity, and helps prevent weight gain and obesity. Walking briskly for 30 minutes five or more times a week helps balance caloric intake with energy expenditure, keeping people healthier longer (Transportation Research Board Special Report 282 2005).

Active living and active transportation not only contribute to people's health but also to the health of one's environment. Research shows that if short haul trips (<5 kilometres) (Grabow, et al. 2012) are taken using alternatives to driving, emissions would be greatly reduced in cities (Map 9). Most emissions are emitted in the first few minutes of automobile operation because vehicles do not reach optimal function during short trips thereby contributing greatly to ozone and nitrogen dioxide being released into the environment.

By providing these networks of alternative transportation, the Meewasin Trail is providing a healthy alternative for the city and its residents. Sedentary travel is a contributing factor to a decline in health. Another study suggests that the use of motorized transportation, rather than active commuting, has been linked to increased mortality as well as decreasing healthy life years. The most impacted is chronic disease (Grabow, et al. 2012).

The correlation between health and active living are evident. As a result, health funding needs to be accessible to help build and design better neighbourhoods that encourage and promote healthy and active living. (Lyons, et al. 2014) In the United States, the Federal Highway Administration completed a study on how to consider health in transportation planning. They used a holistic approach in considering access to alternative transportation, air quality, activity and safety. The planners looked at health as an integral part of design. They looked at partnerships with public health agencies and the roles various programs like Safe Routes to School play and determined that addressing health in conjunction with better transportation will improve health overall (Goodman, Sahlqvist and Oglivie 2014).

Map 9: Active Living



"A web of trails ties the community together. If you build trails the people will come, and through their trail use, safety in neighbourhoods is increased because of 'eyes on the street'. Walking or cycling is a healthy, inexpensive activity, available to everyone and environmentally, trail ways create green ways."

*- Mayor Joan McKinnon,
City of Waterloo, Ontario (Transit Works for Us 2014)*

TRAIL USE

The proximity to trails, characteristics of the area, social conditions and perceived benefits will encourage people to use trails. Alta's research showed that Meewasin Trail users live in close proximity to the trail (Map 10). It appears that the closer people live to the trail, the more likely they will use the trail. The more the distance increased between home and the trail the less likely people were to use the trail. A study in Massachusetts found that trail use decreased by 42 percent for each ¼ mile increase in distance from the home to the trail. The same was true for cyclists, where there was a sharp decline, for those who had to travel over 1.5 miles to reach the trail (Troped 2011). Trail conditions also present an important factor in use, particularly trails with amenities such as restrooms, drinking fountains, streetlights, and trailside facilities (e.g. cafes). Trails which had better amenities had up to 75% increased use and visitation (Troped 2011).

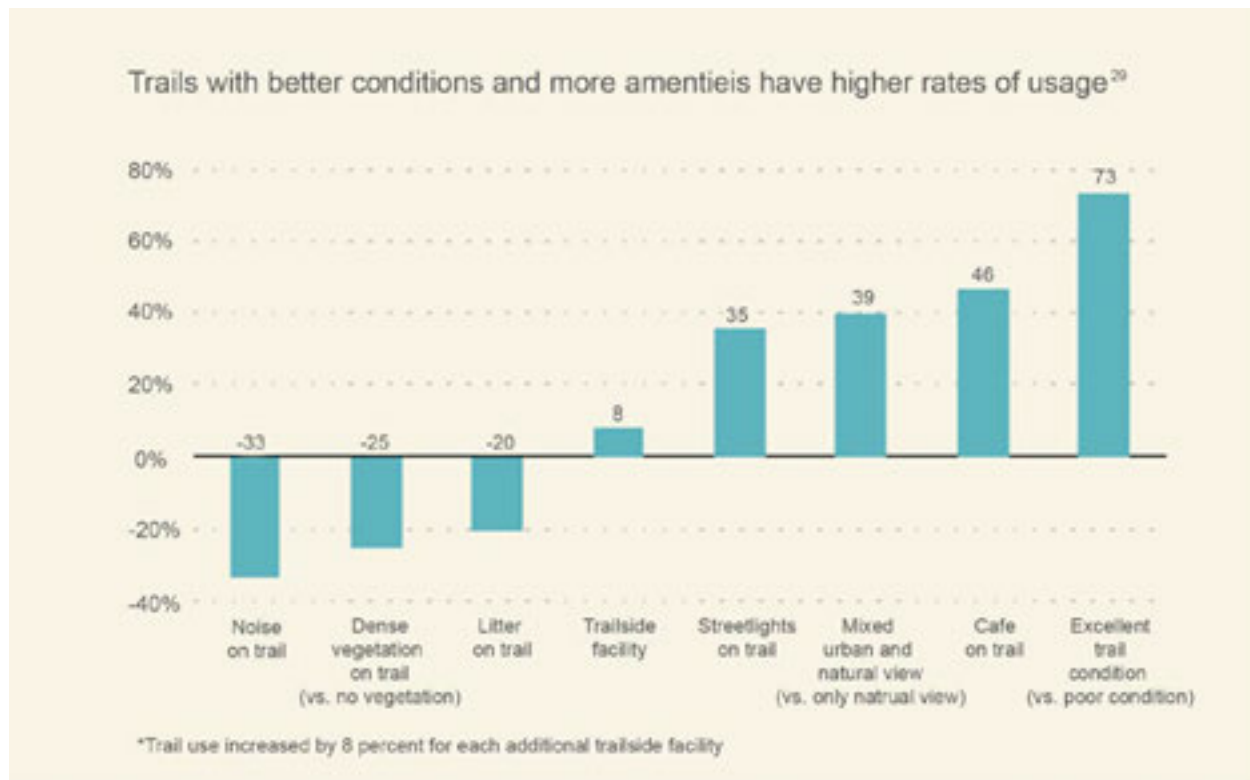
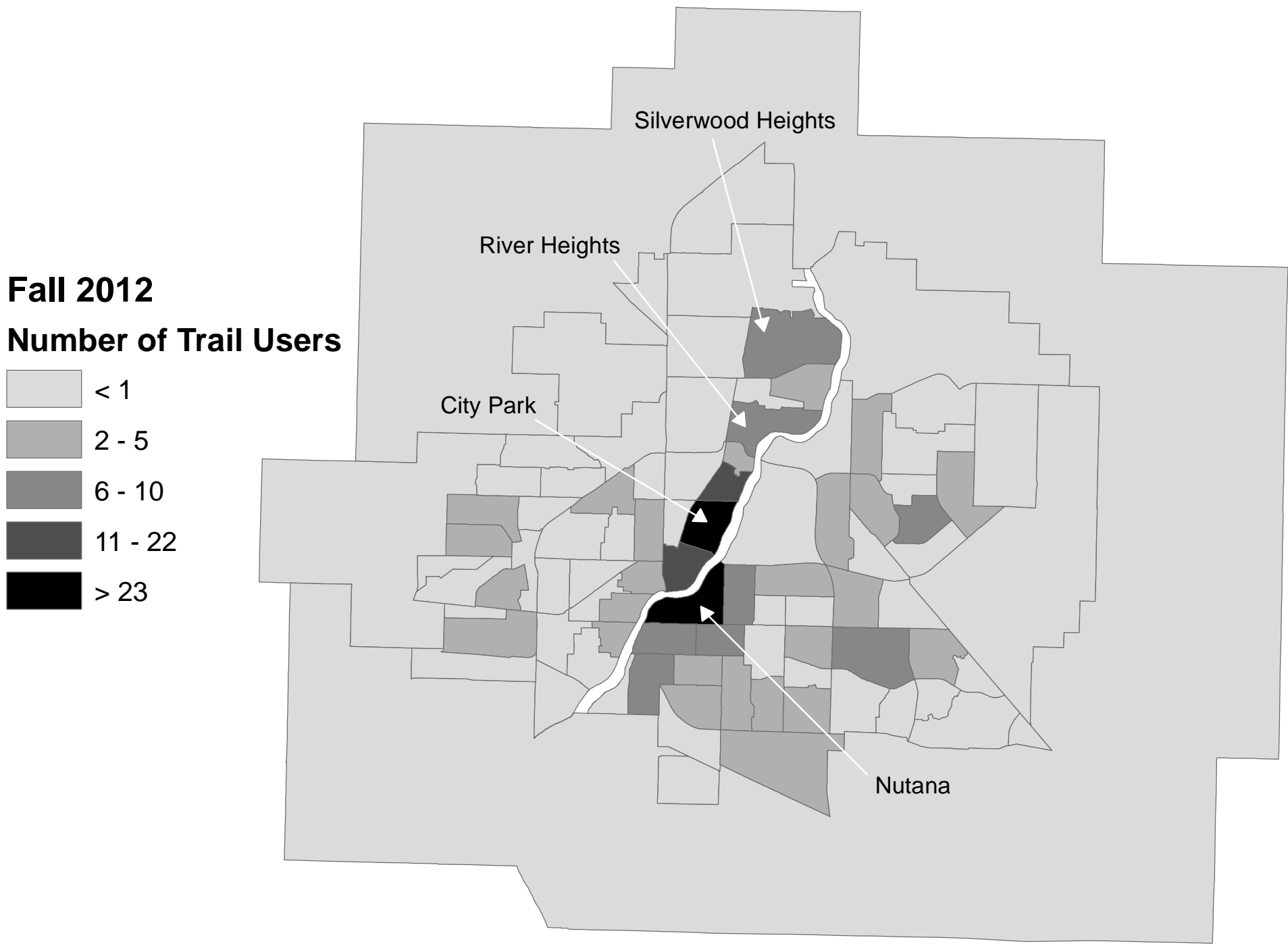
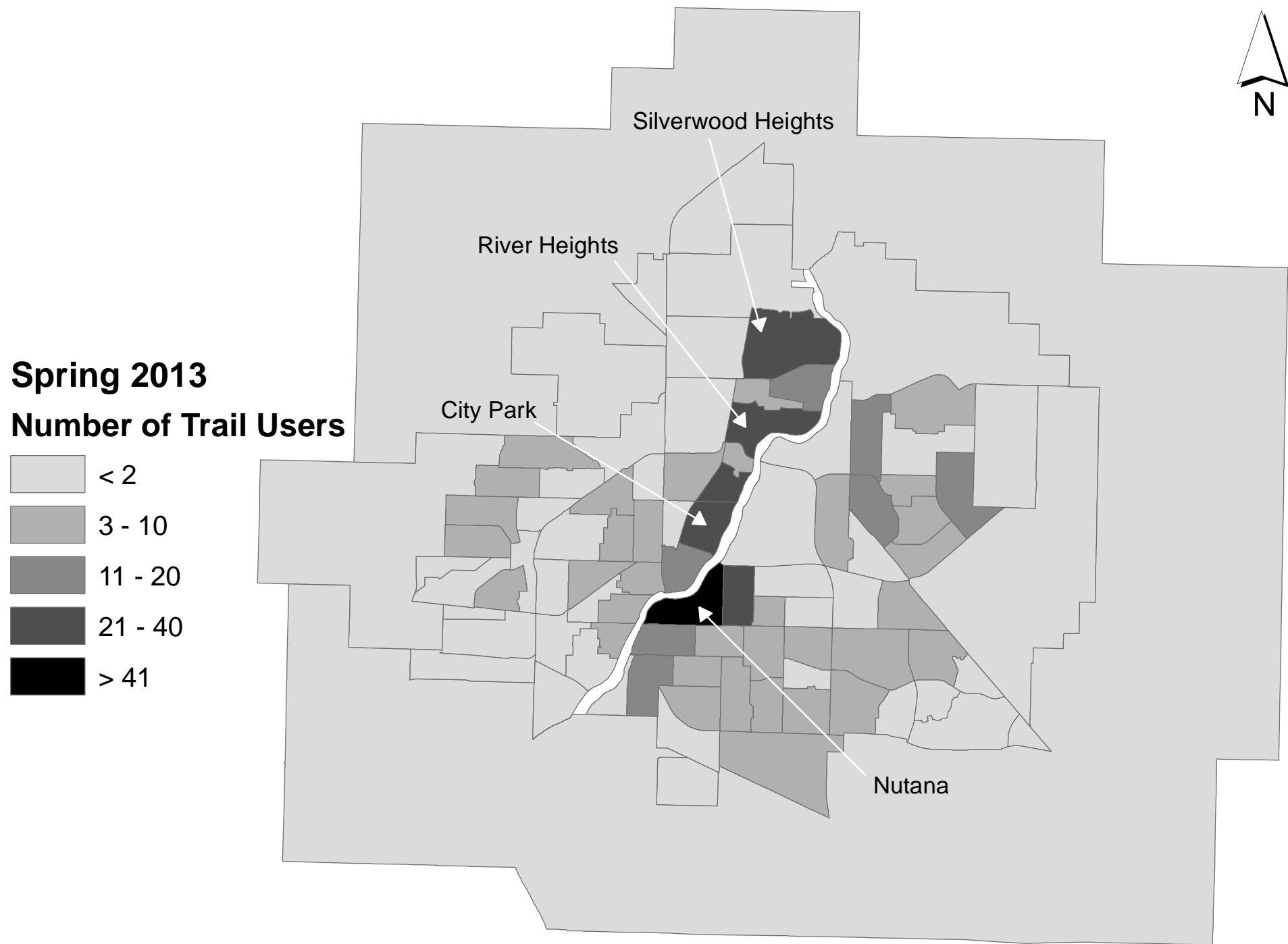


Figure 13 – Trails with better conditions and more amenities have higher rates of usage (Troped 2011)

The Power of Trails for Promoting Physical Activity in Communities (Troped 2011) shows the results of trail use based on conditions. Troped's report also suggests perceived safety concerns have been found to deter or detract from use (Figure 13).

Map 10: Neighbourhood of Trail Users



EDUCATION

Education and enforcement are critical in the safety of trail users.

More and more cities across North America are taking steps to provide alternative transportation and recreation corridors. The Meewasin Trail is predominately a recreational trail with 57% pedestrians and 43% cyclists with a slow rise in commuting traffic (Alta Planning + Design 2014, 2).

As active living, walkable neighbourhoods, and an alternative transportation network become more prominent in the city, safe multi-modal transportation as well as overall recreation plans need to be established for the Meewasin Valley.

As Saskatoon continues to grow, increased pressure will be put on the Meewasin Trail. The trail will experience higher user volumes, mixed types of trail users and increased user conflict. Education will become a critical tool for preventing user conflict. A method for distributing educational materials and training include partnering with the City of Saskatoon and user groups to distribute information to the public. This will be essential in keeping the trail safe for all users.

By providing trail etiquette signs (Image 15), educational courses and promotional material, Meewasin can encourage and remind trail users that everyone is on the trail for the same reasons, to enjoy nature and what they are

Meewasin Trail Trail Etiquette

Keep safety and etiquette in mind
when walking, running, skiing,
or rolling along the Meewasin Trail.
It is every trail users responsibility to
ensure the safety of themselves and others.



Image 15 - Sample of Trail Etiquette Signs Developed by Meewasin

doing. Safety and etiquette need to be kept top of mind for trail users when participating in trail use.

Trail etiquette can be described as the polite way to use trails. An educational kit will outline guidelines for the many users that ride, walk, hike, bike, or ski the trails. Trail etiquette should be a major part of any trail users' experience. Making trail etiquette a priority allows everyone to enjoy the outdoors and have a good time while being safe and courteous. It is every trail user's responsibility and right to ensure their own safety and expect safe practices from other trail users.

Trail safety is an ongoing effort. Educational programs must be offered 2-3 times a year especially as Saskatoon continues to grow. One possible option would be to have two summer students at different locations on the trail for May, June, July and August doing an educational blitz. This could be combined with the City of Saskatoon to do an overall bike safety program for both pedestrians and cyclists.

RECOMMENDATIONS FOR RULES OF PATHWAY USE



Shared-use paths are shared between a variety of different users such as walkers, joggers, cyclists, in-line skaters, people with mobility challenges, and a spectrum of users varying in age. Following proper pathway etiquette is essential and must to be reflected in the signage, in addition to educational programs. This can be achieved through a wide scale media blitz.

Currently, the trail has 12 trail maps (Image 16) installed along it identifying trail courtesy. Trail courtesy information must to be more frequent. The focus for education within the City of Saskatoon is for cyclists. This is important, but all levels of activity require education. The following information can be indicated graphically on trail maps, markers along the trail, on the Meewasin website, and through educational programs:

- Preventing accidents or injuries is the first step. Acting responsibly if something does happen is the second;
- Exercise caution at all times;
- Follow guidelines and rules of the trails;
- Allow room for others to pass; keep to the right, except when passing;
- Yield to slower moving traffic; cyclists yield to pedestrians;
- Signal and acknowledge others. Ensure others are aware of intentions. Use horns, bells or voice as warning to others of one's intentions;
- Proceed at a reasonable speed, be especially cautious going downhill, through intersections, around sharp bends, under or across bridges;
- Watch for slippery sections covered by ice, loose gravel or silt;
- Dismount and walk bicycles across roadways or other locations when choosing a pedestrian style street crossing;
- Keep the volume sufficiently low on your headphones so as to hear other users;
- Be visible at night; wear light-toned clothing with reflective material and bicycles should be outfitted with lights; and

- Control pets: keep pets on short leashes and clean up after them.

A review of trail map locations should be undertaken. New trail maps that better identify users' current locations on the trail are suggested. Currently, none of the trail maps indicate one's location along the trail.



Image 16 – Trail Map (Kiwanis Memorial Park)

DESIGN STANDARDS

VALLEY WIDE TRAIL DESIGN STANDARDS

The following design considerations are based on recommended standards and trail use (Figure 14) (Alta Planning + Design 2014).

| Trail Design Widths | | |
|--|----------------|---|
| Volume/Capacity PPH (People per hour) | Shared Pathway | Separated Pathways |
| Less than 200PPH | 3.0 metre | No |
| 200PPH - 300PPH | 4.0 metre | No |
| 300PPH - 600PPH | 6.0 metre | Optional – Two 3.0 metre separated trails |
| Over 600PPH | No | Yes – Two 4.5 metre separated trails |

Figure 14 – Trail Design Widths

TRAIL DEVELOPMENT - ACCESSIBILITY

Meewasin is committed to providing people with disabilities the same opportunity to accessibility to all sites in the Valley and allowing them to benefit from the experience of being a trail user. Meewasin has reviewed the data and 15 locations have been identified for upgrades to improve accessibility.

The recommendation is to build the Primary Trail (Type 1 and 2) with a grade less than 5% and to widen trails where pinch points as determined through the [Criteria for Assessment](#).

VEGETATION

During the trail review, there were areas with vegetation encroaching on the trail. This can be problematic in that it can reduce initial trail widths or reduce visibility for users on the trail due to overhanging vegetation. As such, trail set-backs for plant material are recommended (these are subject to change):

- 2.0 metre minimum from pavement edge for deciduous;
- 8.0 metre minimum from pavement edge for coniferous; and
- 10.0 metre minimum from pavement edge for Poplar species.

If plant material is encroaching, the material should be removed. Plant material overhanging pathways needs to be removed if it is less than 3.0 metre from the ground in a vertical direction.

SIGNAGE IN THE VALLEY

Below is a summary of signage within the Meewasin Valley:

Interpretive Signs

- The Meewasin interpretive sign design is from 1992. The design could use a review to refresh the look of the signs. The signs are replaced from time to time due to vandalism

allowing the signs to be updated over five year period (The Landplan Collaborative Ltd. and Studio 3 Graphics Ltd. 1992).

Dedication Plaques

- All plaques must have the Meewasin logo. Dedication plaques vary depending on the campaign and site. All plaques must follow Meewasin branding.

Fundraising Campaigns/Special Commemorative Signs

These vary depending on the site:

- Riverworks (Weir)
Aluminum Signs
Royal Signs <http://www.royalsignsystems.ca/>
Contacts - Tim and Joedy (306) 931-2883
- River Landing
Aluminum Signs
Royal Signs <http://www.royalsignsystems.ca/>
Contacts - Tim and Joedy (306) 931-2883
- Wanuskewin Heritage Park to Chief Whitecap Park donor recognition
Stainless Steel Signs
Royal Signs
Contacts - Tim and Joedy (306) 931-2883

Brick Dedication

- This is coordinated with the Donations Officer.

SIGN STANDARDS

Signage System Manual is used for reference for Meewasin signage in the Valley (The Landplan Collaborative Ltd. and Studio 3 Graphics Ltd. 1992). It is however somewhat outdated. This trail study will define the sign requirements moving forward. This is a reasonable summary of the various design guidelines that must be followed.

Signage is necessary to convey different messages to trail users. Currently the Meewasin Trail has signs that fall within one of the following categories:

- Interpretive – educational information about the cultural and heritage aspects of the area;
- Trail branding – expressing the visual identity of Meewasin through trail amenities including drinking fountains, benches, waste receptacles, and trail head signs.
- Regulatory – information about trail, park, and open space regulations (e.g bylaw signage);

- Directional – a wayfinding system connecting the Meewasin Trail system with the larger city network of bicycle and pedestrian infrastructure; and
- Informational – hours of operation of parks, parking lots, and tourist information centres.

Throughout the trail study, signage was encountered everywhere within the Valley. Old signs that no longer have relevance, signs in need of maintenance or signs that were missing. All signs within 10.0 metres of the trail were captured. Capturing of these signs will help facilitate a maintenance program as well as manage the installation and removal of signs.

Currently if a sign is needed there is no protocol to follow. Both Meewasin and the City of Saskatoon install signage as needed. Meewasin and the City of Saskatoon have an approval process but typically the smaller, less significant projects, such as signage, generally are not subject to any type of review. Most signs are relatively inexpensive to produce and install. This study revealed that all signs would benefit from a simple review prior to installation to confirm their placement, content, and permanency. An example of a site that would have benefited from a prior review before sign installation is the Mendel. Over the past year signs at the Mendel indicating a snow dump at the Shakespeare site were identified. This site has not been a snow dump since the mid-1990s. A review would ensure all signs meet protocols, contain a consistent visual identity, and are removed when necessary.

Meewasin has a vested interest in creating an experience for trail users that is memorable and in keeping with the mandate and vision. Therefore, the recommendation is that Meewasin should oversee installation and approval of all interpretive, regulatory, directional, and branding signage in the Valley.

Signage must still meet the current policies in place (e.g. any City of Saskatoon naming policies, etc.). The signage manual requires updating to include the policies, requirements of the funding partners and the Rural Municipality of Corman Park where it pertains to each party's jurisdictional rights.

Image 16 is an example of a site that is over signed. Site signage is a concern and coordination between Meewasin and the City of Saskatoon is needed to avoid over signing an area. For more information about sign standards see Appendix J.



Image 17 – Over Signage (Sutherland Beach)

SITE FURNISHING

Meewasin's current suite of furniture is of an urban and rural style. The urban style is designed to be placed along the trail within the limits of Saskatoon. The rural style is to be placed in the rural or natural park settings (e.g. Gabriel Dumont Park).

Rest nodes are to be placed every 1000 metres at minimum. If a site warrants an increased frequency of rest nodes, they will be considered. For more information on styles and installation details see Appendix K.

LINE PAINTING

There is no standard that exists for line painting, but as a general rule trail designers avoid centre lines unless the area has high traffic volumes or is constrained (narrower than other parts of the trail or a tight corner). The decision whether to paint centre lines or not along the trail depends upon a number of different factors:

- High traffic volumes;
- Constrained or narrow trail;
- Implementation cost;
- Downstream maintenance costs; and
- Type of trail surface.

The trail is a way to connect with nature and using centre and fog lines can make the trail appear more like a road. This is not the experience most trail users desire nor is it one Meewasin wants to convey. The trail is a space that is different from the urban street setting bringing people closer to nature and the river valley and stepping away from the urban setting.

Discussions with Alta Planning + Associates indicate painting lines can contribute to the sense of territorial entitlement, which can increase the potential for more catastrophic accidents. Slow markings are, and will continue to be used at blind corners and narrow sections of the trail that cannot be widened or twinned.

Recommendation for Line Painting:

1. Consider the use of fog lines in the non-lit areas of the trail. The City of Saskatoon's bylaw 6884 states bikes are required to have a light on their bike when biking in the dark;
2. Use slow markings at blind corners; and
3. Use centre line markings in high traffic areas where the trail is constrained by width and cannot be upgraded.

TRAIL MAPPING / WAYFINDING

Meewasin Trail mapping and wayfinding began in 2009 (Image 15). Meewasin worked with Eye Catcher and Cornerstone Design to come up with a print form of the trail for the Meewasin Trail brochure and the trail head maps throughout the Valley. The maps were initially produced using a non GIS format.

This trail study has provided Meewasin with the opportunity to develop a more thorough wayfinding system connected to the larger city-wide network. With the entire trail system in a geographic information systems (GIS) format, Meewasin can work closely with the City of Saskatoon to build an interactive map that includes all existing networks to assist users to reach the Meewasin Trail regardless of transportation mode.

Using a system like ArcGIS Online For Organizations allows Meewasin creativity and flexibility to:

- Manage a volunteer database by seeing where volunteers worked;
- Use demographic data to target people and areas for fundraising. People tend to support the areas with which they are familiar and love;
- Map and target where current donors are located (for internal purposes);
- Produce public-facing maps (ability to add photos) of specific areas (e.g. Trans Canada Trail);
- Prepare “Story Maps” that easily illustrate Meewasin’s story or an area’s story;
- Use the most appropriate ArcGIS Online base maps (satellite, roads, topographical, etc.) for Meewasin’s purposes; and
- Map concerns and a work order to ensure issues submitted are dealt with in a timely manner. This will ultimately assist with managing comments, complaints, and accidents that occur on the trail while helping with future design and determine focus for capital funding and future planning.

There is staff time and program costs associated with this map. Staff time will mostly be dedicated to ongoing maintenance of this database.

To maintain this database there is ongoing operational and capital cost for staff to keep the information current. There is an annual cost for the software, a fee for the subscription, and the person hours associated with monthly updates throughout the year.

DONOR AMENITIES

As a non-profit, Meewasin relies on the generosity of individuals, community groups, foundations, funding grants, and corporations to continue to support their work in conservation, education, and development. Almost 40% of Meewasin's funding is generated through donations and grants, which contributes to the ongoing work Meewasin does. All programs offer donors the opportunity to remember loved ones or honour an individual while being part of a lasting legacy, Meewasin. These donations help Meewasin continue to educate, conserve, and develop throughout the Meewasin Valley.

Donors can choose from a variety of programs, such as planned giving, 500 club, conservation easements, corporate giving, benches, seating nodes, Plant-A-Tree, memorial forest, and/or brick engraving.

As part of the Trail Study, a number of the donor programs (site furnishings, drinking fountains, bricks, Plant-A-Tree) were assessed. The viability of the programs, with respect to the number of assets in the Valley, were analyzed to see how these assets are tracked and what type of replacement or capital costs are involved to maintain and/or add new amenities.

Some of the programs under review have a tendency to cost more in the long run than what they bring in which, is not necessarily negative as it allows for participation and ownership in the Valley, but it is important to understand their impact and how best to manage them as Meewasin moves forward.

Further details about this program and recommendations can be reviewed in Appendix L.



Image 18 – Example of Donor Amenity Management System

<http://www.nektardata.com/resource/products/>)

RECOMMENDATIONS

Trail users have come to expect a safe, relaxed and quiet environment without the concerns related to an automobile-centric space.

Trail Recommendations:

1. All trail construction should meet the standards as laid out by the City of Saskatoon's specifications;
2. Build the Primary Trail to be accessible throughout the Meewasin Valley (e.g. all ramps have a maximum grade of 5%, cross slopes do not exceed 2%, and curb cuts are provided at entrances and exits. Upgrade the sites that do not meet these requirements;
3. Adopt the recommended trail widths based on capacity for future trail building;
4. Plan and implement the twinning and widening of trails;
5. Install wheelchair accessible drinking fountains where not already installed and develop a plan for future locations;
6. Implement a maintenance program for the upkeep of the entire trail system (trail and amenities);
7. Develop a tracking system in conjunction with the City of Saskatoon for a responsive (preventative)e maintenance program for the trail and amenities;
8. No review of the suggested speed limits was completed during this study – consider a review and future enforcement;
9. Develop an education program about trail etiquette and the promotion of active living to help encourage a change in lifestyle;
10. Review and research a steward or ambassador type program for education and enforcement;
11. Work with the City of Saskatoon's Active Transportation Plan;
12. Work with the City of Saskatoon;
13. Develop an interactive trail map;
14. Review the trail for use at night and develop a trail lighting standard for evening use;
15. Review signs by Meewasin and City of Saskatoon staff with a recommendation that one agency, preferably Meewasin, oversee the installation and approval of all interpretive, regulatory, directional and branding signs in the Valley;
16. Review and assess the trail systems outside of Saskatoon city limits;
17. Continue counts and add more trail counters that differentiate between trail use; and
18. A night audit of the trail should be considered.

Recommendations for Signage in the Meewasin Valley:

1. Use graffiti resistant surfaces on signs;
2. Develop a tracking system and maintenance program;
3. Review signage implementation – Meewasin oversee implementation of all signs in the valley.

Recommended Vegetation Management Practice:

1. Develop a vegetation management program including:

- Prune all vegetation back 2.0 metres from trail edge where possible and where this is not possible a minimum of 1.0 metres;
- Prune overhanging vegetation to a minimum of 3.0 metres height throughout the entire system. Start in the southwest for pruning;
- 2. If construction or trail upgrades are happening in an area the vegetation should be addressed at that time;
- 3. Prune the protected views on an annual basis to maintain the views; and
- 4. Map all important view-sheds and develop management standards.

Recommendations for Intersections and Crosswalks:

1. All entries to trail (crosswalks) should be cleared of plant material to ensure that a person in a wheelchair or a small child can see the oncoming traffic and make eye contact with the driver;
2. Paint zebra cross walks at all trail entrances; and
3. Ensure all crosswalks adhere to City of Saskatoon policies.
4. Complete a crosswalk study at trail entrances to address conflict and provide necessary recommendations;
5. Complete regular inspections. These inspections will alert maintenance crews to missing signs or needed maintenance for crosswalk signs;
6. Install crosswalk signs at all intersections entering the trail;
7. Clear plant material a minimum of 2.0 metres back from signs;
8. Develop an educational or awareness campaign in conjunction with Saskatoon Police Services to increase the safety of cyclists and pedestrians; and

Other Recommendations

9. Standardized reporting method (paper or smart phone application);
10. Provide information as to which agency is responsible for what;
11. Encourage the public to report and provide information. This should be a dedicated email, not the general meewasin@meewasin.com;
12. Once reported, remove graffiti promptly and repair broken site furnishings within a reasonable time frame;
13. Develop community education programs and media blitz; and
14. Report and address unwanted or illegal behavior.

Closing Remarks

Meewasin reviewed the overall project list and determined approximately \$16,000,000 is needed to upgrade the trail to current standards and proposed standards. Looking to the future, Meewasin adjusted the proposed standards to project a cost.

Meewasin reviewed two scenarios with an annual capital budget allocation of \$500,000 and \$1,000,000 with inflation factors to model an implementation strategy with a ten year time horizon (Figure 15).

For instance, at \$500,000 per year Meewasin can attend to over half of the top ten critical projects within 10 years. With an increase to \$1,000,000 per year over 90% of the top ten critical projects can be completed. These numbers are based strictly on a cyclical capital replacement program. The cost assessment for the annual maintenance program is suggested but no annual funding has been assessed in this report nor for any other implications of these recommendations (e.g. additional educational activities).

In closing, throughout Meewasin's strategic planning process, clear consistent messages from the public and stakeholders emphasized that the Meewasin Trail network should be the primary focus over the next ten years. Emphasis should be placed on "improving and refreshing" the existing infrastructure to "optimize the carrying capacity" of the trail network for today and into the future (Meewasin Valley Authority 2014). With every passing season the degradation of the Meewasin Trail will become more extensive and costly to repair. Overall, this study provides an approach to address and improve this cherished asset.

Trail Infrastructure - Priority Replacment By Trail Section

| Priority | Trail Sections | Estimated Year Constructed | Recommendation | Projected Duration | Cost 2014 \$\$\$* |
|----------|---|----------------------------|---|--------------------|-------------------|
| 1 | Mendel | 1986-1989 | Accessibility - Replace trail along the boardwalk (river edge trail) | 1 years | \$ 865,294.56 |
| 2 | Cosmopolitan Park | 1993-1994 | Build Primary Trail followed by secondary trail - widen to 6m wide | 2 years | \$ 1,752,597.68 |
| 3 | Kiwanis Park | 1982 | Accessibility, drainage, widen trail to 6m | 2 years | \$ 1,385,426.12 |
| 4 | Spadina (Meewasin Washroom Shelter to Weir) | 1982 | Widen trail to 4m - accessibility issues at many of the entrances along this section of trail | 3 years | \$ 1,379,642.59 |
| 5 | University Trail | 1981-1984 | Widen trail to 6m - accessibility concerns at the entrance from the University Bridge | 3 years | \$ 2,234,427.19 |
| 6 | Meewasin Riverworks (Weir - 33rd to Queen) | 1982/2003 | Widen trail (or twin trail) - This section through the Mendel is the busiest section of trail during the evening hours | 4 years | \$ 1,386,783.59 |
| 8 | Meewasin Park | 1981 | Trail is one of the oldest sections. It is need of an upgrade. Entrance from parking lot is not accessible. Widen to 4m. | 4 years | \$ 1,935,889.15 |
| 9 | Rotary Park | 1996-1997 | Widen to 6m | 1 years | \$ 998,439.04 |
| 7 | CPR to Circle Drive North | 1995-1996/2001 | Widen trail to 4m - Major accessibility concerns at Circle Drive Bridge | 2 years | \$ 861,471.50 |
| 10 | Victoria Park | 1985-1986/2010 | Widen trail to 4m | 2 years | \$ 2,357,061.84 |
| | | | | | \$ 15,157,033.27 |

Meewasin Matters Trail Campaign is not part of the infrastructure analysis. *Based on 2014 dollars

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APPENDIX

A. ALTA PLANNING + ASSOCIATES REPORTS

- Meewasin Trail – User Count and Demand Estimation Report
- Meewasin Trail – User Survey Report
- Meewasin Trail Comparison 11-03-2014

Meewasin Trail
User Count Report Addendum | October 2014



Introduction

In 2012 and 2013, the Meewasin Valley Authority conducted a series of user counts along the Meewasin Trail. These counts were designed to quantify use patterns across the trail network. The results, which were analyzed and published in 2014 in collaboration with Alta Planning + Design, revealed patterns such as:

- » A 57% and 43% mode share for pedestrians and cyclists, respectively
- » A systemwide average peak volume of 89 users per hour
- » High peak volumes (164 persons per hour, or pph) at Mendel Art Gallery
- » High peak bicycle volumes (78 pph) at Stew Uzelman Pedway
- » Balanced volumes on the west side and east side of the trail
- » Primarily pedestrian use in central areas and mostly bicycle use in outlying areas

This memorandum is designed to supplement these insights by comparing Meewasin against other trail networks in peer cities. This contextual analysis demonstrates that, for a moderate-sized city, Saskatoon's premiere trail is busier than many others in North America, with user volumes approaching that of the largest cities.



Photo credit: Saskatoon Cycle Chic

Methodological Challenges

Estimating systemwide levels of pedestrian and cyclist traffic on multi-use path networks such as the Meewasin Trail is a challenging exercise, and comparing activity on different trail systems presents an additional hurdle. This section outlines some of the main challenges.

1 It is rarely possible to collect data in a continuous manner across an entire trail network - instead, sample locations are selected to periodically measure pedestrian and cyclist activity at specified points. Regardless of how accurate these point counts are, the results cannot be easily interpolated along the network (i.e. to estimate activity levels between screenline locations).

Trail surveys can and should report the total number of users counted, but this figure is not a meaningful indicator of trail activity because it does not control for double-counting - i.e. user trips which cross several screenline locations. Without accompanying data to describe the distribution of user trip distances on a trail, the double-count effect cannot be readily controlled for. Interpreting the total number of users counted as the total number of trail visits will over-estimate user volumes, with the highest estimates found on trails with the most screenline samples. A more extensive sampling effort should be rewarded with more accurate and reliable data - not just larger numbers.

Unfortunately, some of the trail user count reports produced in North America in recent years generate top-line results by summing all trail users counted. This practice exacerbates the difficulties in comparing results between different trail networks.

2 A further challenge stems from the nature of sampling itself. Typically, limitations in financial and human resources mean that screenline samples are conducted for 1- or 2-hour periods and repeated across several days. Model-based tools are available to extrapolate point samples across a 24-hour period and longer time frames. The National Bicycle and Pedestrian Documentation Project (NBPD) model - used for the Meewasin User Count Report - is the most widely used tool. The NBPD model controls for weekly and seasonal variations in active travel, while accounting for geographic differences in climate. However, the extrapolation process introduces a degree of error into the estimates. Moreover, the use of alternative models or, in some instances, automated (24-hour) counters, means that sample-based estimates are not always comparable with one another. The lack of standardization in this area is a barrier to reliably comparing trail volumes on different systems.

3 Finally, individual count methodologies differ across trail systems. Some, like Meewasin, set up screenlines on the trail itself, while others attempt to count users at access points on either side of the trail. Both of these methods are sound, but the results are not comparable. Other differences in count methodologies include the user types counted (e.g. joggers and equestrians) the time periods surveyed (e.g. hourly or bi-hourly) and the indicators reported (e.g. peak hour users, average users, total users). Variations in reporting make it challenging to reliably compare data across jurisdictions.

For these reasons, this memo attempts to avoid the uncertainty associated with comparing systemwide projections. Instead, it examines counts at individual screenlines. By focusing on single locations - namely, the busiest locations - the volumes on different trails can be more reliably compared with the Meewasin Trail.

Case Study: Capital Crescent Trail - Washington, D.C.

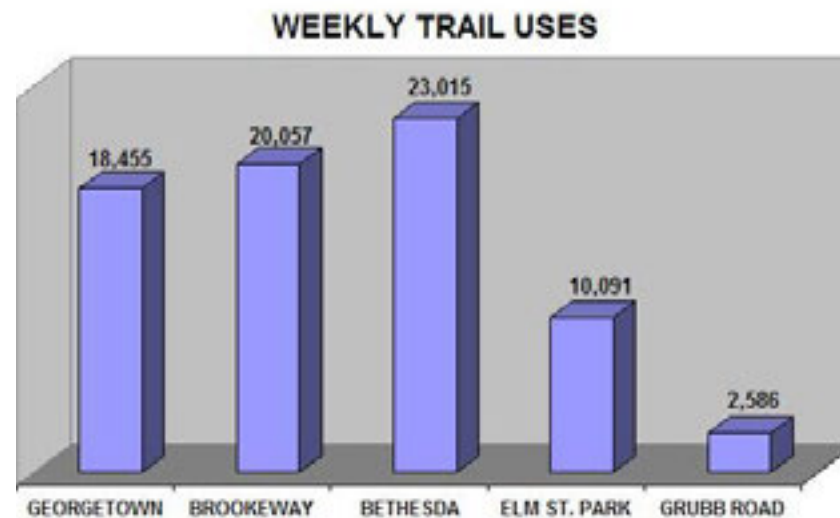
Capital Crescent Trail (CCT) in Washington, DC has weekly volumes ranging from around 2,500 (at outer survey locations) to 23,000 (at central locations). The top 3 locations for Capital Crescent averaged 20,500 projected users per week.

By comparison, Meewasin's projections range from 500 at Diefenbaker Park¹ to nearly 17,000 at Mendel Art Gallery. The top 3 locations for Meewasin averaged 15,500 projected users per week. At the busiest locations, then, Meewasin's projected weekly volumes are roughly 25% lower than the Capital Crescent Trail's.

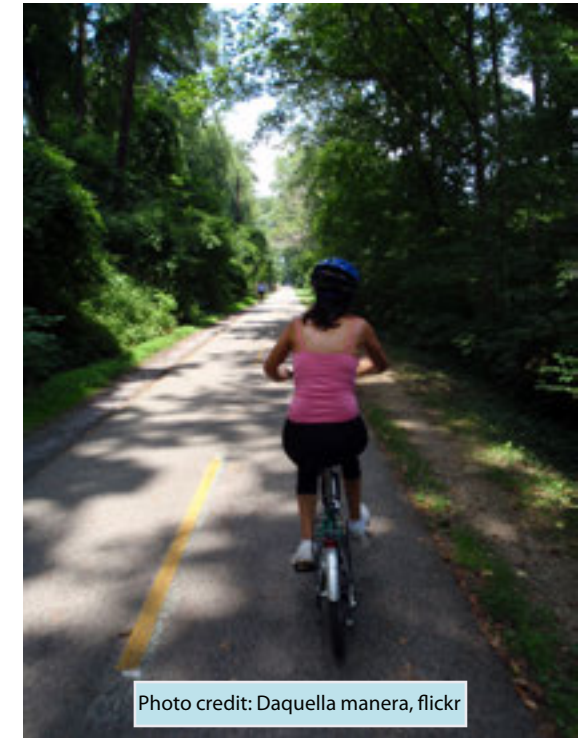
Bethesda Trailhead is the Capital Crescent Trail's busiest location, with a weekend maximum hourly volume of 565, average hourly volumes of 415, and minimum hourly volumes of 274. These hourly volumes are not directly comparable with the data published in the Meewasin Trail User Count Report (2014), which was reported in 2-hour increments. Mendel Art Gallery's peak 2-hour volume of 472, found during the weekday evening, averages to only 236 per hour - significantly less than the Bethesda location. However, when examining the busiest single hour on Meewasin - found at Mendel Art Gallery between 5 and 6 pm

on Thursday, May 30 - 342 people were counted. This one-hour peak count is higher than the two-hour average (497) would suggest, but it is still significantly lower than the maximum peak hour volume for Capital Crescent Trail (565). These peak-hour counts suggest that, when both trails are at their busiest, the CCT sees about 200 more users per hour than Meewasin.

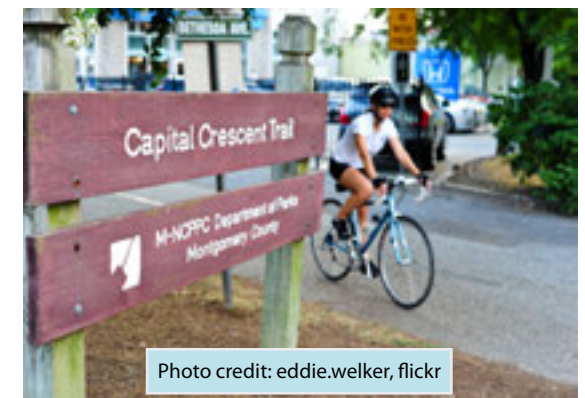
These results are encouraging in light of the fact that Capital Crescent Trail is located in a much larger city than Saskatoon. The City of Saskatoon has a population of just over 200,000, with a regional (CMA) population of 260,000. Washington, D.C., by comparison, has a population of over 600,000, with a regional (MSA) population of just under 6 million - three times larger at the city level and at least twenty times larger at the regional level.



Weekly trail use on CCT is roughly 25% higher than Meewasin



Portions of the CCT feature directional separation, which increases user comfort and functional trail capacity



¹ Diefenbaker Park is an outlier; the next lowest screenlines come in around the 1,500 range.

Case Study: Lakefront Trail - Chicago, IL

Chicago's Lakefront Trail may be the busiest multi-use path in North America. Running nearly the entire length of the city along Lake Michigan, the trail passes through The Loop, an employment hub with some of the highest-intensity land uses of any American downtown.

Central portions of the Lakefront Trail have extremely high volumes at select times. The weekend 1-4 pm count at "South of Fullerton" saw about 5,500 users (2,343 pedestrians and 3,196 cyclists) - roughly 250 every 15 minutes. These counts scale up to about 24,000 daily weekend users. Weekday counts at this location were quite different, with about 1,600 users in the 3-hour AM peak and 5,000 in the PM peak. The study reports a broad estimate of 20,774 to 29,855 for weekday traffic to account for this disparity.

By comparison, Meewasin has no locations with projected daily users as high as 20,000. Mendel Art Gallery, with 3,500 projected weekday users (based upon the PM peak sample), comes closest. These volumes are comparable to - but still lower than - outlying screenlines on the Lakefront Trail, which saw volumes in the 5,000 to 10,000 users per day range. This suggests that overall volumes on Lakefront Trail are at least double that of Meewasin.



Photo credit: Marit & Toomas Hinnosaar, flickr

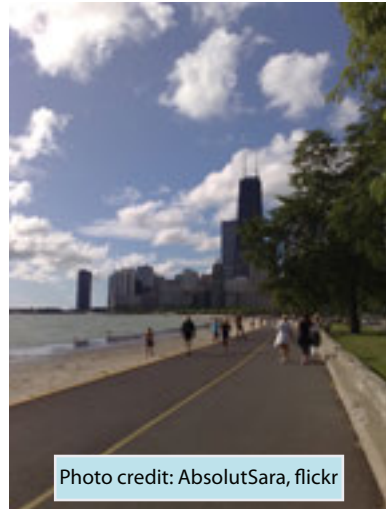


Photo credit: AbsolutSara, flickr

South of Fullerton Along the Trail

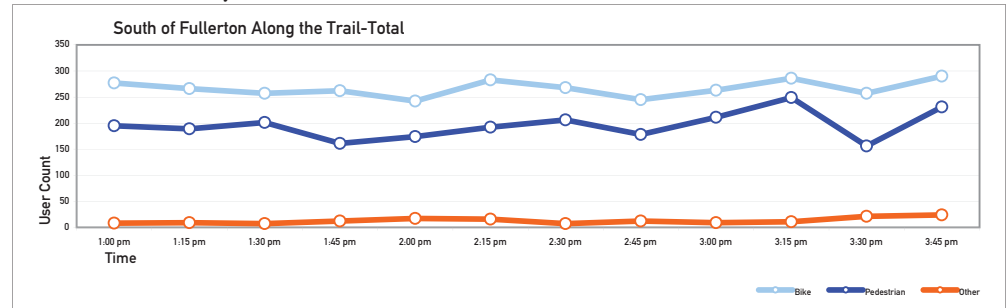
August 2010

Estimated Daily Weekend Users: 23906

Estimated Daily Weekday Users: 20774 to 29855

Data Collected

WEEKEND 1-4 P.M. Bicyclists 3,196 Pedestrians 2,343 Other 153



★ Count Locations

DEVON
PETERSON
BRYN MAWR
FOSTER
LAWRENCE
MONTROSE
IRVING PARK
ADDISON
BELMONT
DIVERSEY
FULLERTON
ARMITAGE
NORTH
DIVISION
CHICAGO
KINZIE
MADISON
HARRISON
ROOSEVELT
16TH
CERMAK
26TH
31ST
35TH
PERSHING
43RD
47TH
51ST
GARFIELD
59TH
63TH
MARQUETTE
71ST

Conclusions

The concluding points listed at right suggest a number of advantages for Meewasin relative to other regional trails in North America.

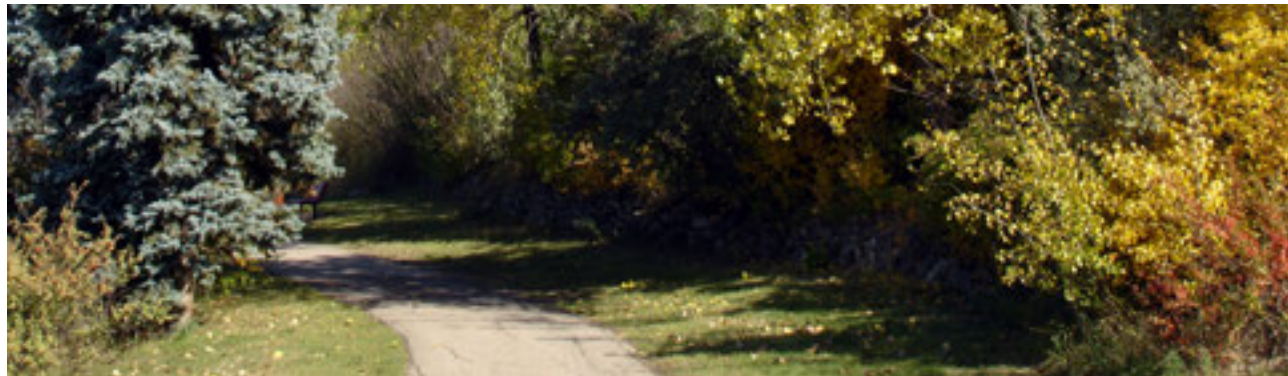
Meewasin demonstrates unusually balanced usage across different days of the week, without the spikes in activity (e.g. weekend afternoons) that characterize trails in other cities. Meewasin also differentiates itself by serving more pedestrians than cyclists - a rare characteristic. Both of these findings are indicative of a multi-purpose facility that effectively serves various trip purposes and modes

- Meewasin has achieved an enviable balance between transportation and recreational trips, and between pedestrians and cyclists.

Relative to other trails, Meewasin's weak point is its overall activity level. However, as this analysis has suggested, user volumes on Meewasin are impressive for a city the size of Saskatoon. Volumes about 25 percent lower than Capital Crescent Trail, for instance, belie the fact that Saskatoon is only a fraction of the size of the American capital city. Similarly, although the Lakefront Trail

has volumes at least twice as high as Meewasin, the City of Chicago is more than thirteen times the size of Saskatoon.

These insights suggest that Meewasin is well-positioned for future growth. Since the trail has already achieved a healthy balance between transportation and recreation usage, trail planners may focus on other issues, such as enhancing representation among women and children and improving maintenance practices and amenities along the trail, in the effort to attract future users.



Summary of Peer City Trails

| Trail System | Location | City Pop. | Reg. Pop. | Peak Hour Users* |
|------------------------|------------------|--------------|-------------|------------------|
| Meewasin Trail | Saskatoon, SK | 0.2 million | 0.3 million | 342 |
| Capital Crescent Trail | Washington, D.C. | 0.6 million | 6.0 million | 565 |
| Lakefront Trail | Chicago, IL | 2.7 million | 9.7 million | 1,846 |
| Genesee Riverway Trail | Rochester, NY | 0.21 million | 1.0 million | 91 |
| Monon Rail Trail | Indianapolis, IN | 0.85 million | 2.0 million | 635 |
| * At busiest location | | | | |

1 Weekday versus weekend. Meewasin is a more balanced trail system than most North American networks, with roughly equal volumes on weekdays and weekends. This suggests that Meewasin is well-used for both transportation and recreation purposes; people in Saskatoon use Meewasin purely for enjoyment, but they also use it to get places they need to go. This is uncharacteristic of many other trail networks, such as the Genesee Riverway Trail in Rochester, NY, which are used primarily for exercise and recreational purposes.

2 User types. Meewasin has a high level of participation among both pedestrians and cyclists, with pedestrians the predominant user in central areas and cyclists in outer areas. Pedestrians slightly outnumber cyclists in all three surveyed periods - weekday peaks (AM and PM) plus weekend mid-day. This pattern differs from most North American trails, such as Chicago's Lakefront Trail, where bicyclists outnumber pedestrians with few exceptions. This information suggests that pedestrian commuting on Meewasin is unusually high.

3 Overall volumes. Meewasin has volumes that are somewhat - but not always substantially - lower than trail networks in larger cities. When city and regional population is considered, Meewasin compares favourably with trail networks in cities like Washington, D.C.

Meewasin Trail

User Count and Demand Estimation Report

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Figure 1: Summary Count Findings

- Total number of trail visitors counted: 11,597
- 57 percent of human visitors were pedestrians and 43 percent were cyclists
- Dogs represent 8 percent of all trail traffic (n = 934)
- Average peak active traffic volume: 89 persons per hour (pph)
- Mendel Art Gallery:
 - Highest average volumes (164 pph) for all trail users and for pedestrians (94 pph)
- Stew Uzelman Pedway:
 - Second-highest average volumes (148 pph) for all trail users and highest bicycle volumes (78 pph)
- Dogs have a significant presence at 3 locations:
 - Sutherland Beach
 - Crocus Prairie
 - Stew Uzelman Pedway

1. Overview and Data Collection Process

In late May 2013, volunteers converged upon the Meewasin Trail in Saskatoon, SK to count trail users at 18 screenline locations (Figure 2). Over the course of one week and five count periods—two in the weekday AM peak, two in the weekday PM peak and one mid-day on a weekend—surveyors accumulated 65 two-hour samples of active traffic volumes.

Users were classified as pedestrians, cyclists, leashed dogs or unleashed dogs and results were tallied at 15-minute intervals (8 sub-periods per two-hour count period). A total of 11,597 trail users were counted, for an average of 178 users per two-hour count period, per location, or 89 users per hour.

AM and PM peak counts were conducted on May 30 (Thursday) and June 4 (Tuesday), with weekend counts taken between these dates on June 1 (Saturday). Weather conditions during these dates were fair, with sunny or overcast skies offering ideal walking and cycling conditions. Morning count periods were the coolest, with temperatures around 10°C. Temperatures were roughly 18°C in the evening count periods and 20°C during the mid-day weekend count.

Figure 2 shows the distribution of screenline locations along Meewasin Trail, while Table 1 summarizes the number and type of samples collected at each location. Due to limited volunteer resources, not all locations were surveyed the same number of times, and some were not surveyed during the weekday count periods. However, all count locations were surveyed on Saturday, June 1.

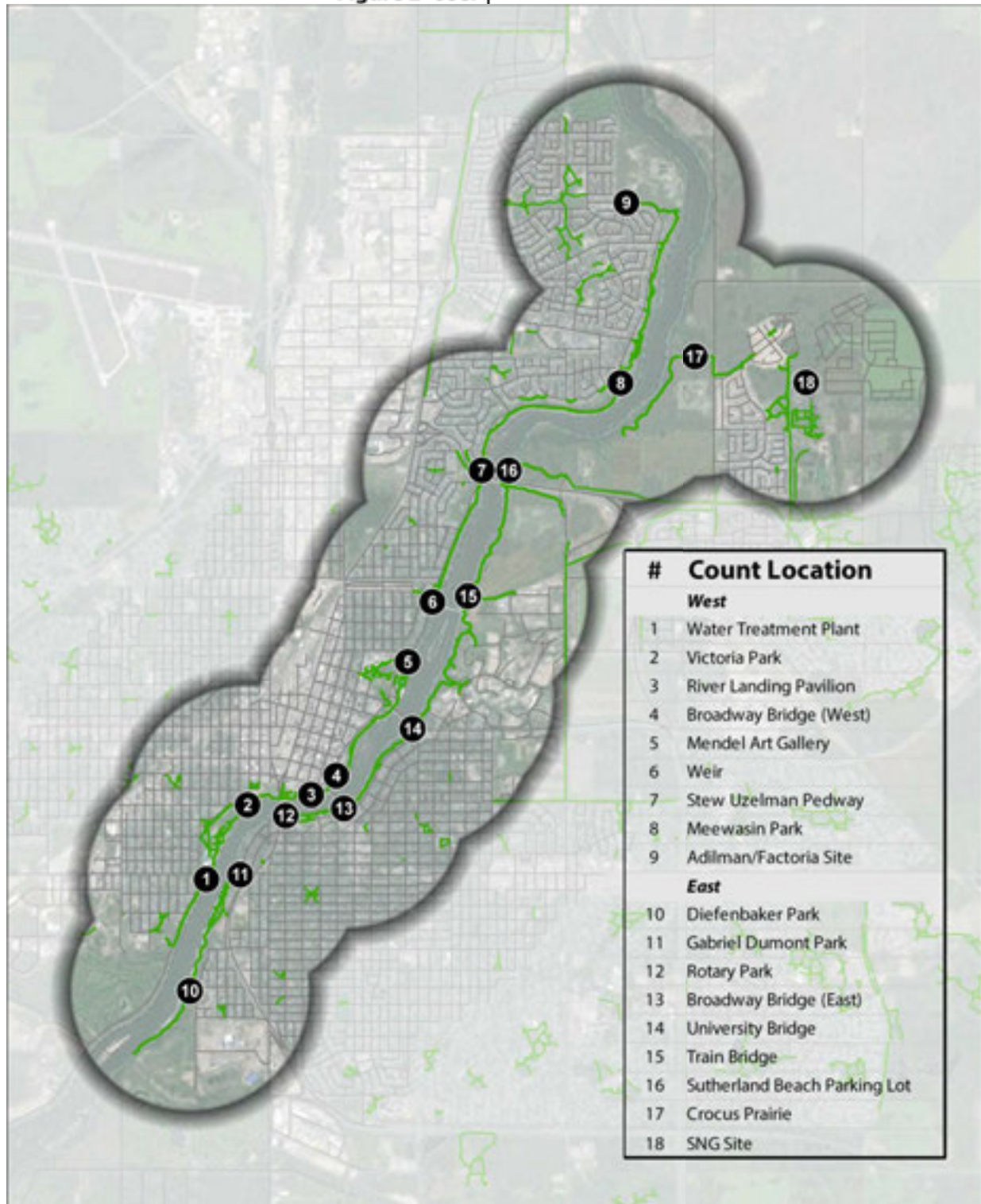
Figure 2: User Count Locations

Table 1: Summary of Sample Data Collected, By User Count Location and Time Period

| Screenline Location | Weekday Morning | Weekday Afternoon | Weekend Mid-day | Total Samples | Total Users | 2-Hour Average | 1-Hour Average |
|------------------------|-----------------|-------------------|-----------------|---------------|---------------|----------------|----------------|
| West Side | 14 | 12 | 9 | 35 | 7,180 | 205 | 103 |
| Water Treatment Plant | No data | No data | ✓ | 1 | 53 | 53 | 27 |
| Victoria Park | ✓✓ | ✓✓ | ✓ | 5 | 748 | 150 | 75 |
| River Landing Pavilion | ✓✓ | ✓✓ | ✓ | 5 | 911 | 182 | 91 |
| Broadway Bridge (West) | ✓✓ | ✓✓ | ✓ | 5 | 910 | 182 | 91 |
| Mendel Art Gallery | ✓✓ | ✓✓ | ✓ | 5 | 1,637 | 327 | 164 |
| Weir | ✓✓ | ✓✓ | ✓ | 5 | 1,130 | 226 | 113 |
| Stew Uzelman Pedway | ✓✓ | ✓✓ | ✓ | 5 | 1,475 | 295 | 148 |
| Meewasin Park | ✓✓ | No data | ✓ | 3 | 246 | 82 | 41 |
| Adilman/Factoria Site | No data | No data | ✓ | 1 | 70 | 70 | 35 |
| East Side | 11 | 10 | 9 | 30 | 4,417 | 147 | 74 |
| Diefenbaker Park | No data | No data | ✓ | 1 | 18 | 18 | 9 |
| Gabriel Dumont Park | ✓✓ | ✓✓ | ✓ | 5 | 246 | 49 | 25 |
| Rotary Park | ✓✓ | ✓✓ | ✓ | 5 | 264 | 53 | 26 |
| Broadway Bridge (East) | ✓✓ | ✓ | ✓ | 4 | 764 | 191 | 96 |
| University Bridge | ✓✓ | ✓✓ | ✓ | 5 | 927 | 185 | 93 |
| Train Bridge | ✓✓ | ✓✓ | ✓ | 5 | 1,348 | 270 | 135 |
| Sutherland Beach | ✓ | ✓ | ✓ | 3 | 713 | 238 | 119 |
| Crocus Prairie | No data | No data | ✓ | 1 | 77 | 77 | 39 |
| SNG Site | No data | No data | ✓ | 1 | 60 | 60 | 30 |
| Total | 25 | 22 | 18 | 65 | 11,597 | 178 | 89 |

✓ = 1 sample ✓✓ = 2 samples

No data = No counts collected

The total number of trail users counted at each location can be divided by the number of available samples to express average two-hour volumes that incorporate all available data. Figure 3 shows these average two-hour volumes for each screenline location. Mendel Art Gallery, Stew Uzelman Pedway and Sutherland Beach have the highest average volumes. Dog traffic is concentrated at Crocus Prairie, Stew Uzelman Pedway and Sutherland Beach. The vast majority of off-leash dog traffic is found at the latter location, which is the site of an off-leash recreation area.

The locations with the highest average trail user volumes are generally those with the most samples. This is not a coincidence, but rather a strategic decision by the project team to target limited volunteer resources at locations known to be busy. This gives confidence that the data from the busiest locations (i.e. those with the highest absolute numbers of travelers) comes from large, reliable samples.

Figure 3: Average Two-Hour Volumes, by User Count Location

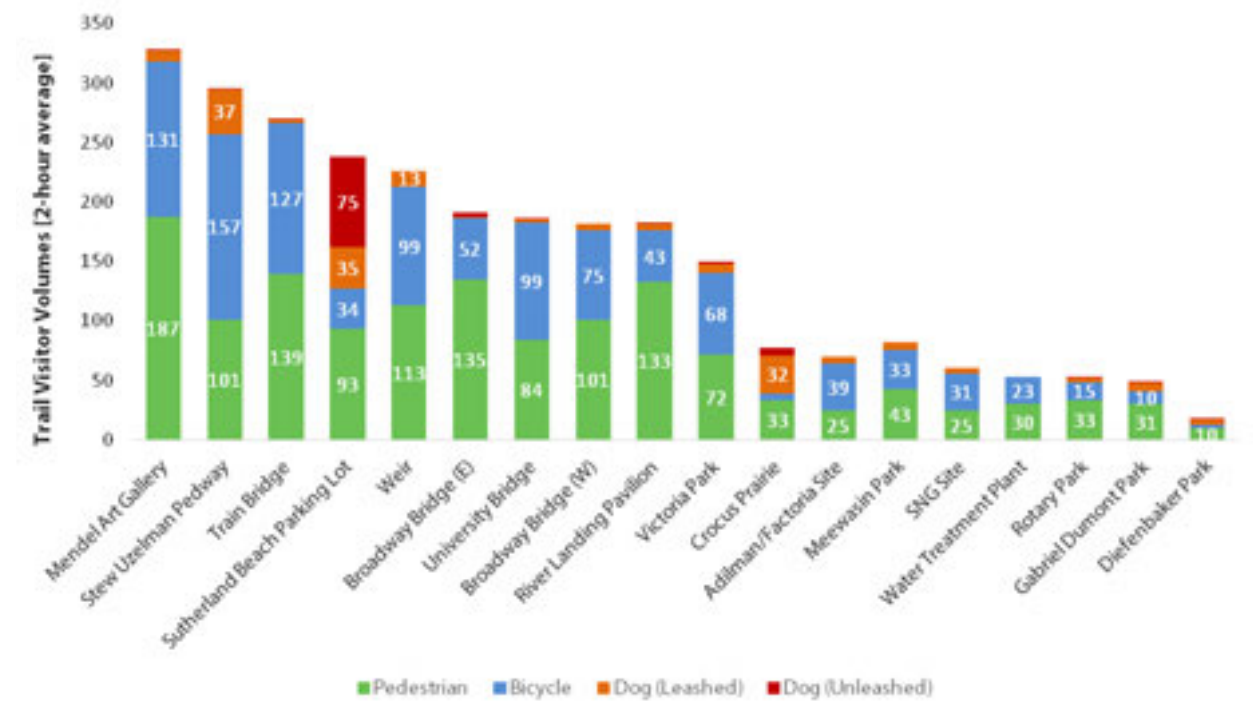
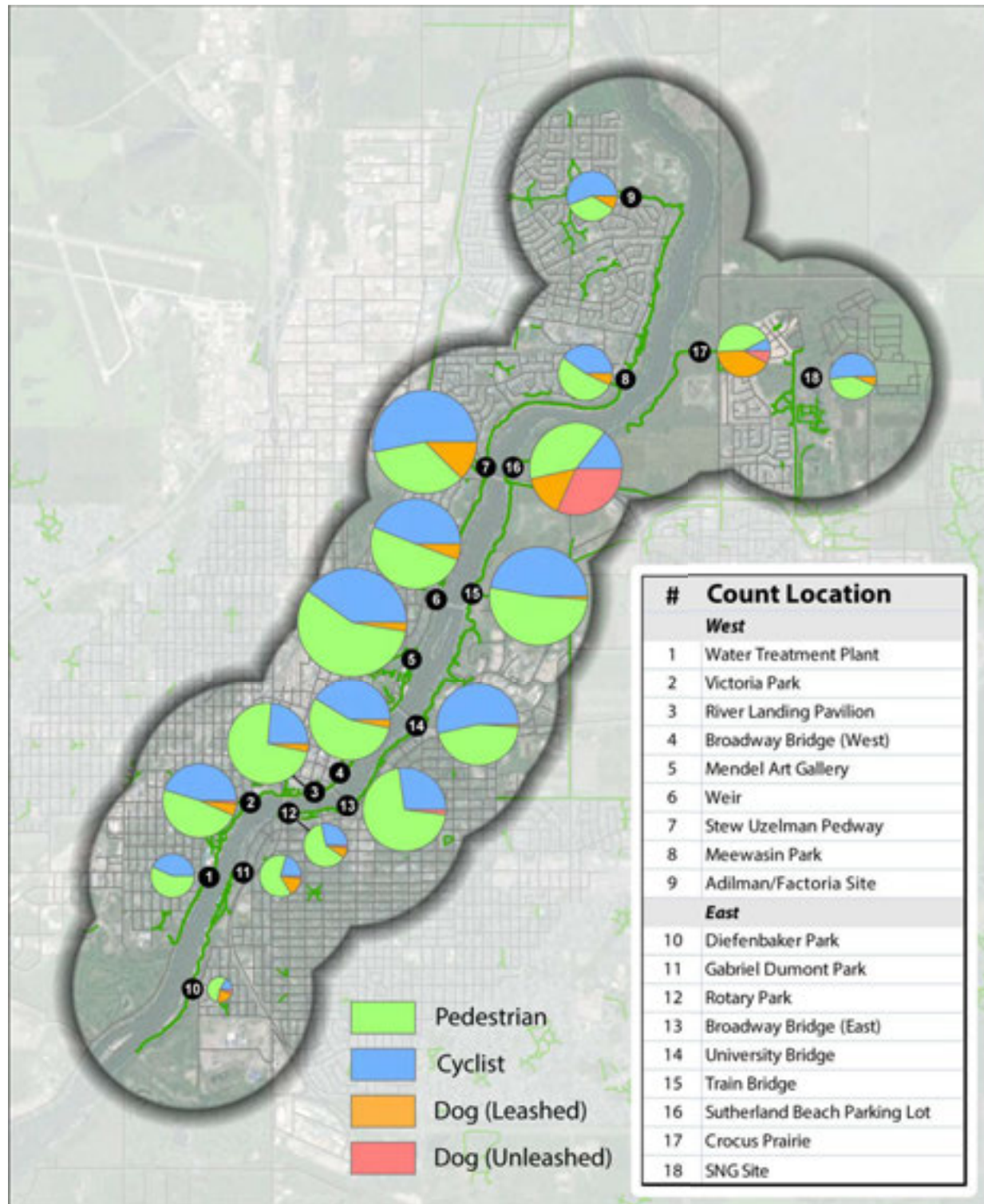


Figure 4 shows how these average two-hour volumes are distributed across Meewasin Trail. For each location, a pie chart is provided that is scaled according to its average two-hour volume. Within each pie, the mode split between pedestrians, cyclists and dogs is shown using green, blue and orange/red, respectively.

Figure 4: Average Two-Hour Volumes, by User Count Location



Several patterns are evident in Figure 4:

- Volumes are relatively balanced on the west and east side of Meewasin Trail.
- The central portion of the trail (adjacent to downtown Saskatoon and the University of Saskatchewan) has the highest average volumes overall.
- Trail traffic in the south and central portions is primarily pedestrian, while cyclists are the majority in the north portion and near the University of Saskatchewan.
- Dog-walkers tend to congregate in three locations in the northern part of the trail: Crocus Prairie, Sutherland Beach and Stew Uzelman Pedway.

These average volumes reveal general patterns in Meewasin Trail traffic, but they do not describe conditions during a morning rush hour or a busy weekend. The following section examines the data in greater detail, focusing on the three busiest time periods in the week: the weekday AM and PM peaks and mid-day on Saturday.

2. Count Results

This section presents detailed count results, by time period, for each of the 18 screenline locations.

Tables 2 to 4 show average two-hour volumes for the AM peak, PM peak and weekend mid-day, respectively. Average volumes are provided to maintain comparability between count locations with varying numbers of count samples. Locations without sample counts for a given period are greyed out to indicate unavailable data.

The tables in this section include estimated daily, weekly and annual volumes derived from the two-hour sample counts. This is an extrapolation of two-hour volumes over longer time frames, accounting for local climate, time of day and day of the week. This methodology is described in greater detail in Section 3, along with a methodology for projecting long-term demand in the ten-, twenty- and thirty-year ranges.

2.1 Weekday AM Peak (7:00 to 9:00)

Table 2 (Weekday AM peak) shows the results of traffic counts undertaken between 7:00 and 9:00 AM on weekdays. The counts suggest that Train Bridge sees the highest volume of traffic, with a total of 216 cyclists and pedestrians passing this location during the morning peak. Other popular locations include Stew Uzelman Pedway, with a count of 215 pedestrians and cyclists, University Bridge, with a total of 188, and Broadway Bridge (E), with a total of 165. It is noteworthy that all four of the locations are in close proximity to bridges, suggesting that bridge crossings are a focal point of activity within the trail system.¹

Table 2: Weekday AM Peak Activity (2-Hour Volumes, 7:00 to 9:00)

| | SAMPLES | 2-HOUR COUNTS* | | | | | ESTIMATED VOLUMES | | |
|------------------------------|-----------|----------------|------------|-----------|-----------|--------------|-------------------|--------|---------|
| | | Bike | Pod | Dog (L) | Dog (R) | Total | DAY | WEEK | YEAR |
| Train Bridge | 2 | 120 | 93 | 3 | 1 | 216 | 2,062 | 17,182 | 691,736 |
| Stew Uzelman Pedway | 2 | 134 | 62 | 18 | 1 | 215 | 2,052 | 17,102 | 688,533 |
| University Bridge | 2 | 106 | 78 | 3 | 1 | 188 | 1,795 | 14,955 | 602,066 |
| Broadway Bridge (E) | 2 | 49 | 113 | 2 | 1 | 165 | 1,575 | 13,125 | 528,409 |
| Mendel Art Gallery | 2 | 77 | 55 | 6 | 1 | 138 | 1,317 | 10,944 | 441,942 |
| Weir | 2 | 58 | 65 | 7 | 0 | 129 | 1,231 | 10,261 | 413,120 |
| Broadway Bridge (W) | 2 | 49 | 65 | 6 | 0 | 120 | 1,145 | 9,545 | 384,298 |
| Victoria Park | 2 | 56 | 40 | 6 | 2 | 103 | 983 | 8,193 | 329,855 |
| Sutherland Beach Parking Lot | 1 | 17 | 27 | 0 | 36 | 80 | 764 | 6,364 | 256,198 |
| Meewasin Park | 2 | 12 | 44 | 8 | 0 | 63 | 601 | 5,011 | 201,756 |
| River Landing Pavilion | 2 | 15 | 40 | 5 | 1 | 61 | 582 | 4,852 | 195,351 |
| Rotary Park | 2 | 2 | 13 | 3 | 1 | 18 | 172 | 1,432 | 57,645 |
| Gabriel Dumont Park | 2 | 2 | 11 | 3 | 1 | 16 | 153 | 1,273 | 51,240 |
| Crocus Prairie | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Adelman/Factoria Site | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| SNV Site | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Water Treatment Plant | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Defender Park | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| SUM | 25 | 695 | 704 | 68 | 44 | 1,510 | | | |
| MODE SHARE | | 46% | 47% | 4% | 3% | 100% | | | |
| MODE SHARE EXCL. DOGS | | 50% | 50% | | | | | | |

*Rolling average of available data for stations with two AM count periods

¹ In user surveys conducted in the fall of 2012 and spring of 2013, bridges along the Meewasin Trail were identified as problem spots in terms of user security and trail maintenance. These concerns, which are explored in a companion report, *Meewasin Trail User Survey Results*, are an important concern which should be taken into account when considering maintenance and priorities for trail improvements.

2.2 Weekday PM Peak (4:00 to 6:00)

Table 3 (Weekday PM peak) suggests that trail volumes are higher in the PM peak than in the AM peak, with an average of 3,184 total users across 12 screenlines (compared to 1,510 in the AM peak). This substantially higher count was recorded despite only sampling 12 of the 18 screenline locations (13 were sampled in the AM peak).

The higher volumes in the PM peak (relative to the AM peak) are consistent across all locations. For example, Mendel Art Gallery saw an increase from 138 trail users to 472, an increase of 240 percent, Stew Uzelman Pedway went from 215 to 409 (up 90 percent), and Train Bridge increased from 216 to 344 (up 59 percent). These trends are likely explained by weather patterns (i.e. cooler mornings and warmer evenings) and leisure preferences (i.e. more recreational activity after the work day than before). Also noteworthy is that the top seven count locations remain largely consistent across the AM and PM counts, except for University Bridge and Sutherland Beach Park. University Bridge sees more traffic in the morning peak while Sutherland Beach Park sees more traffic in the evening.

Table 3: Weekday PM Peak Activity (2-Hour Volumes, 4:00 to 6:00)

| | SAMPLES | 2-HOUR COUNTS* | | | | | ESTIMATED VOLUMES | | |
|------------------------------|-----------|----------------|--------------|------------|-----------|--------------|-------------------|--------|-----------|
| | | Bike | Ped | Dog (L) | Dog (R) | Total | DAY | WEEK | YEAR |
| Mendel Art Gallery | 2 | 162 | 299 | 11 | 0 | 472 | 3,540 | 27,231 | 1,096,304 |
| Stew Uzelman Pedway | 2 | 209 | 146 | 54 | 1 | 409 | 3,068 | 23,596 | 949,975 |
| Sutherland Beach Parking Lot | 1 | 49 | 118 | 106 | 74 | 347 | 2,603 | 20,019 | 805,969 |
| Train Bridge | 2 | 155 | 184 | 5 | 1 | 344 | 2,580 | 19,846 | 799,001 |
| Broadway Bridge (E) | 1 | 74 | 209 | 0 | 12 | 295 | 2,213 | 17,019 | 685,190 |
| Weir | 2 | 126 | 147 | 19 | 0 | 291 | 2,183 | 16,788 | 675,899 |
| Broadway Bridge (W) | 2 | 83 | 168 | 9 | 0 | 258 | 1,935 | 14,885 | 599,251 |
| River Landing Pavilion | 2 | 47 | 162 | 5 | 0 | 214 | 1,605 | 12,346 | 497,053 |
| University Bridge | 2 | 110 | 89 | 2 | 0 | 201 | 1,508 | 11,596 | 466,858 |
| Victoria Park | 2 | 87 | 101 | 9 | 1 | 196 | 1,470 | 11,308 | 455,245 |
| Rotary Park | 2 | 25 | 60 | 5 | 1 | 91 | 683 | 5,250 | 211,364 |
| Gabriel Dumont Park | 2 | 16 | 42 | 10 | 2 | 69 | 518 | 3,981 | 160,265 |
| Meewasin Park | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Crocus Prairie | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Adlimun/Factoria Site | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| SNV Site | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Water Treatment Plant | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Deerbrook Park | 0 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| SUM | 23 | 1,139 | 1,723 | 232 | 91 | 3,184 | | | |
| MODE SHARE | | 36% | 54% | 7% | 3% | 100% | | | |
| MODE SHARE EXCL. DOGS | | 40% | 60% | | | | | | |

*Rolling average of available data for stations with two PM count periods

Tables 2 and 3 also indicate that pedestrians comprise a larger share of Meewasin Trail traffic in the evening than in the morning: the PM mode split is 61% pedestrians and 39% bicycle traffic, while the AM split is 55%-45%. Dogs, too, account for more traffic in the PM peak, where they represent a full nine percent of Meewasin Trail visitors, compared to just five percent in the AM peak (seven percent on average). Perhaps surprisingly, this nine percent share for dogs is the same as reported during the weekend mid-day (Table 3), where dogs also represent nine percent of trail users. The key difference between the PM peak and weekend dog counts is that dogs are more likely to be leashed on weekdays (73 percent) than on the weekend (59 percent).

2.3 Weekend Mid-Day (11:00 to 1:00)

Table 4 features results from the mid-day weekend count period. When two-hour average volumes from each count station are summed, the total is slightly higher during this count period than the weekday PM peak (3,192 versus 3,184), but these totals are not directly comparable because more locations were sampled on the weekend (n=18) than in the PM peak (n=12). For the most part, individual screenlines reported slightly lower volumes in the mid-day weekend period relative to the weekday PM peak. Major exceptions to this pattern were Broadway Bridge (west) and River Landing Pavilion—both of which saw large increases in weekend traffic over the PM peak—and Stew Uzelman Pedway, which had significantly less weekend traffic than weekday PM. Yet, it is noteworthy that the top ten count locations remain consistent from the PM peak to the weekend mid-day, suggesting that the central portion of the trail from Sutherland Beach Park down to Victoria Park is a consistent focal point of much activity within the trail network.

Table 4: Weekend Mid-Day Activity (2-Hour Volumes, 11:00 to 1:00)

| | SAMPLES | 2-HOUR COUNTS | | | | | ESTIMATED VOLUMES | | |
|------------------------------|-----------|---------------|--------------|------------|------------|--------------|-------------------|--------|---------|
| | | Bike | Pod | Dog (L) | Dog (R/L) | Total | DAY | WEEK | YEAR |
| Mendel Art Gallery | 1 | 176 | 228 | 14 | 1 | 419 | 2,095 | 11,639 | 468,579 |
| Broadway Bridge (W) | 1 | 194 | 208 | 11 | 0 | 413 | 2,065 | 11,472 | 461,869 |
| River Landing Pavilion | 1 | 91 | 260 | 12 | 0 | 363 | 1,815 | 10,083 | 405,952 |
| Weir | 1 | 130 | 143 | 17 | 0 | 290 | 1,450 | 8,056 | 324,115 |
| Sutherland Beach Parking Lot | 1 | 35 | 135 | 0 | 116 | 286 | 1,430 | 7,944 | 319,841 |
| Train Bridge | 1 | 84 | 143 | 2 | 0 | 229 | 1,145 | 6,361 | 256,097 |
| Stew Uzelman Pedway | 1 | 97 | 88 | 43 | 0 | 228 | 1,140 | 6,333 | 254,978 |
| University Bridge | 1 | 63 | 86 | 2 | 0 | 151 | 755 | 4,194 | 168,867 |
| Victoria Park | 1 | 58 | 78 | 10 | 4 | 150 | 750 | 4,167 | 167,749 |
| Broadway Bridge (E) | 1 | 35 | 103 | 2 | 1 | 141 | 705 | 3,917 | 157,684 |
| Meewasin Park | 1 | 76 | 40 | 4 | 0 | 120 | 600 | 3,333 | 134,199 |
| Crocus Prairie | 1 | 6 | 33 | 32 | 6 | 77 | 385 | 2,139 | 86,111 |
| Gabriel Dumont Park | 1 | 18 | 48 | 10 | 1 | 77 | 385 | 2,139 | 86,111 |
| Adilman/Factoria Site | 1 | 39 | 25 | 6 | 0 | 70 | 350 | 1,944 | 78,283 |
| SHG Site | 1 | 31 | 25 | 4 | 0 | 60 | 300 | 1,667 | 67,100 |
| Water Treatment Plant | 1 | 23 | 30 | 0 | 0 | 53 | 265 | 1,472 | 59,271 |
| Rotary Park | 1 | 23 | 20 | 4 | 0 | 47 | 235 | 1,306 | 52,561 |
| Defenbaker Park | 1 | 3 | 10 | 4 | 1 | 18 | 90 | 500 | 20,130 |
| SUM | 18 | 1,182 | 1,703 | 177 | 130 | 3,192 | | | |
| MODE SHARE | | 37% | 53% | 6% | 4% | 100% | | | |
| MODE SHARE EXCL. DOGS | | 41% | 59% | | | | | | |

2.4 Overall Results

Table 5 consolidates the data shown in Tables 2 to 4 to derive average two-hour volumes using all available data. This provides a means to compare results across stations that were not surveyed during one or more of the weekday count periods. By controlling for the number of samples at each location, we can analyze the distribution of pedestrian and bicycle volumes across Meewasin Trail. The results show that Mendel Art Gallery accounts for roughly 12 percent of trail traffic, followed by Stew Uzelman Pedway and Sutherland Beach at 11 and 10 percent, respectively. These locations are followed by three bridges: Train Bridge, Broadway Bridge (east side) and Broadway Bridge (west side). Together, these top 6 locations account for almost two-thirds of all traffic sampled on Meewasin Trail. These high-traffic locations are generally located in the central portion of the trail, a spatial pattern that is evident in Figure 2.

Table 5: Consolidated Two-Hour Volumes

| | SAMPLES | 2-HOUR COUNTS* | | | | | | | | | | Total | Avg. Total | Share of Avg. Total |
|------------------------------|---------|----------------|-----------|-------|----------|---------|--------------|---------|--------------|----------------|-------|-------|------------|---------------------|
| | | Bike | Bike Avg. | Pod | Pod Avg. | Dog (S) | Dog (S) Avg. | Dog (W) | Dog (W) Avg. | Dog (S&W) Avg. | | | | |
| Mendel Art Gallery | 5 | 654 | 131 | 935 | 187 | 46 | 9 | 2 | 0 | 1,637 | 327 | 12% | | |
| Stew Uzelman Pedway | 5 | 783 | 157 | 909 | 182 | 186 | 37 | 3 | 1 | 1,475 | 295 | 11% | | |
| Train Bridge | 5 | 633 | 127 | 687 | 139 | 16 | 3 | 2 | 0 | 1,348 | 270 | 10% | | |
| Sutherland Beach Parking Lot | 3 | 501 | 167 | 280 | 93 | 106 | 35 | 226 | 75 | 713 | 238 | 9% | | |
| Weir | 5 | 497 | 99 | 546 | 113 | 67 | 13 | 0 | 0 | 1,130 | 226 | 8% | | |
| Broadway Bridge (E) | 4 | 207 | 52 | 538 | 135 | 5 | 1 | 14 | 4 | 764 | 191 | 7% | | |
| University Bridge | 5 | 495 | 99 | 419 | 84 | 12 | 2 | 1 | 0 | 927 | 185 | 7% | | |
| Broadway Bridge (W) | 5 | 373 | 75 | 505 | 101 | 32 | 6 | 0 | 0 | 910 | 182 | 7% | | |
| River Landing Pavilion | 5 | 214 | 43 | 664 | 133 | 32 | 6 | 1 | 0 | 911 | 182 | 7% | | |
| Victoria Park | 5 | 342 | 68 | 358 | 72 | 39 | 8 | 9 | 2 | 748 | 150 | 6% | | |
| Crocus Prairie | 1 | 6 | 6 | 33 | 33 | 32 | 32 | 6 | 6 | 77 | 77 | 3% | | |
| Adliman/Factoria Site | 1 | 39 | 39 | 25 | 25 | 6 | 6 | 0 | 0 | 70 | 70 | 3% | | |
| Meewasin Park | 3 | 99 | 33 | 128 | 43 | 19 | 6 | 0 | 0 | 246 | 82 | 3% | | |
| SHG Site | 1 | 31 | 31 | 25 | 25 | 4 | 4 | 0 | 0 | 60 | 60 | 2% | | |
| Water Treatment Plant | 1 | 23 | 23 | 30 | 30 | 0 | 0 | 0 | 0 | 53 | 53 | 2% | | |
| Rotary Park | 5 | 76 | 15 | 166 | 33 | 19 | 4 | 3 | 1 | 264 | 53 | 2% | | |
| Gabriel Dumont Park | 5 | 52 | 10 | 153 | 31 | 34 | 7 | 7 | 1 | 246 | 49 | 2% | | |
| Defender Park | 1 | 3 | 3 | 50 | 10 | 4 | 4 | 1 | 1 | 18 | 18 | 1% | | |
| SUM | 65 | 4,628 | 71 | 6,035 | 93 | 639 | 18 | 275 | 4 | 13,597 | 2,708 | 100% | | |
| MODE SHARE | | 40% | | 52% | | 6% | | 2% | | 100% | | | | |
| MODE SHARE EXCL. DOGS | | 43% | | 57% | | | | | | | | | | |

*Rolling average of available data for stations with multiple count periods.

*Rolling average of available data for stations with multiple count periods.

Table 6 provides average results for the weekday peaks and weekend. There are several notable patterns:

- Almost all locations have significantly higher PM peak traffic than AM peak. The major exception is University Bridge, where volumes are relatively balanced.
- Comparing average weekday volumes with weekend volumes (Weekday: Weekend ratio) shows great variation among the user count location. The ratios are as high as 1.6 at Broadway Bridge (East) and as low as 0.4 at River Landing Pavilion. A high ratio means that the location is significantly busier on weekdays, while a low ratio suggests the opposite. Victoria Park, with a ratio of 1.0, has balanced traffic on weekdays and weekends.
- Locations that are busiest on weekdays are mainly serving commuters heading to work, while those that are busiest on weekends are recreational in nature.²

Table 6: Weekday and Weekend Activity Comparison

| | 2-HOUR COUNTS* | | | | |
|------------------------------|----------------|------------|-------------|-----------------|------------------|
| | WEEKDAY AM | WEEKDAY PM | WEEKDAY AVG | WEEKEND MID-DAY | WEEKDAY: WEEKEND |
| Broadway Bridge (E) | 165 | 281 | 223 | 141 | 1.6 |
| Stew Uzelman Pedway | 215 | 409 | 312 | 228 | 1.4 |
| University Bridge | 188 | 201 | 194 | 151 | 1.3 |
| Train Bridge | 216 | 344 | 280 | 229 | 1.2 |
| Rotary Park | 18 | 91 | 54 | 47 | 1.2 |
| Victoria Park | 103 | 196 | 150 | 150 | 1.0 |
| Sutherland Beach Parking Lot | 80 | 347 | 214 | 286 | 0.7 |
| Mendel Art Gallery | 138 | 472 | 305 | 419 | 0.7 |
| Weir | 129 | 291 | 210 | 290 | 0.7 |
| Broadway Bridge (W) | 120 | 258 | 189 | 413 | 0.5 |
| Meewasin Park | 63 | n/a | 63 | 120 | 0.5 |
| Gabriel Dumont Park | 16 | 69 | 42 | 77 | 0.5 |
| River Landing Pavilion | 61 | 214 | 137 | 363 | 0.4 |
| Crocus Prairie | n/a | n/a | n/a | 77 | n/a |
| Adilman/Factoria Site | n/a | n/a | n/a | 70 | n/a |
| SNG Site | n/a | n/a | n/a | 60 | n/a |
| Water Treatment Plant | n/a | n/a | n/a | 53 | n/a |
| Diefenbaker Park | n/a | n/a | n/a | 18 | n/a |

*Rolling average of available data for stations with multiple count periods

² Several other concurrent factors support this notion, including land use (e.g. proximity to the Saskatoon CBD for commuters or parks for recreational users), high weekday volumes at bridges (which tend to serve a more functional role than the active travel network on average), and the presence of dogs at low-ratio (i.e. weekend-oriented) stations.

3. Daily, Weekly and Annual Extrapolation

Estimated daily, weekly and annual volumes were extrapolated from the two-hour volumes at each station based on National Bicycle and Pedestrian Documentation Project (NBPD) methodology. The NBPD tool scales up two-hour samples of trail count data over longer time frames while accounting for local climate, time of day and day of the week. The tool is based upon the known distribution of active travel trips: with the knowledge (for example) that daily trips are concentrated in the AM and PM peaks, and that traffic is lowest in winter (especially in cold climates), the model can extrapolate from two-hour counts regardless of when and where the counts were performed.

3.1 Methodology

For Meewasin Trail, five concurrent screenline counts were carried out, representing three time periods (weekday AM peak, weekday PM peak and weekend mid-day). A rich sample of active transportation volumes (up to five two-hour counts) is thus available for many count locations. The NBPD tool produces separate extrapolations for each two-hour period and should, if the model fits, calculate broadly similar daily, weekly and annual estimates from each of the count periods at the same location. This means that, for count locations that were surveyed more than once, estimates are available based on several different samples. By comparing these estimates against each other, we can verify results and gain a sense of their potential range.

In each of the Tables 2 to 4, estimated daily, weekly and annual volumes were provided for the weekday AM peak, weekday PM peak and weekend mid-day. Table 7 consolidates these estimates in order to compare them. This offers a convenient way to identify “low,” “medium” and “high” estimate scenarios for each location.

3.2 Results

The estimates derived from the PM peak samples are the highest, while those from the mid-day weekend are lowest. Since there is some variation between these estimates, the project team has taken the former as a “high” estimate and the latter as a “low,” with the AM peak representing the middle ground. For the purposes of providing a single reliable estimate (“best guess”), Table 7 takes the average of the available estimates to provide daily, weekly and annual volumes across each count location.

Table 7: Range of 24-Hour Volume Estimates from Three Count Extrapolations

| Time Period | ESTIMATED VOLUMES | | | | | | | | | | | |
|------------------------------|-------------------|---------|---------|---------|---------|---------|---------|---------|-----------|-----------|-----------|---------|
| | Day | | | | Week | | | | Year | | | |
| Sample Source | AM Peak | PM Peak | Weekend | Average | AM Peak | PM Peak | Weekend | Average | AM Peak | PM Peak | Weekend | Average |
| Mendel Art Gallery | 1,317 | 3,540 | 2,095 | 2,317 | 10,944 | 27,231 | 11,639 | 16,605 | 441,942 | 1,096,304 | 468,579 | 668,942 |
| Stew Uzelman Pedway | 2,052 | 3,068 | 1,140 | 2,087 | 17,102 | 23,596 | 6,333 | 15,677 | 688,533 | 949,975 | 254,978 | 631,162 |
| Train Bridge | 2,062 | 2,580 | 1,145 | 1,929 | 17,182 | 19,846 | 6,361 | 14,463 | 691,736 | 799,001 | 256,097 | 582,278 |
| Broadway Bridge (W) | 1,145 | 1,935 | 2,065 | 1,715 | 9,545 | 14,885 | 11,472 | 11,967 | 384,298 | 599,251 | 461,869 | 481,806 |
| Weir | 1,231 | 2,183 | 1,450 | 1,621 | 10,261 | 16,788 | 8,056 | 11,702 | 413,120 | 675,899 | 324,315 | 471,111 |
| Sutherland Beach Parking Lot | 764 | 2,603 | 1,430 | 1,599 | 6,364 | 20,019 | 7,944 | 11,442 | 256,198 | 805,969 | 319,841 | 460,669 |
| Broadway Bridge (E) | 1,575 | 2,213 | 705 | 1,498 | 13,125 | 17,019 | 3,917 | 11,354 | 528,409 | 685,190 | 157,684 | 457,094 |
| University Bridge | 1,795 | 1,508 | 755 | 1,353 | 14,955 | 11,596 | 4,194 | 10,248 | 602,066 | 466,858 | 168,867 | 412,597 |
| River Landing Pavilion | 582 | 1,605 | 1,815 | 1,334 | 4,852 | 12,346 | 10,083 | 9,094 | 195,351 | 497,053 | 405,952 | 366,119 |
| Victoria Park | 983 | 1,470 | 750 | 1,068 | 8,193 | 11,308 | 4,167 | 7,889 | 329,855 | 455,245 | 167,749 | 317,656 |
| Meewasin Park | 601 | n/a | 600 | 601 | 5,011 | n/a | 3,333 | 4,172 | 201,756 | n/a | 134,199 | 167,978 |
| Rotary Park | 172 | 683 | 235 | 363 | 1,432 | 5,250 | 1,306 | 2,663 | 57,645 | 211,364 | 52,561 | 107,190 |
| Gabriel Dumont Park | 153 | 518 | 385 | 352 | 1,273 | 3,981 | 2,139 | 2,464 | 51,340 | 160,265 | 86,111 | 99,205 |
| Crocus Prairie | n/a | n/a | 385 | 385 | n/a | n/a | 2,139 | 2,139 | n/a | n/a | 86,111 | 86,111 |
| Adliman/Factoria Site | n/a | n/a | 350 | 350 | n/a | n/a | 1,944 | 1,944 | n/a | n/a | 78,283 | 78,283 |
| SNG Site | n/a | n/a | 300 | 300 | n/a | n/a | 1,667 | 1,667 | n/a | n/a | 67,100 | 67,100 |
| Water Treatment Plant | n/a | n/a | 265 | 265 | n/a | n/a | 1,472 | 1,472 | n/a | n/a | 59,271 | 59,271 |
| Defenbaker Park | n/a | n/a | 90 | 90 | n/a | n/a | 500 | 500 | n/a | n/a | 20,130 | 20,130 |
| Sum | 14,432 | 23,906 | 15,960 | | 120,239 | 183,865 | 88,666 | | 4,842,149 | 7,402,374 | 3,569,697 | |

The estimates derived from weekend data are lower than those derived from PM peak data, yet these count periods had similar two-hour volumes at many stations. This suggests that the NBPd model scales these volumes using different factors, and as a result may overstate the difference between weekend and weekday trail use patterns. This is likely because the model is built upon data from American communities where multi-use trails are primarily recreational and thus substantially busier on the weekends than on weekdays. When estimating daily traffic on such trails from two-hour sample data, smaller expansion factors are needed for weekend counts (relative to weekday) since these volumes are a larger proportion of overall active traffic. Applying these expansion factors to Meewasin, where there is greater balance between weekday and weekend trail usage, results in relatively low estimates for the weekend mid-day period.³ This is a further justification for averaging the results to find a middle ground between the low, medium and high estimates.

³ The Meewasin Trail is different from many trails in the United States because it connects to significant regional destinations (such as downtown Saskatoon and U of S) and runs through the urban core of Saskatoon. As a result, Meewasin functions as both a commuter route and recreational path, and is well-utilized on both weekdays and weekends.

4. 30-Year Projection

The high-quality data provided by the Meewasin Trail counts offers a means to predict future trail usage with a great deal of accuracy. This is because screenline counts are the most reliable way of assessing current trail usage.⁴ Although other methods are available, they are less accurate because they require the researcher to infer trail volumes from cycling rates in the general community (i.e. Census journey-to-work data) or by using surrogate population and employment data. Thus, when direct trail counts are available, they are the preferred baseline for future projections.

4.1 Methodology

This 30-year projection takes the two-hour average volumes found in Tables 2 to 4 and models the year-over-year increase. The growth rates used for this calculation are conservative estimates that tie Meewasin Trail volumes to the rate of general population growth in the Saskatoon region. The population growth estimates have been provided by the Meewasin Valley Authority in consultation with the City of Saskatoon, and assume an annual population growth rate of 2.5 percent for the City of Saskatoon and 3.5 percent for surrounding communities in the Saskatoon CMA. All count locations were inside the City of Saskatoon. However, several were located at the northern and southern edges of the city. These locations (Diefenbaker Park, SNG Site and Adilman Drive) were assumed to have somewhat higher growth rates in line with neighbouring communities for the following reasons:

- Distance from central Saskatoon and proximity to edge communities;
- Planned extension of Meewasin Trail to the north and south will link in new users through former terminus points;
- Proximity to planned communities (e.g. University Heights phase 1 through 3) that will be bring increased travel demand.

⁴ 24-hour automated counters are even better than manual counting because a continuous sample of trail volumes can be recorded. However, these are more costly than volunteer-driven manual counts, which can produce similar results through targeted sampling of two-hour periods in the weekday and weekend peaks.

4.2 Results

Table 8 shows that, over the next thirty years, active travel volumes on the Meewasin Trail can be expected to roughly double. Mendel Art Gallery is currently the busiest location in two time periods, with 2-hour volumes over 400 users. By 2043, it is expected to have almost 1,000 users in the PM peak.

Table 8: Projected Active Travel Volumes to 2043

| | Growth Rate | 2-HOUR VOLUMES | | | | | | | | | | | |
|------------------------------|-------------|----------------|------|------|------|---------|------|------|------|-----------------|------|------|------|
| | | AM Peak | | | | PM Peak | | | | Weekend Mid-Day | | | |
| | | 2013* | 2023 | 2033 | 2043 | 2013* | 2023 | 2033 | 2043 | 2013 | 2023 | 2033 | 2043 |
| Mendel Art Gallery | 2.5 | 138 | 177 | 226 | 289 | 472 | 604 | 773 | 990 | 419 | 536 | 687 | 879 |
| Stew Uzelman Pedway | 2.5 | 215 | 275 | 352 | 451 | 409 | 524 | 670 | 858 | 228 | 292 | 374 | 478 |
| Sutherland Beach Parking Lot | 2.5 | 80 | 102 | 131 | 168 | 347 | 444 | 569 | 728 | 286 | 366 | 469 | 600 |
| Train Bridge | 2.5 | 216 | 276 | 354 | 453 | 344 | 440 | 564 | 722 | 229 | 293 | 375 | 480 |
| Broadway Bridge (E) | 2.5 | 165 | 211 | 270 | 346 | 295 | 378 | 483 | 619 | 141 | 180 | 231 | 296 |
| Broadway Bridge (W) | 2.5 | 120 | 154 | 197 | 252 | 258 | 330 | 423 | 541 | 413 | 529 | 677 | 864 |
| Weir | 2.5 | 129 | 165 | 211 | 271 | 291 | 373 | 477 | 610 | 290 | 371 | 475 | 608 |
| University Bridge | 2.5 | 188 | 241 | 308 | 394 | 201 | 257 | 329 | 422 | 151 | 193 | 247 | 317 |
| River Landing Pavilion | 2.5 | 61 | 78 | 100 | 128 | 214 | 274 | 351 | 449 | 363 | 465 | 595 | 761 |
| Victoria Park | 2.5 | 103 | 132 | 169 | 216 | 196 | 251 | 321 | 411 | 150 | 192 | 246 | 315 |
| Crocus Prairie | 2.5 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 77 | 99 | 126 | 162 |
| Adilman/Factoria Site | 3.5 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 70 | 99 | 139 | 196 |
| Meewasin Park | 2.5 | 63 | 81 | 103 | 132 | n/a | n/a | n/a | n/a | 120 | 154 | 197 | 252 |
| SNG Site | 3.5 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 60 | 85 | 119 | 168 |
| Water Treatment Plant | 2.5 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 53 | 68 | 87 | 111 |
| Rotary Park | 2.5 | 18 | 23 | 29 | 38 | 91 | 116 | 149 | 191 | 47 | 60 | 77 | 99 |
| Gabriel Dumont Park | 2.5 | 16 | 20 | 26 | 34 | 69 | 88 | 113 | 145 | 77 | 99 | 126 | 162 |
| Diefenbaker Park | 3.5 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 18 | 25 | 36 | 51 |

*Rolling average of available 2013 data for stations with multiple count periods. Orange cells represent volumes of greater than 400 users (200 persons per hour). Blue cells represent volumes of greater than 600 users (300 pph). Green cells represent volumes of greater than 800 users (400 pph).

The cells highlighted in pink in Table 8 are the instances where over 400 users (200 pph) can be expected in a peak two-hour period. A path segment exceeding 200 pph (bi-directional) is a candidate for widening and/or separation of users (through barriers, surfaces and grades) beyond the shared 3-metre pathway of Meewasin Trail. Several other thresholds are also identified: 300 pph (in green) and 400 pph (in blue).

Table 8 indicates that, over time, several locations will experience volumes beyond 400 users (200 pph). Generally speaking, capacity problems will be most acute in the PM peak and on the weekends. By 2023, four count locations are projected to exceed 200 pph in the PM peak, plus three on the weekend. By 2033, this will increase to seven locations in the PM peak and five on the weekend. By 2043, ten of the twelve locations surveyed in the PM peak will have more than 200 pph and eight will be beyond capacity on the weekend. In certain locations, namely Mendel Art Gallery and Stew Uzelman Pedway in the PM peak and Broadway Bridge (west) and Mendel Art Gallery on the weekend, volumes will be above 400 pph.

This paints a picture of a Meewasin Trail that will be busier along its entire length but that will also have pinch points at locations where user volumes exceed path capacity. These locations—highlighted in Table 8—should be monitored over time and be given consideration for priority upgrades in order to mitigate user conflicts as volumes grow. Geographically speaking, these locations are in the central part of the Meewasin Trail, adjacent to downtown Saskatoon and the University of Saskatchewan.

4.3 Design Guidance for Future Trail Upgrades

The path network in Vancouver, BC comprises the full range of pathway types and volumes, from those serving less than 200 pph to those over 600 pph. Its Seawall is a particularly good example of pathway design for accommodating high volumes of active travelers. The following examples show pathway configurations at progressively higher traffic levels, explaining how additional width and separation can be provided as volumes increase over time.

LESS THAN 200 PPH – 3-metre shared pathway (no separation)**Design Considerations**

- 3-metre pathways are well-suited to outlying areas, such as Diefenbaker Park or Adilman Drive, where active travel volumes are generally low.
- Shared pathways of this width do not effectively accommodate passing movements, side-by-side riding, or significant speed differentials between users (e.g. a pedestrian pushing a stroller versus a commuter cyclist).
- Volumes will first exceed 200 pph in the peak hours, and conflicts will be most acute in these time periods.

Figure 5: 3-metre shared pathway

The Existing Meewasin Trail in Saskatoon, SK

[Photo credit: Teebs, flickr]

200 TO 300 PPH – 4-metre shared pathway (no separation)

Design Considerations

- This design provides an additional metre of operating space beyond a standard 3-metre shared pathway
- This can often be accomplished without substantial changes to path alignment and for relatively low cost

Figure 6: 4-metre shared pathway



Central Valley Greenway on Vancouver, BC's east side

[Photo credit: buzzerblog, flickr]

300 TO 600 PPH – 6-metre shared pathway (no separation) or Two separated pathways (6-metre total)**Design Considerations**

- For the separated pathways option, paths can be separated through differentiated surfaces.
- Twin three-metre paths are one option, but the divider can also be shifted to allocate additional space to either path depending on the profile of path users (e.g. 2 m + 4 m = 6 m).
- Asphalt is the preferred surface for wheeled users (including cyclists and wheelchair users) and runners.
- The pedestrian path can be treated with a greater variety of materials, including concrete, asphalt or paving stones.
- If asphalt is used on both paths, additional separation should be provided to reduce the likelihood of conflicts between users. This can be achieved through a vertical buffer (roughly 0.5 metres high) that may consist of curbs, benches, planters and other landscaping elements

Figure 7: 6-metre shared pathway

Seawall in Vancouver, BC's Northeast False Creek

Figure 8: Two separated pathways (2 m bicycle [1-way], 4 m pedestrian)



Seawall in Vancouver, BC's Stanley Park

[Photo credit: W.D. Vanlue, flickr]

OVER 600 PPH⁵ - 4.5 m separated paths**Design Considerations**

- Beyond 600 pph, a shared-use path is inadequate to address potential conflicts between active travelers
- Vertical barriers are the preferred method of separation, and may consist of curbs, benches, planters and other landscaping elements
- Special consideration should be given wayfinding and safety measures at the junctions of pathway access routes

Figure 9: Two 4.5-metre separated pathways

Seawall in Vancouver, BC's Southeast False Creek

⁵ None of the locations surveyed are projected to have average peak volumes in excess of 500 pph by 2043. Nevertheless, this design might be appropriate in selected locations—e.g. at major trail access points, spots with poor sightlines, or adjacent to off-leash dog parks.

Meewasin Trail

User Survey Report

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Summary User Survey Findings

- Total number of trail visitors surveyed: 940
- Number of trail users surveyed, Fall 2012: 284
- Number of trail users surveyed, Spring 2013: 656
- Key themes:
 - Amenities (e.g. bathrooms, water fountains)
 - Maintenance
 - Safety and security
 - Trail improvements (e.g. extension, widening)

1. User Survey Administration Process

In fall 2012 and spring 2013, 940 users of Meewasin Trail in Saskatoon, SK were surveyed.¹ The survey was conducted in-person and online, with participating users given the option to fill out the survey on their own time.

A sample of the paper survey is provided at right. The paper survey was identical to the online survey, and results were digitized by volunteers to create a master database of survey responses.²

Meewasin Trail Survey

Location: Victoria Park Date: June 9/13 Time: 11:10am
 Surveyor: _____ Weather: Sunny

- Gender
☐ Female ☒ Male
- Age group? (check only one)
☐ Under 18 ☐ 19-24 ☒ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65 and over
- What is your postal code?
S7K
- How did you get here today?
☐ Walk ☐ Drive alone ☐ Bicycle ☐ Carpool ☒ Transit ☐ Other _____
- What best describes the primary activity of your trip today? (check all that apply)
 Recreation? ☒ Hiking ☐ Dog walking ☐ Running ☐ Biking ☐ Roller blading ☐ Skateboarding ☐ Enjoying nature ☐ Other _____
 Transportation? ☐ Commuting to work ☐ Traveling to school ☐ Traveling to shopping ☐ Other _____
- When do you typically visit the Meewasin Trail?
☐ Monday ☒ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☒ Saturday ☐ Sunday
- How frequently do you visit the Meewasin Trail?
☐ Daily ☐ Monthly ☒ Weekly ☐ Other _____
- How long to you intend to be here today? (not including travel time to the trail)
☐ Less than one hour ☒ 1-2 hours ☐ 2-4 hours ☐ More than 4 hours
- What distance do you intend to travel on the trail today?
Pool to end Victoria bridge
major inconvenience no wheelchair access for last 3-4 years. Can you put in a wheelchair ramp?
- What is your destination? (reference map)
N/A
- Where did you enter?
midtown
- Where do you intend to exit?
N/A
- In general, do you feel safe visiting the Meewasin Trail?
☒ Yes ☐ No ☐ Sometimes
- If no, what concerns you? (illegal activity, theft, wildlife, etc.)
None
- Please tell us about your trail experience.

| | Great | Good | Fair | Poor |
|-------------------------------------|-----------------------|----------------------------------|----------------------------------|-----------------------|
| 1. Trail conditions | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Usability of maps and signs | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Interactions with other visitors | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Parking | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. Restrooms | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |

* For any "Poor" answers above, please cite specific issues (use back if necessary, note question number)
no signs for children park
some places winter is hard - absolutely necessary to have mirror in washroom

- What specific improvements would you like to see on the trail?
camera if vandalism (eg. mirror being broken)
- How would you rate the Meewasin Valley Trail's value to the community?
☐ Not Important ☐ Somewhat Important ☐ Important ☒ Very Important
- Please rate your support for increased trail funding:
☐ Do not support ☒ Somewhat support ☐ Support ☐ Strongly support
- General Comments (use back if necessary):
Pool to end Victoria bridge
major inconvenience no wheelchair access for last 3-4 years. Can you put in a wheelchair ramp?

¹ Although 940 users were surveyed, few questions have exactly 940 responses. This is due to several factors, including incomplete surveys (i.e. skipped questions), illegible responses, and questions that permitted multiple responses per user.

² Responses were grouped in such a way that results cannot be identified as web-based or in-person.

The table below lists the questions that were asked of survey participants, and indicates whether or not these questions are “open-ended.” Questions that are *not* open-ended have responses grouped into discrete buckets that are pre-defined by the survey team. Questions of this type can be identified in the sample survey form (above) by their usage of radio buttons (check boxes). For instance, for gender and age (questions 2 and 3), respondents were only able to select *male* or *female*, and a pre-defined age range (e.g. *25 to 34*).

Open-ended questions, on the other hand, ask respondents to express their answers in written form, and do not limit the potential responses to a few categories. This means that open-ended questions are inherently more challenging to analyze, since they require post-processing to “encode” answers into discrete analytical categories. Some open-ended questions are relatively simple to encode. For example, *today’s date* (Q1) can be expressed as words or numbers, but these differences do not prevent post-processing of results since all the necessary information is provided. Other open-ended questions, such as *general comments* (Q21), cannot realistically be encoded due to the variety of responses and the qualitative nature of the prompt. In cases where encoding proved unfeasible, verbatim responses are provided instead of a graphic. Appendix A contains verbatim responses for questions 12, 13 and 21.

For the most part, open-ended questions have been successfully encoded. The grouped results for these questions are displayed as tables throughout this report, in contrast with the closed-ended questions (for which graphic outputs were available). The results for open-ended questions are not necessarily less accurate than closed-ended questions, but readers should be aware that these results have been post-processed. One consequence of post-processing is that categories such as “other,” “unknown” and “n/a” become necessary. Another issue is that the chosen categories reflect the biases of the researcher to a certain degree.

Inventory of Survey Questions

| # | Question | Open-Ended? |
|----|--|-------------|
| 1 | Today's Date | Yes |
| 2 | Gender | No |
| 3 | Age | No |
| 4 | Postal Code | Yes |
| 5 | How did you get here today? | No |
| 6 | What best describes the primary activity of your trip today? | No |
| 7 | When do you typically use MT? | No |
| 8 | How frequently do you visit MT? | Yes |
| 9 | How long do you typically spend on MT? | No |
| 10 | What distance do you usually travel on MT? | Yes |
| 11 | What is your typical destination? | Yes |
| 12 | Where do you typically enter the trail? | Yes* |
| 13 | Where do you typically exit the trail? | Yes* |
| 14 | In general, do you feel safe visiting the Meewasin Trail? | No |
| 15 | If no, what concerns you (illegal activity, theft, wildlife, etc.)? | Yes |
| 16 | Please tell us about your trail experience. | No |
| 17 | For any "Poor" answers above, please cite specific issues | Yes |
| 18 | What specific improvements would you like to see on the trail? | Yes |
| 19 | How would you rate the Meewasin Valley Trail's value to the community? | No |
| 20 | Please rate your support for increased trail funding. | No |
| 21 | General comments | Yes** |

*Questions 12 and 13 presented encoding challenges due to varying interpretations of the survey questions and inconsistent place-name terminology. As such, anonymous verbatim responses are provided for these questions in Appendix A. Note that questions 12 and 13 (entrance and exit points) are indirectly analyzed in a companion report, *Meewasin Trail User Count Report*, using a much larger sample dataset derived from 18 screenline locations along the trail. Readers seeking data on Meewasin Trail activity at various locations should consult the *User Count Report*.

**Question 21 (general comments) broadly reflects the more specific concerns highlighted in the preceding questions (14 through 20).

2. User Survey Results

Meewasin Trail survey questions can be divided into two categories:

1. Questions examining trail user and trip characteristics.
2. Questions gauging trail user experience through direct feedback.

Results from the first set of questions, which correspond with numbers 1 through 13 above, are provided in section 2.1. The second group of questions (14 through 21) is discussed in section 2.2.

2.1 Trail User and Trip Characteristics

This section presents results from survey questions that provide information about the typical Meewasin Trail user and his or her trips. This includes demographic data about trail users and geographic information about their trips (e.g. origins and destinations, travel purpose, distance and duration).

By building a profile of Meewasin Trail users, this information provides an understanding of the various ways in which the trail is used. The subsequent section, 2.2 – Trail User Feedback, reviews user opinions on various aspects of the trail experience. This feedback can serve as a key input into the establishment of funding priorities along the trail and the prioritization of future upgrades.

2.1.1 Date of Collection

More individuals were surveyed in spring 2013 (656) than in fall 2012 (284). Together 940 surveys were collected. For both surveys, just over 75 percent of responses were collected on weekdays, which is consistent with the 5:2 split of weekdays to weekends in a given week. This means that the survey dataset is broadly representative of Meewasin Trail usage throughout the week.

For the purposes of this report, results from both fall and spring are provided separately. Breaking out the data in this fashion allows for a comparison of trends between the survey periods. Although not all questions show different results in the fall and spring surveys, many do—and this reveals elements of user preferences and trip characteristics that would not be apparent in looking at an aggregated dataset.

Figure 1: Date of Collection

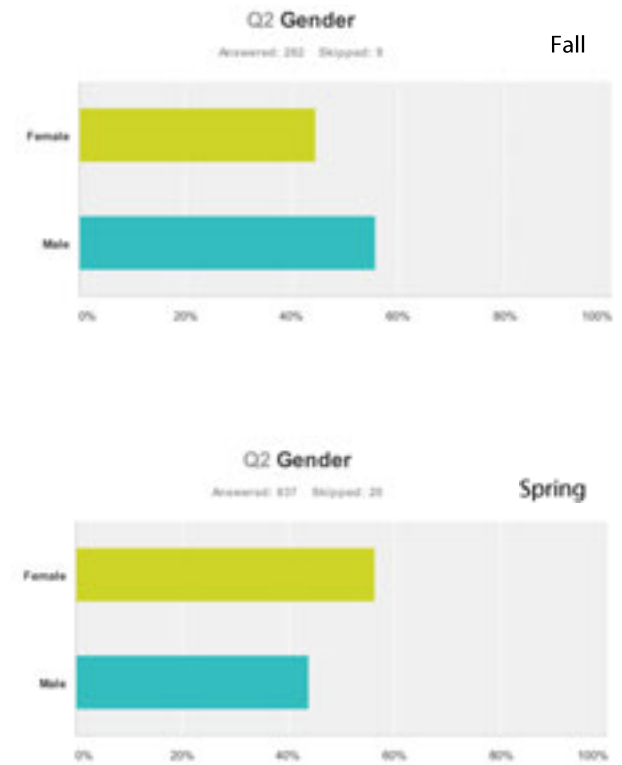
| Spring 2013 | | |
|--------------|------------|------------|
| | Responses | % |
| 5/30 Thurs | 251 | 38 |
| 6/01 Sat | 141 | 21 |
| 6/03 Mon | 19 | 3 |
| 6/04 Tues | 216 | 33 |
| 6/05 to 6/17 | 29 | 4 |
| All | 656 | 100 |
| All weekday | 486 | 78 |
| All weekend | 141 | 22 |

| Fall 2012 | | |
|-------------|------------|------------|
| | Responses | % |
| 9/24 Mon | 3 | 1 |
| 9/27 Thurs | 132 | 46 |
| 9/29 Sat | 65 | 23 |
| 10/02 Tues | 84 | 30 |
| All | 284 | 100 |
| All weekday | 219 | 77 |
| All weekend | 65 | 23 |

2.1.2 Gender

More men than women were surveyed in the in fall survey (56% to 44%), yet the opposite trend was found in the spring, where women outnumbered men 56% to 44%. Since the spring survey was far larger, the proportion of women on the Meewasin Trail is, on average, slightly higher than that of men.

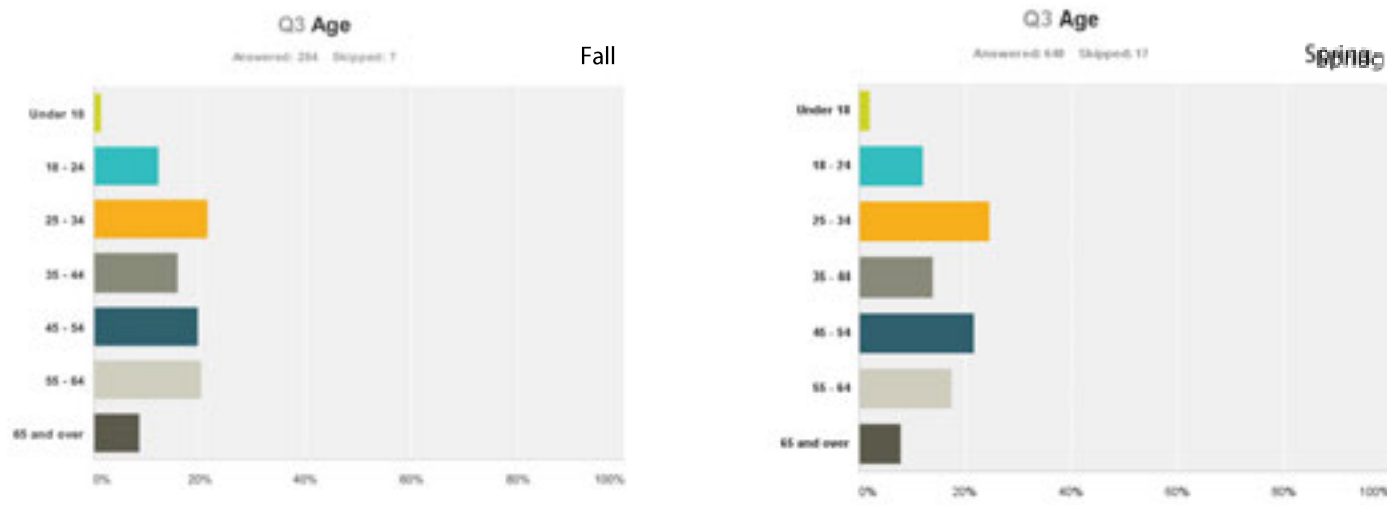
Figure 2: Gender



2.1.3 Age

In both the fall and spring surveys, the single largest age group was the 25 to 34 cohort. Both surveys reported a similar dip among the 35 to 44 age group and a rebound among the 45 to 54 age group. The 55 to 64 age group is also notable—particularly in the fall survey, where this group comprises as many Meewasin Trail users as the 45 to 54 cohort. In both surveys, the least-represented age cohort is the under-18 group, which has substantially less representation than seniors over 65.

Figure 3: Age



2.1.4 Place of Residence

This question reveals place of residence for Meewasin Trail users surveyed in the Fall and Spring sessions. Over 90 percent of users surveyed lived in the City of Saskatoon, with a further 4 percent living outside of Saskatoon but within Saskatchewan. Out-of-province visitors comprise 6 percent of surveyed Meewasin Trail users, on average, with somewhat higher representation in the spring than in the fall (7 percent versus 4 percent). An even higher proportion would likely be found during the summer months—a reflection of seasonal tourism patterns in Saskatoon.

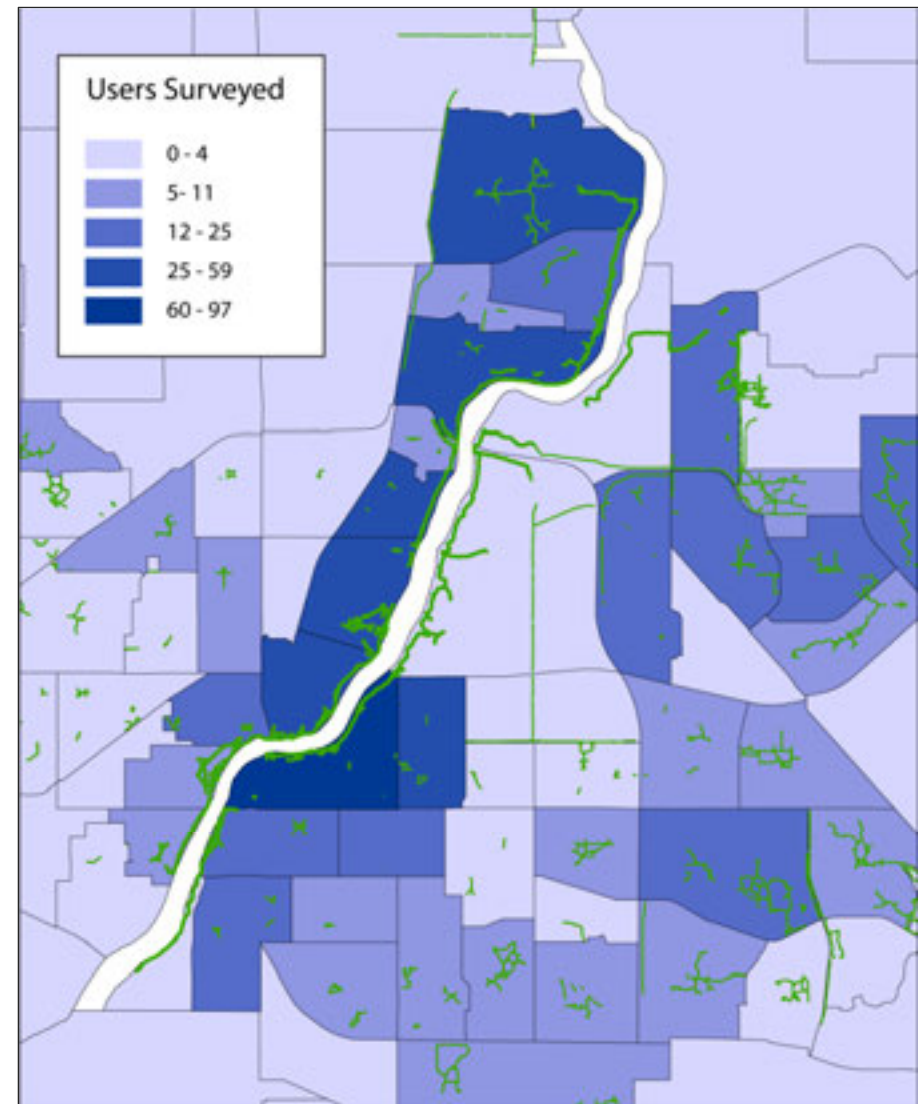
Place of Residence for Surveyed Trail Users

| | Fall 2012 | Spring 2013 | Total |
|--------------------------------|------------------|--------------------|--------------|
| | (n=284) | (n=656) | (n =940) |
| | % | % | % |
| Saskatoon (specified) | 85 | 87 | 87 |
| Saskatoon (unspecified) | 5 | 2 | 3 |
| In province, outside Saskatoon | 4 | 4 | 4 |
| Out of province | 4 | 7 | 6 |
| Unknown | 2 | 0 | 1 |
| Total* | 100 | 100 | 100 |

*Due to rounding, percentages do not necessarily sum to 100.

As Figure 4 shows, Meewasin Trail users disproportionately arrive from neighbourhoods surrounding the trail. The west side of the trail, in particular, is home to a large concentration of trail users. The Nutana neighbourhood, on the east side of the trail, is home to the single largest number of users surveyed.

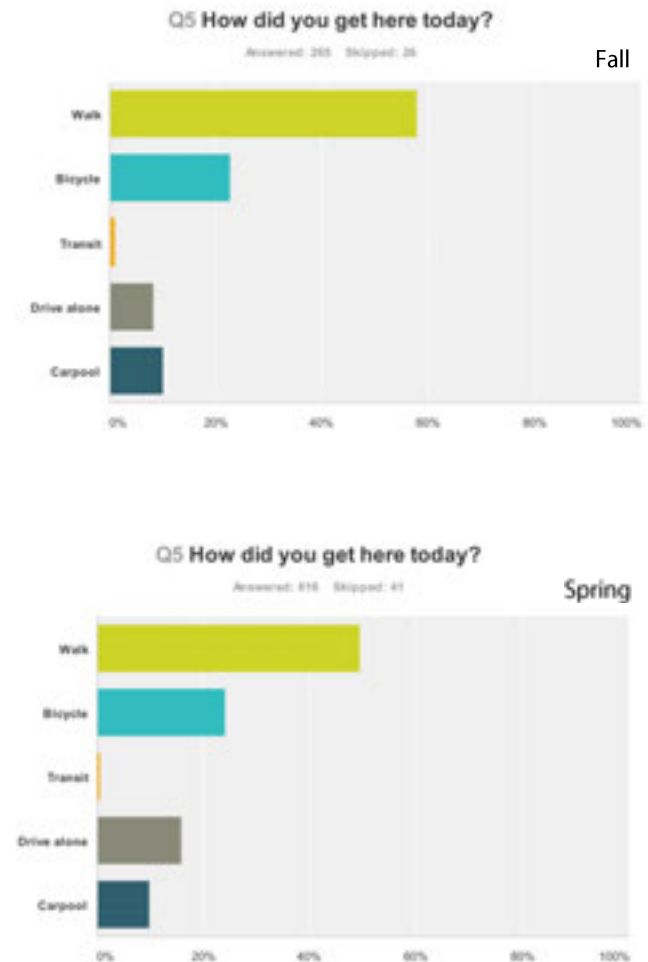
Figure 4: Place of Residence, by Neighbourhood



2.1.5 Mode of Transportation

Fall: Walk 58%, Bike 23% (Active=81%), Transit 1%, Drive 8%, Carpool 10%. Spring: Walk 49%, Bike 24% (Active=73%), Transit 1%, Drive 16%, Carpool 10%. High shares for active transportation reinforce the findings of question 4, i.e. that Meewasin Trail users generally live nearby. It appears that some walk trips are shifted to driving in the spring (other mode shares are roughly stable).

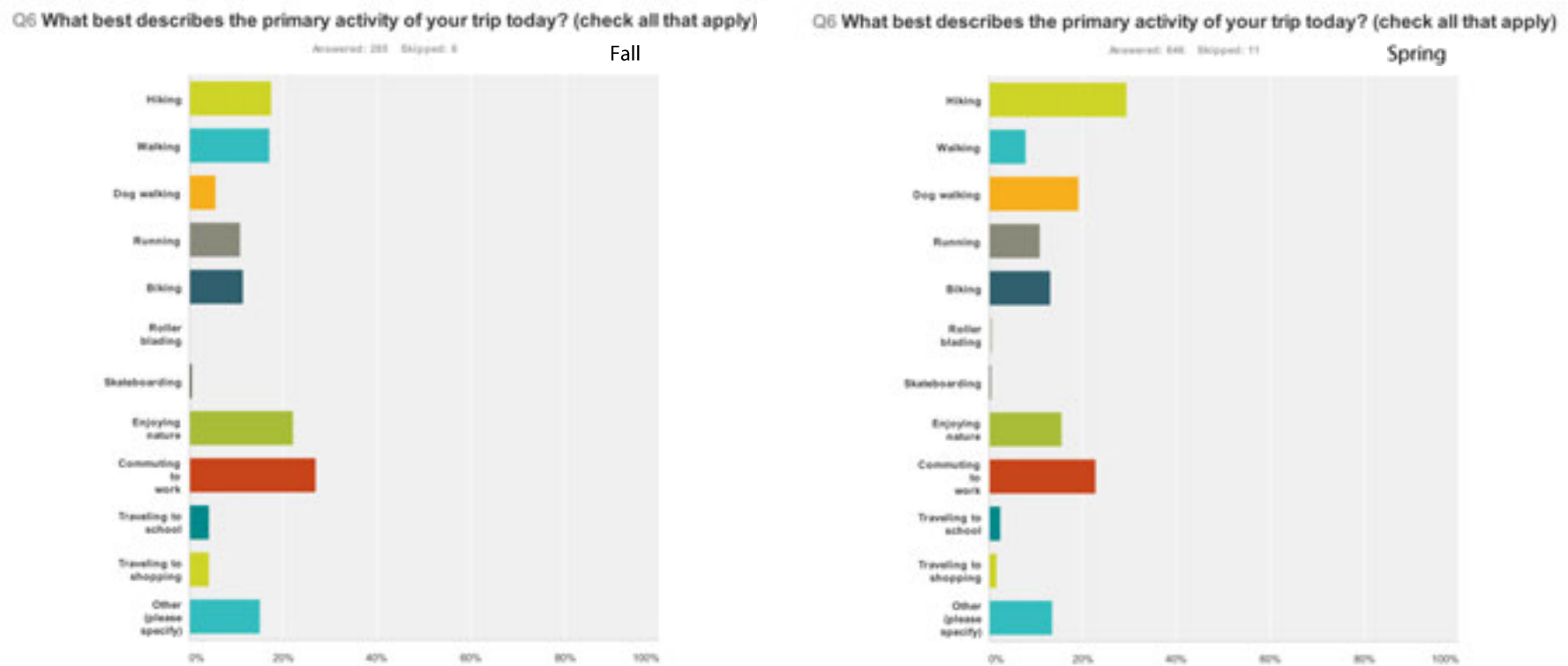
Figure 5: Mode of Transportation



2.1.6 Trip Purpose

The Meewasin Trail is recreational in nature. “Commuting to work” was selected by 27% of respondents in the fall and 23% in the spring. “School” and “Shopping” were selected rarely, but more frequently in fall than in spring (both are over 4% in the fall and around 2% in spring). “Hiking,” and “Dog walking” were significantly higher in spring than in fall (29 vs. 18 percent for hiking; 19 vs. 6 percent for dogs). “Walking,” on the other hand, was down significantly in the spring versus the fall. “Running” and “Biking” were relatively stable across the seasons.

Figure 6: Trip Purpose

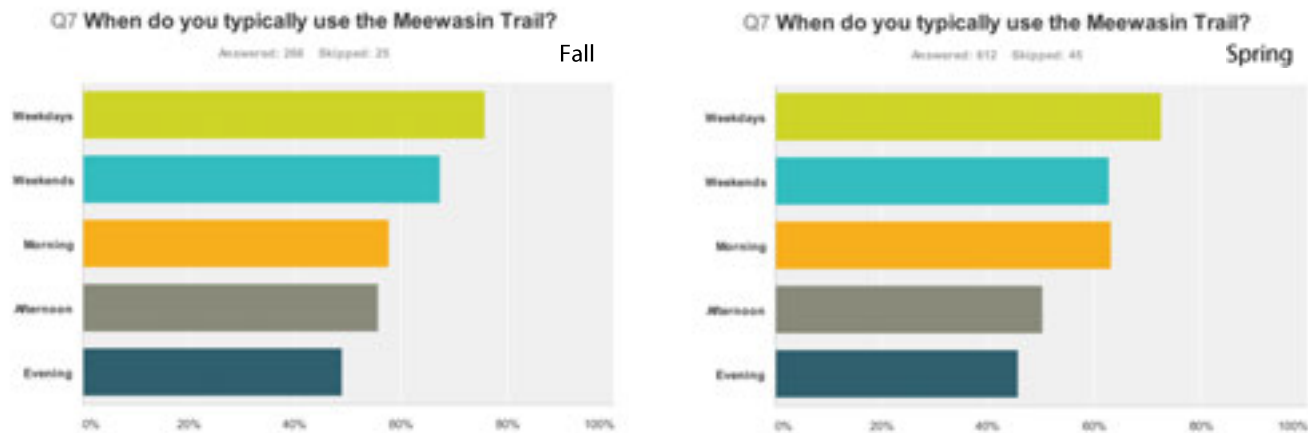


2.1.7 Time of Day

Results are relatively consistent across seasons. “Weekdays” were selected slightly more often than “Weekends.” In both surveys, “Morning” was the most-selected time of day, following by “Afternoon” then “Evening”.

These results are consistent with count data, provided in a companion report,³ that found higher overall activity levels on weekdays than on weekends. That report also concluded that the weekday PM peak (4:00 to 6:00)—*not* the morning—was the busiest time of the week along most of the Meewasin Trail. That finding is actually consistent with the results shown below, despite the fact that “morning” looks like most popular time of day. This is because the categories used in this question do not correspond well to “PM peak.” This question effectively splits PM peak ‘votes’ into both the “Afternoon” and “Evening” buckets.⁴ The result of this ‘vote-splitting’ is that the “afternoon” category makes the “evening” category appear smaller than it really is. The count data⁵ confirms that PM peaks are as busy, if not busier, than AM peaks. That report should be consulted for the most accurate estimates of trail volumes at different locations and times.

Figure 7: Time of Day & Day of the Week



³ The *Meewasin Trail User Count Report (2014)* provides a statistically significant analysis of bicycle and pedestrian activity at 18 screenline locations along the trail.

⁴ Interpretations of when “afternoon” ends and “evening” begins are bound to differ; this grey area makes the “evening” results appear lower than they are.

⁵ *Meewasin Trail User Count Report (2014)*.

2.1.8 Trip Frequency

Meewasin Trail users tend to be frequent users. In both surveys the majority of respondents (roughly 63 percent) used the trail 3 or more times per week. The next 25 percent of those surveyed use the trail 1 to 2 times per week. The remaining 12 percent use the trail less than 2-3 times per month.

Figure 8 and several subsequent figures contain a “Trend” column, which represents the *difference* between the spring and fall surveys. In this case, the Trend column reveals an increase in the proportion of users making very frequent trips (3 or more times per week), and a corresponding reduction in the percentage of users only using the trail 2 to 3 times per month. This result is consistent with subsequent questions suggesting that Meewasin Trail users spend more time on the trail, travel longer distances, and feel safer in the spring than in the fall.

With almost 90 percent of trail users visiting on a weekly basis (or more), the Meewasin Trail is already being cared for by a dedicated user community. This may present an opportunity to establish volunteer groups to lead tasks such as crime watch, invasive plant management and trail cleanup in a more formal manner.

Figure 8: Trip Frequency

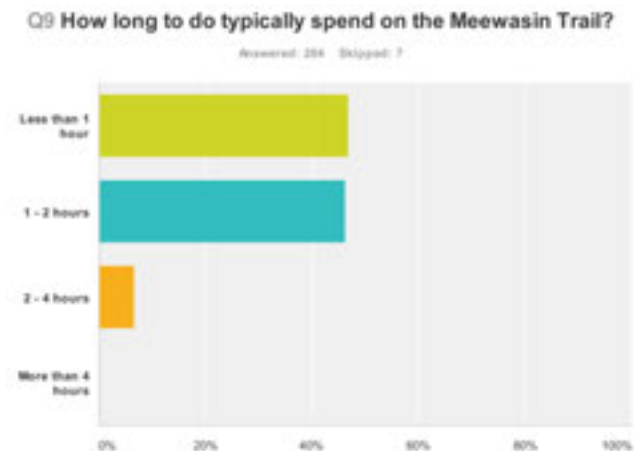
| | Fall 2012 | | Spring 2013 | | Trend | | Total | |
|--------------------------|-----------|------|-------------|------|-----------|------|-----------|-----|
| | Responses | % | Responses | % | Responses | % | Responses | % |
| 3 or more times per week | 184 | 62.8 | 435 | 63.4 | 251 | 0.6 | 619 | 63 |
| 1-2 times per week | 76 | 25.9 | 172 | 25.1 | 96 | -0.9 | 248 | 25 |
| 2-3 times per month | 17 | 5.8 | 19 | 2.8 | 2 | -3.0 | 36 | 4 |
| 2-3 times per year | 2 | 0.7 | 7 | 1.0 | 5 | 0.3 | 9 | 1 |
| Less than 2 per year | 14 | 4.8 | 53 | 7.7 | 39 | 2.9 | 67 | 7 |
| Responses | 293 | 100 | 686 | 100 | 393 | 0.0 | 979 | 100 |

2.1.9 Trip Duration

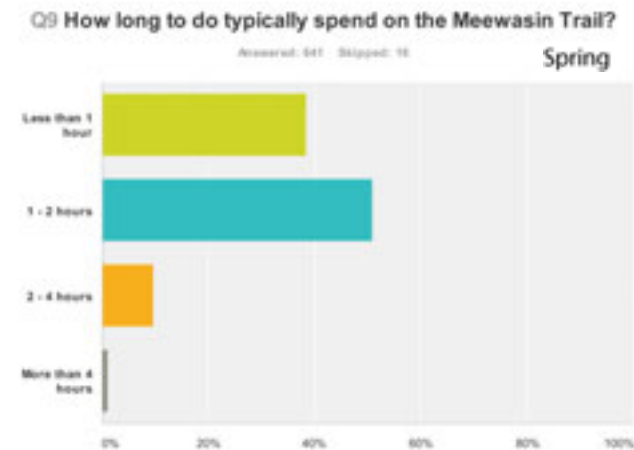
Trip duration results were relatively consistent between surveys. Generally, the fall survey had more responses in the “short trip” category (less than 1 hour), while the spring survey had more responses in the “1 to 2 hours” range. This likely reflects seasonal differences (e.g. temperatures and sunrise/sunset), with users more likely to spend over an hour on the trail in early June than in early October. Despite these differences, in both seasons the vast majority of users (roughly 90%) spend less than 2 hours on the trail.

Figure 9: Trip Duration

Fall



Spring



2.1.10 Trip Distance

Short distances are the most popular. Overall, the largest two user groups were those travelling less than 4 km (31%) and those going between 4 and 8 km (33%). The relative mix of these two groups reversed between the fall and spring surveys, with the shorter distances (0 to 3.9 km) dropping from 38.5% to 27.5% and the longer distances (4 to 8 km) climbing from 26.9% to 36% of trips. The increase in longer trips may reflect weather patterns or seasonal recreation preferences—as with trip duration, there is a greater willingness to travel long distances in early June than early October. The stable rate of trips beyond 20 km in both surveys (roughly 3% of trips) suggests that these enthused, confident users will ride long distances regardless of season.

Although cross-tabulations are not available for this survey dataset, pedestrians generally travel shorter distances than cyclists. 1.8 km is the 90th-percentile distance for pedestrian trips, while the equivalent number for cyclists is 10 km.⁶ It is reasonable to assume that almost all pedestrian trips are represented in the “0 to 3.9 km” group, while bicycle trips are spread across a wider range of distances (including short trips under 4 km, but also extending beyond 20 km).

Figure 10: Trip Distance

| | Fall 2012 | | Spring 2013 | | Trend | | Total | |
|-------------------------|-----------|------|-------------|------|-----------|-------|-----------|-----|
| | Responses | % | Responses | % | Responses | % | Responses | % |
| 0 to 3.9 km | 106 | 38.5 | 168 | 27.5 | 62 | -11.0 | 274 | 31 |
| 4 to 7.9 km | 74 | 26.9 | 220 | 36.0 | 146 | 9.1 | 294 | 33 |
| 8 to 11.9 km | 39 | 14.2 | 86 | 14.1 | 47 | -0.1 | 125 | 14 |
| 12 to 19.9 km | 15 | 5.5 | 13 | 2.1 | -2 | -3.3 | 28 | 3 |
| 20 km+ | 8 | 2.9 | 18 | 2.9 | 10 | 0.0 | 26 | 3 |
| Further analysis needed | 14 | 5.1 | 47 | 7.7 | 33 | 2.6 | 61 | 7 |
| Unspecified | 19 | 6.9 | 59 | 9.7 | 40 | 2.7 | 78 | 9 |
| | 275 | 100 | 611 | 100 | 336 | 0 | 886 | 100 |

⁶ United States National Household Transportation Survey (NHTS), 2009.

2.1.11 Destination

The plurality of responses (34%) indicated “no destination”—i.e. a loop was performed. This suggests the importance of recreational trips (and fitness trips in particular) on the Meewasin Trail. Overall, 9% of respondents specified “home,” 3% “work,” 7% “school,” 6% “downtown” and 2% “Innovation Place.” These categories sum to 27% of all trips, which is consistent with the proportion of work trips found in Figure 6 (23% to 27%). Others specified buildings, landmarks and geographic areas: popular responses included Downtown, School/University, Bridges, Parks, Broadway, Weir and Innovation Place. The percentage of respondents selecting “home” decreased 10.8 percentage points between fall and spring, while “None/Loop” increased 8.2 percentage points. The increase in loop trips in the spring survey is consistent with the longer trips taken in the spring (see Figure 9 and 10), and suggests that recreational and fitness trips are somewhat more popular in the spring than in the fall.

| | Fall 2012 | | Spring 2013 | | Trend | | Total | |
|------------------------|-----------|------|-------------|------|-----------|-------|-----------|-----|
| | Responses | % | Responses | % | Responses | % | Responses | % |
| None/Loop | 78 | 28.1 | 221 | 36.0 | 143 | 7.9 | 299 | 34 |
| Home | 45 | 16.2 | 33 | 5.4 | -12 | -10.8 | 78 | 9 |
| School/University | 14 | 5.0 | 52 | 8.5 | 38 | 3.4 | 66 | 7 |
| Downtown | 15 | 5.4 | 38 | 6.2 | 23 | 0.8 | 53 | 6 |
| Parks | 7 | 2.5 | 45 | 7.3 | 38 | 4.8 | 52 | 6 |
| Bridges | 18 | 6.5 | 28 | 4.6 | 10 | -1.9 | 46 | 5 |
| Broadway | 24 | 8.6 | 7 | 1.1 | -17 | -7.5 | 31 | 3 |
| Farmer's Market/Food | 15 | 5.4 | 10 | 1.6 | -5 | -3.8 | 25 | 3 |
| Work | 13 | 4.7 | 18 | 2.9 | 5 | -1.7 | 31 | 3 |
| Beaches | 3 | 1.1 | 12 | 2.0 | 9 | 0.9 | 15 | 2 |
| Weir | 3 | 1.1 | 14 | 2.3 | 11 | 1.2 | 17 | 2 |
| Innovation Place | 1 | 0.4 | 13 | 2.1 | 12 | 1.8 | 14 | 2 |
| Mendel | 7 | 2.5 | 1 | 0.2 | -6 | -2.4 | 8 | 1 |
| River/Watersports | 2 | 0.7 | 9 | 1.5 | 7 | 0.7 | 11 | 1 |
| Unspecified | 33 | 11.9 | 113 | 18.4 | 80 | 6.5 | 146 | 16 |
| Responses: | 278 | 100 | 614 | 100 | | | 892 | 100 |
| Individuals Surveyed*: | 268 | | 606 | | | | 874 | |

*Multiple responses are permitted for questions 11, 15, 17 & 18

Figure 11: Destination

2.1.12 Trail Entrance Point

Anonymous verbatim comments are provided in Appendix A.

2.1.13 Trail Exit Point

Anonymous verbatim comments are provided in Appendix A.

2.2 Trail User Feedback

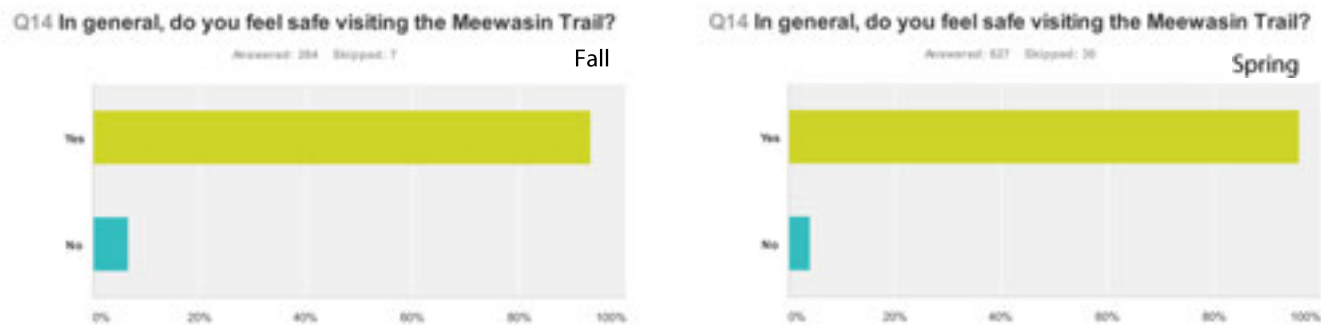
This section presents results from survey questions that provide direct feedback from Meewasin Trail Users. This includes data that identifies potential improvements and gauges perceptions of safety and levels of community support.

This section provides an understanding of the recurring issues faced by Meewasin Trail users (e.g. safety, maintenance, bathroom access). The Meewasin Valley Authority can use this information to help prioritize and target future improvements to the trail.

2.2.1 In general, do you feel safe visiting the Meewasin Trail?

In one of the most unanimous responses, 95 percent of users surveyed indicated that they feel safe using the Meewasin Trail. There was some variation in the response between seasons—93 percent in the fall and 96 percent in the spring. Like Figure 9, 10 and 11, this difference in perceived safety may be explained by seasonal patterns, such as longer June days.

Figure 12: Perceived Safety



2.2.2 If no, what concerns you (illegal activity, theft, wildlife, etc.)?

Personal safety and security was the predominant theme, with two-thirds of respondents raising concerns on this topic. These concerns included lighting and night safety (31%), personal safety at specific locations, such as bridges (18%), concern regarding other people (10%), assault and theft (4%) and illegal activity (3%). “Lighting and night safety” was cited much more frequently in the fall survey (44.3%) than the spring (30.5%)—probably a reflection of seasonal sunlight patterns. Conversely, individual people were cited as a concern more than twice as often in the spring than the fall (14.4% to 6.6%). Collisions were the second major area of concern, with 18 percent of respondents raising concerns about interactions between trail users (e.g. speeds, etiquette, trail design).

It should be noted that this question contains leading prompts (“illegal activity, theft, wildlife, etc.”) that likely skew the results toward personal safety and crime. For this reason, these results should be viewed in conjunction with subsequent questions (e.g. Figure 16, 17 and 18) that provide further delineation of user concerns. Appendix A, which includes verbatim feedback from Meewasin Trail users (“General Comments”), should also be referenced. Moreover, this question elicited a low number of responses (202 of 940 surveys, or 21%), and as such is less representative of Meewasin Trail user sentiment than subsequent questions derived from larger samples.

Figure 13: User Concerns

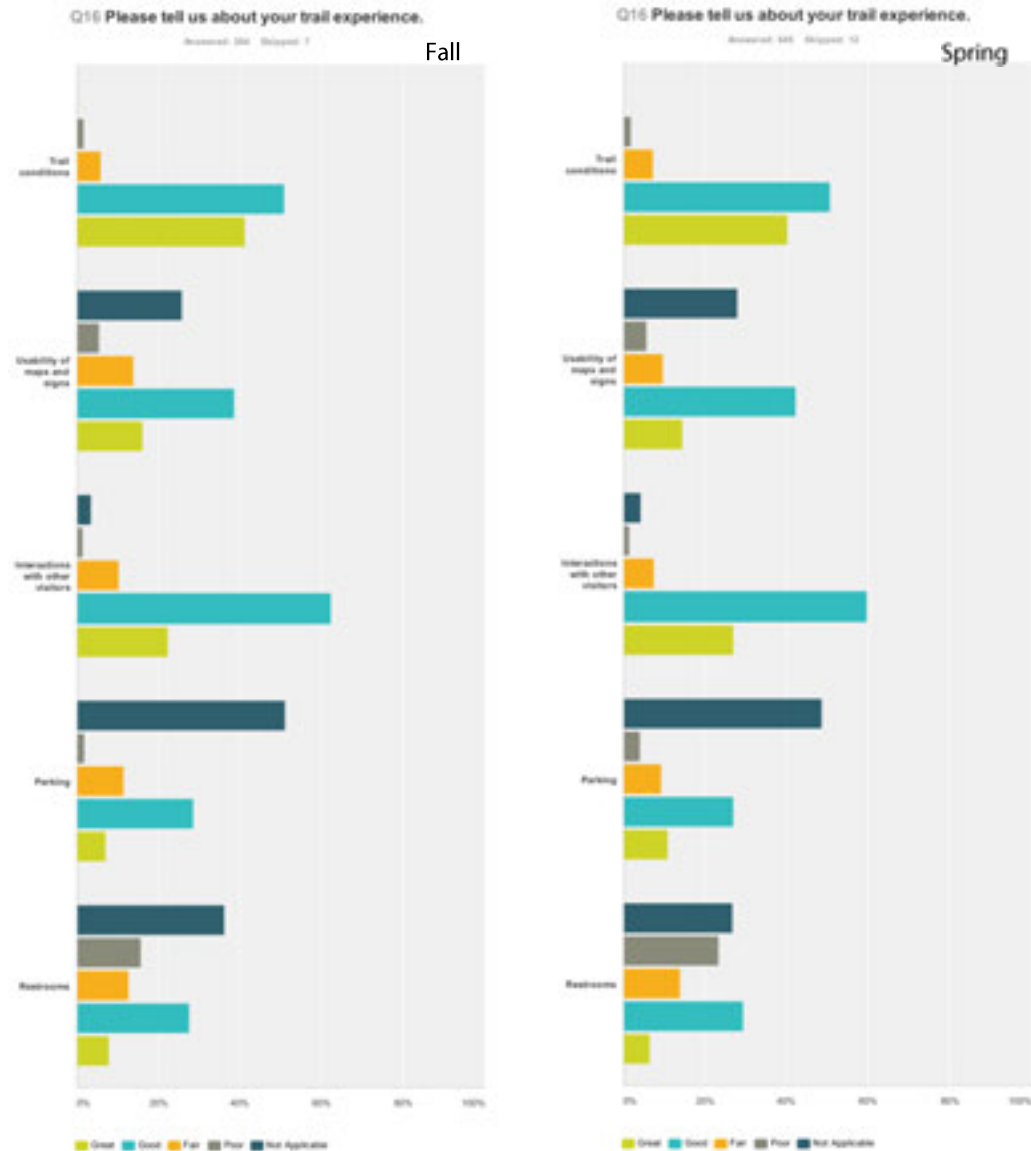
| | Fall 2012 | | Spring 2013 | | Trend | | Total | |
|--|-----------|------|-------------|------|-----------|-------|-----------|-----|
| | Responses | % | Responses | % | Responses | % | Responses | % |
| Assault/theft | 4 | 6.6 | 5 | 4.2 | 1.0 | -2.3 | 9 | 4 |
| Collisions | 10 | 16.4 | 26 | 22.0 | 16.0 | 5.6 | 36 | 18 |
| No issues--feel safe | 5 | 8.2 | 7 | 5.9 | 2.0 | -2.3 | 12 | 6 |
| Other | 4 | 6.6 | 3 | 2.5 | -1.0 | -4.0 | 7 | 3 |
| Illegal Activity | 3 | 4.9 | 4 | 3.4 | 1.0 | -1.5 | 7 | 3 |
| Lighting & night safety | 27 | 44.3 | 36 | 30.5 | 9.0 | -13.8 | 63 | 31 |
| Specific locations | 12 | 19.7 | 24 | 20.3 | 12.0 | 0.7 | 36 | 18 |
| People | 4 | 6.6 | 17 | 14.4 | 13.0 | 7.8 | 21 | 10 |
| Usually feel safe | 0 | 0.0 | 5 | 4.2 | 5.0 | 4.2 | 5 | 2 |
| Wildlife | 0 | 0.0 | 4 | 3.4 | 4.0 | 3.4 | 4 | 2 |
| Unspecified | 2 | 3.3 | 0 | 0.0 | -2.0 | -3.3 | 2 | 1 |
| Responses: | 71 | 100 | 131 | 100 | | | 202 | 100 |
| Individuals Surveyed*: | 61 | | 118 | | | | 179 | |
| *Multiple responses are permitted for questions 11, 15, 17 & 18. | | | | | | | | |

Figure 14: Trail Experience

2.2.3 Please tell us about your trail experience

This question produced relatively consistent results between surveys. The responses to Trail Conditions and Interactions with Other Visitors were generally positive (Great+Good= 90-92% and 85-87%, respectively). Responses to Usability of Maps/Signs were neutral (about 50% satisfaction). Parking and Restrooms each have less than 50% satisfaction.

The high incidence of “n/a” responses for Restrooms and Usability of Maps/Signs is consistent with comments pointing out the absence of these features (see Figure 17 and Figure 18), while the high incidence of “n/a” responses for Parking confirms the findings of Figure 5—i.e. that most visitors arrive by foot or bike and thus do not require parking.



2.2.4 For any “poor” answers above, please cite specific issues

Bathrooms were, by far, the most-mentioned theme. Concerns were related to the cleanliness, quality and number of bathrooms, and were cited by 46 percent of survey respondents. Trail maintenance and wayfinding/signage (incl. symbols, signs, maps and interpretive products) were cited by 20% and 14%, respectively. 11 percent cited parking issues—primarily motor vehicle parking, but bicycle parking was also cited. The remaining 10 percent was divided between two closely-linked categories: calls to widen and improve trail (4%) and concerns over user behavior and etiquette (5%).

Figure 15: Specific Issues for “Poor” Responses

| | Fall 2012 | | Spring 2013 | | Trend | | Total | |
|--|-----------|------|-------------|------|-----------|------|-----------|-----|
| | Responses | % | Responses | % | Responses | % | Responses | % |
| Bathrooms | 44 | 47.3 | 111 | 46.1 | 67 | -1.3 | 155 | 46 |
| Behaviour/Etiquette | 4 | 4.3 | 12 | 5.0 | 8 | 0.7 | 16 | 5 |
| Maintenance | 17 | 18.3 | 49 | 20.3 | 32 | 2.1 | 66 | 20 |
| Parking | 5 | 5.4 | 31 | 12.9 | 26 | 7.5 | 36 | 11 |
| Wayfinding/Signage | 18 | 19.4 | 30 | 12.4 | 12 | -6.9 | 48 | 14 |
| Widen/Improve Trail | 5 | 5.4 | 8 | 3.3 | 3 | -2.1 | 13 | 4 |
| Responses: | 93 | 100 | 241 | 100 | | | 334 | 100 |
| Individuals Surveyed*: | 79 | | 208 | | | | 287 | |
| *Multiple responses are permitted for questions 11, 15, 17 & 18. | | | | | | | | |

2.2.5 What specific improvements would you like to see on the trail?

The most-cited improvements were: widen/separate/expand trail (16%), improve maintenance practices (15%), more and better bathrooms (12%) and water fountains (10%), and better access to bridges along the trail (8%).

Figure 16: Specific Improvements

| | Fall 2012 | | Spring 2013 | | Trend | | Total | |
|--|-----------|------|-------------|------|-----------|------|-----------|-----|
| | Responses | % | Responses | % | Responses | % | Responses | % |
| Amenities | 16 | 5.0 | 65 | 9.8 | 49 | 4.8 | 81 | 8 |
| Bathrooms | 26 | 8.1 | 88 | 13.2 | 62 | 5.1 | 114 | 12 |
| Behaviour/Etiquette | 19 | 5.9 | 24 | 3.6 | 5 | -2.3 | 43 | 4 |
| Bridge Access | 39 | 12.1 | 37 | 5.6 | -2 | -6.6 | 76 | 8 |
| Connections to/from | | 0.0 | 15 | 2.3 | 15 | 2.3 | 15 | 2 |
| Lighting | 12 | 3.7 | 29 | 4.4 | 17 | 0.6 | 41 | 4 |
| Maintenance | 59 | 18.3 | 93 | 14.0 | 34 | -4.4 | 152 | 15 |
| Parking | 2 | 0.6 | 4 | 0.6 | 2 | 0.0 | 6 | 1 |
| Paving/Surfaces | 9 | 2.8 | 34 | 5.1 | 25 | 2.3 | 43 | 4 |
| Security | 8 | 2.5 | 10 | 1.5 | 2 | -1.0 | 18 | 2 |
| Water Fountains | 25 | 7.8 | 77 | 11.6 | 52 | 3.8 | 102 | 10 |
| Wayfinding/Signage | 17 | 5.3 | 25 | 3.8 | 8 | -1.5 | 42 | 4 |
| Widen/Separate/Extend | 63 | 19.6 | 94 | 14.1 | 31 | -5.5 | 157 | 16 |
| Junk data | 27 | 8.4 | 71 | 10.7 | 44 | 2.3 | 98 | 10 |
| <i>Responses:</i> | 322 | 100 | 666 | 100 | | | 988 | 100 |
| <i>Individuals Surveyed*:</i> | 240 | | 509 | | | | 749 | |
| *Multiple responses are permitted for questions 11, 15, 17 & 18. | | | | | | | | |

2.2.6 How would you rate the Meewasin Valley Trail's value to the community?

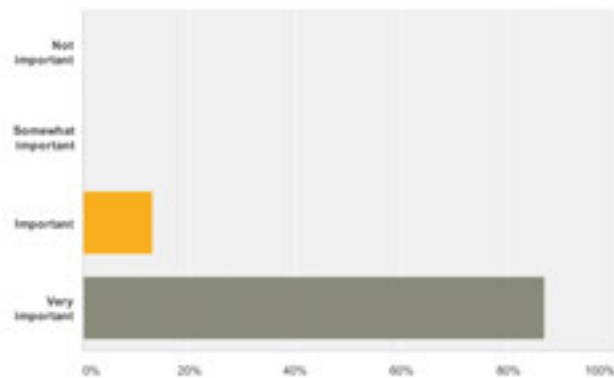
Nearly 100% rated MT as at least "important." 84-86% rated the trail's value as "Very important" and 13-14% rated it "Important."

Figure 17: Value to the Community

Q19 How would you rate the Meewasin Valley Trail's value to the community?

Answered: 234 Skipped: 7

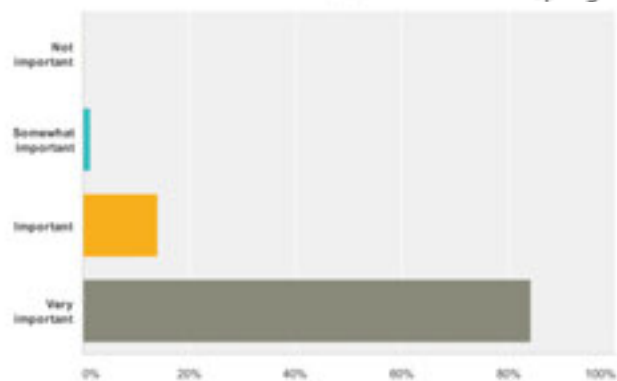
Fall



Q19 How would you rate the Meewasin Valley Trail's value to the community?

Answered: 639 Skipped: 18

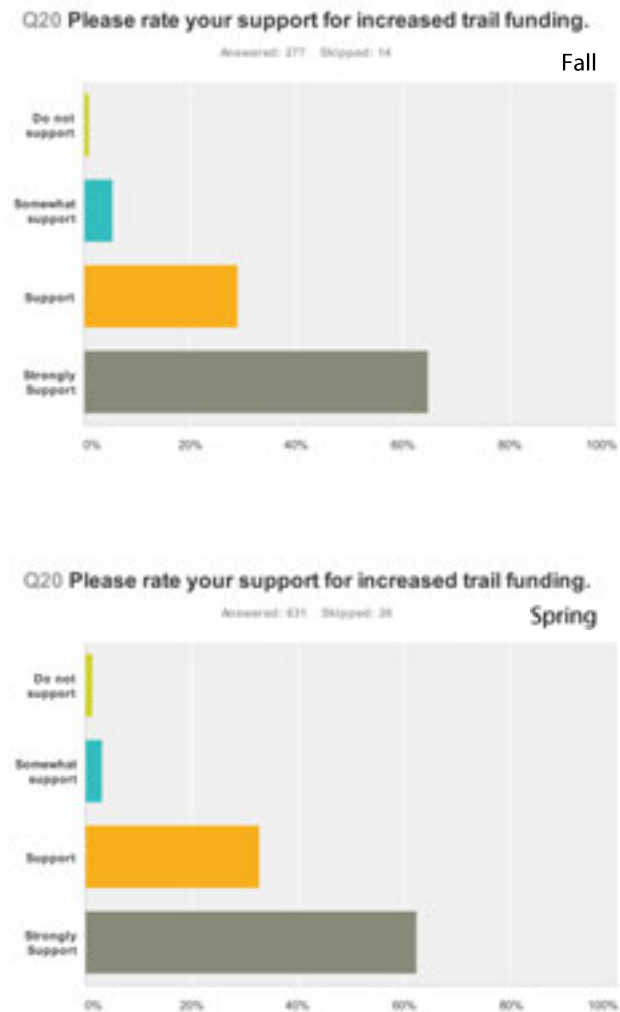
Spring



2.2.7 Please rate your support for increased trail funding

Both surveys saw roughly 95% support for increased trail funding (“Strongly Support” + “Support”). The fall survey had somewhat higher numbers for “Strongly Support.”

Figure 18: Support for Increased Funding



2.2.8 General comments

Anonymous verbatim comments are provided in Appendix A.

3.0 Key Themes

This report has summarized the results of 21 survey questions delineating the travel patterns and user characteristics of Meewasin Trail users. The following describes the key themes emerging from this survey, ordered according to the relative frequency and intensity of user responses.

1. Increase trail funding for Meewasin Trail expansion and upgrades.
2. Develop a prioritization approach for expansion and upgrades.
3. Improve the number and quality of bathrooms.
4. Separate and/or widen trail at conflict points and consider improving access to bridges.
5. Enhance trail maintenance practices for both a) snow and debris clearance and b) regular surface repairs.
6. Improve trail markings and signage for both a) wayfinding and b) delineation of space between users.
7. Add amenities such as water fountains and ensure proper functioning.
8. Consider Crime Prevention through Environmental Design (CPTED) strategies (e.g. lighting) at locations such as bridges.
9. Consider a “Share the Trail” educational campaign to reduce conflicts between non-motorized users and dogs.
10. Consider taking advantage of the high number of regular trail users to establish crews of volunteers to assist in specific tasks including providing eyes on the trail during evening hours, trail cleanup and management of invasive plant species.

B. GENERAL COMMENTS INTERCEPT SURVEY

Meewasin Trail Survey Sept-Oct 2012

| | | |
|-----|--|---------------------|
| 130 | Overall, great job preserving the area...."it really makes the city" | 2/19/2013 11:49 AM |
| 131 | want Mendel galley to be functional centre and restaurants; want restaurants along the trail where you can look at the river; should have line drawn on cneter for passing and wide enough to pass; walkers shouldn't wear headphones | 2/19/2013 11:43 AM |
| 132 | critical to community; not built for multi-use | 2/19/2013 11:36 AM |
| 133 | It's great we have this trail | 2/19/2013 11:35 AM |
| 134 | They are in the process of moving to S7K0G3 (24th and Spadina); it is a mavelous trail and it makes saskatoon beautiful; bought new condo becuase of the trail; deck around mendal boat dock as well as the roadway and it needs a better layout | 2/19/2013 9:57 AM |
| 135 | resolve problems with victoria (traffic) bridge; would love to see ped/bike on traffic bridge; trail wider in city araea too congested around bessborough | 2/19/2013 9:52 AM |
| 136 | This is a highlight of Saskatoon and love visiting the valley when here. Old maps not good new trail maps are great! | 2/19/2013 9:48 AM |
| 137 | A great trail! | 2/19/2013 9:44 AM |
| 138 | Really like the trail | 2/19/2013 9:42 AM |
| 139 | 7 tourists, visiting from alberta and BC, stopped by to say they love the trail and think it's wonderful | 2/19/2013 9:41 AM |
| 140 | the trail is really important for families especially connecting to the west side of riversdale; highlight of saskatoon; we think it is the bomb; builds quality of life, economy , tourism and it is free for every one. | 2/19/2013 9:39 AM |
| 141 | Do not remove the beaver! Did not like cement trails, interpetive signs for tree at first, ok for urban species, leave the trail as gravel. Tree planting is so well done. | 2/19/2013 9:30 AM |
| 142 | Do anything to preserve the Meewasin Trail and nature | 2/19/2013 9:25 AM |
| 143 | differing purposed when using trail as a cyclist because cyclist and peds don't; good to widen trail; no way to get downtown by bike 4th avenue bike route a joke - different modes of transportation need different facilities | 2/19/2013 8:30 AM |
| 144 | ESSENTIAL TO THE CITY; HAD A WONDERFUL CONVERSATION WITH A 94 YR OLD WHO VISITS THE TRAIL DAILY | 2/19/2013 7:55 AM |
| 145 | THE MORE TRAILS THE BETTER | 2/19/2013 7:47 AM |
| 146 | PAVED TRAILS NICE; MORE DRINKING FOUNTAINS | 2/19/2013 7:44 AM |
| 147 | BEAUTIFUL TRAIL ONE OF THE BEST ASSETS | 2/19/2013 7:42 AM |
| 148 | LIVED IN SASKATOON 8 YEARS AND THIS IS ONLY THE 2ND TIME VISITING THE TRAIL - IMPROVE THE TRAIL AT MENDEL LOWER TRAIL SLABS ARE VERY DANGEROUS | 2/19/2013 7:39 AM |
| 149 | REALLY ENJOY IT | 2/19/2013 7:28 AM |
| 150 | NOT ENOUGH WATER (DRINKING) FOUNTAINS; CLEAN | 2/19/2013 7:23 AM |
| 151 | NEED MORE WASHROOMS & SIGNS FOR WASHROOMS | 2/19/2013 7:21 AM |
| 152 | BIKE RENTAL CAFE WATERFRONT | 2/19/2013 7:19 AM |
| 153 | WANT TO SEE A WALKING BRIDGE | 2/19/2013 7:17 AM |
| 154 | VERY CLEAN | 2/19/2013 7:16 AM |
| 155 | LOVE THE LANDSCAPING | 2/19/2013 7:14 AM |
| 156 | MORE TRAILS | 2/19/2013 7:12 AM |
| 157 | EXPANSION OF TRAIL | 2/19/2013 7:06 AM |
| 158 | BEAUTIFUL | 2/19/2013 7:03 AM |
| 159 | BEAUTIFUL | 2/19/2013 7:02 AM |
| 160 | GREAT THING FOR SASKATOON. OPEN UP UNDER VICTORIA (TRAFFIC) BRIDGE | 2/19/2013 6:57 AM |
| 161 | HAVING TRAIL BLOCKED UNDER VICTORIA (TRAFFIC) BRIDGE A REAL PAIN! | 2/19/2013 6:51 AM |
| 162 | GREAT ASSET TO CITY | 2/19/2013 6:48 AM |
| 163 | GOOD EXPERIENCE. GLAD FOR TRAIL | 2/19/2013 6:46 AM |
| 164 | IMPORTANT TO KEEP GREAN SPACE ALONG RIVER | 2/15/2013 1:57 PM |
| 165 | BEAUTIFUL PART OF CITY | 2/15/2013 1:55 PM |
| 166 | WOULD LIKE TO SEE MORE CHALLENGING TRAILS - REGULAR MAINTENANCE AND UPKEEP | 2/15/2013 1:51 PM |
| 167 | WOULD LIKE TO SEE MORE CHALLENGING TRAILS - REGULAR MAINTENANCE AND UPKEEP | 2/15/2013 1:50 PM |
| 168 | SNOW REMOVAL WAS AWESOME LAST WINTER | 2/15/2013 1:47 PM |
| 169 | TRAILS ARE FANTASTIC - BEST THING ABOUT SASKATOON | 2/15/2013 1:44 PM |
| 170 | THE TRAIL IS GREAT! | 2/15/2013 1:42 PM |
| 171 | THIS IS A UNIQUE PUBLIC SPACE ALONG A RIVER. OTHER CITIES SHOULD COPY | 2/15/2013 1:40 PM |
| 172 | KEY TO THE CITY - ESSENTIAL PART OF SASKATOON | 2/15/2013 1:36 PM |
| 173 | PLEASE KEEP THE TRAIL | 2/15/2013 1:29 PM |
| 174 | GENERALLY FEEL SAFE ON TRAIL | 2/15/2013 1:24 PM |
| 175 | MAKES SASKATOON NICER | 2/15/2013 1:17 PM |
| 176 | IMPORTANT - TRAIL IS KEY TRANSPROTATION | 2/15/2013 1:07 PM |
| 177 | ITS GREAT. HOPEFULLY IT EXPANDS | 2/15/2013 12:57 PM |
| 178 | Winnipeg made a pedestrian bridge. This could be great for Saskatoon. | 2/15/2013 12:43 PM |
| 179 | creating a lost and found Love the Trail!! | 2/15/2013 12:35 PM |
| 180 | Meewasin Valley Trail makes Saskatoon nicer | 2/13/2013 8:16 AM |
| 181 | Keep up the good work! | 10/12/2012 12:55 PM |
| 182 | I feel that we as a community are putting countless hours and money into the trail for the same things to keep happening a block away : s | 10/10/2012 1:44 PM |
| 183 | Keep up the good work | 10/8/2012 10:48 PM |
| 184 | I'm still getting acquainted with what is available, but hope to explore it more and eventually use the trail to get to work in the summer from Silverspring to downtown. | 10/5/2012 9:17 PM |
| 185 | need the traffic bridge converted to a ped/bike walkway NO CARS NO NEW BIG BRIDGE | 10/5/2012 3:23 PM |

Meewasin Trail Survey May-June 2013

Q21 General comments

Answered: 282 Skipped: 375

| # | Responses | Date |
|----|---|--------------------|
| 1 | more development in terms of lunch places to stop etc. maybe by the kids park there is an empty parking lot that could be developed | 7/23/2013 8:21 AM |
| 2 | Pool to end of Traffic Bridge...major inconvenience no wheelchair access for last 3-4 years. Can you put in a wheelchair ramp? | 7/23/2013 8:16 AM |
| 3 | Additional comments but completed survey already: 1. Bikers on the train bridge - should be divided. Not wide enough. 2. Geese by University Bridge | 6/21/2013 12:21 PM |
| 4 | So lucky to have these trails. | 6/21/2013 10:21 AM |
| 5 | City needs to be more bike friendly. | 6/21/2013 10:13 AM |
| 6 | Sign is lying - wrong info. | 6/21/2013 10:12 AM |
| 7 | Well maintained and pleased just need better lighting. | 6/21/2013 10:01 AM |
| 8 | Really appreciate | 6/21/2013 9:11 AM |
| 9 | Love it! | 6/21/2013 8:57 AM |
| 10 | I have been roller blading the trail for 26 years. Weir to mendel section surface conditions dangerous; return on investment - stay in the core before expanding; I keep healthy with this facility; wife won't roller blade to dangerous; been all over north America and this is one of the best; trail very well used; there is conflict, width is insufficient; could be a tourist attraction better developed and promoted | 6/20/2013 8:18 AM |
| 11 | once a week hiking walking group for nature; more off leash dog area in lower trails; allow dogs on lower trail | 6/20/2013 8:09 AM |
| 12 | need more trails; more bike paths | 6/20/2013 8:04 AM |
| 13 | its awesome beautiful trail | 6/20/2013 8:02 AM |
| 14 | pretty nice trail; good recreation family activity | 6/20/2013 7:59 AM |
| 15 | courtesy and friendly; new bikers are a bit dangerous; good surveying will improve with pavement markings | 6/20/2013 7:56 AM |
| 16 | its awesome lucky to have the trail in this city - best job! | 6/20/2013 7:50 AM |
| 17 | appreciates being able to access the river | 6/20/2013 7:46 AM |
| 18 | keep'er going | 6/20/2013 7:45 AM |
| 19 | think the meewasin trail is extremely important and support 250% increased funding; more inter linking trails backshore; queen street no ramp connections; no sidewalk to trail at balmoral coming from schoolneed connection | 6/20/2013 7:37 AM |
| 20 | we love the trail and live close; it's our recreation...quality of life! | 6/20/2013 7:30 AM |
| 21 | haven't seen washrooms | 6/20/2013 7:27 AM |
| 22 | so important to have green space for health etc. | 6/20/2013 7:25 AM |
| 23 | like just the way they are; more saskatoon plantings like the tree variety | 6/20/2013 7:24 AM |
| 24 | It's beautiful, gets everyone out. Glad I live so close! | 6/20/2013 7:21 AM |
| 25 | I love it! | 6/20/2013 7:15 AM |
| 26 | very nice trail...when they first put the trail in I thought it was a waste of money but I didn't realize how great it would be! | 6/20/2013 7:13 AM |
| 27 | it's awesome! | 6/19/2013 1:20 PM |
| 28 | I love it, it's why I live here and if it weren't here I'd probably move. | 6/19/2013 1:18 PM |
| 29 | more than strongly support increased funding; so lucky to be close to the trail; love the trail it's my happy place; it's so wonderful; it's perfect | 6/19/2013 1:15 PM |
| 30 | beautiful river bank; use as much as possible. not too many cities have what we have. | 6/19/2013 1:12 PM |
| 31 | I love it, greatest things in the city. I wished I lived right here and could walk right out my door and have it! | 6/19/2013 1:09 PM |
| 32 | In school currently and can't afford to support this; I use the trail for spirituality, kayaking access, a real way to open my soul! | 6/19/2013 12:57 PM |
| 33 | we love our walk! | 6/19/2013 12:48 PM |
| 34 | awesome place to walk, bring lunch, picnic on trail, feed the birds | 6/19/2013 12:46 PM |
| 35 | The trail is better than great. Increase funding as much as possible for the river valley needs love and attention. | 6/19/2013 11:44 AM |
| 36 | it's the highlight in Saskatoon, it's a meeting place. everyone knows when you say, meet me at the weir. | 6/19/2013 11:36 AM |
| 37 | do not support through taxes | 6/19/2013 11:33 AM |
| 38 | this trail is great | 6/19/2013 11:32 AM |
| 39 | It's great to get outside! | 6/19/2013 11:31 AM |
| 40 | glad you are doing the survey | 6/19/2013 11:25 AM |
| 41 | normally never use it so don't have much to say | 6/19/2013 11:24 AM |
| 42 | I love the trail! | 6/19/2013 11:13 AM |
| 43 | beautifies the city | 6/19/2013 11:11 AM |
| 44 | looking forward to opening of trails to bridge, outraged that it's blocked off | 6/19/2013 11:09 AM |
| 45 | one of the best things of saskatoon | 6/19/2013 11:07 AM |
| 46 | support as long as it is not coming out of my taxes | 6/19/2013 11:05 AM |
| 47 | protect river bank | 6/19/2013 10:41 AM |
| 48 | boat launch area needs work - hard to access | 6/19/2013 9:48 AM |
| 49 | more natural trails | 6/19/2013 9:44 AM |
| 50 | appreciate the tree variety; hook up to the new bridge | 6/19/2013 9:40 AM |
| 51 | like the trail and its ambience; used to use the trails in the north you're there | 6/19/2013 9:14 AM |
| 52 | Great! | 6/19/2013 9:03 AM |
| 53 | great way to get outside and be active | 6/19/2013 9:00 AM |
| 54 | 2 females, 1 male. 1 person 18-24. 2 people 35-44. | 6/19/2013 8:57 AM |
| 55 | Fortunate to have trails | 6/19/2013 8:56 AM |
| 56 | cleaning trail. cosmo part | 6/19/2013 8:55 AM |
| 57 | Bicycles on bridges too fast | 6/19/2013 8:53 AM |
| 58 | the river is Saskatoon's best feature, the trail should be too, real gully between university bridge and Broadway bridge. | 6/19/2013 8:52 AM |
| 59 | very nice | 6/19/2013 8:50 AM |
| 60 | very nice | 6/19/2013 8:44 AM |
| 61 | daughter got married on trail. would support through taxes. trails important. we need to have less people driving everywhere. more control on animals around the path | 6/19/2013 8:32 AM |
| 62 | keep up the good work | 6/19/2013 8:24 AM |
| 63 | use it to walk to / from work. easier than driving. much more beautiful walk. | 6/19/2013 8:19 AM |
| 64 | enjoy trails. gem of Saskatoon. use for rest of life. | 6/19/2013 8:17 AM |

Meewasin Trail Survey May-June 2013

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|-----|---|--------------------|
| 65 | said the trail was pointless when it started. now he uses it every day . more people out here and it is beautiful. | 6/19/2013 8:09 AM |
| 66 | value is 10/10 | 6/19/2013 8:07 AM |
| 67 | do not support through taxes | 6/19/2013 8:04 AM |
| 68 | Very Nice! | 6/19/2013 8:04 AM |
| 69 | support even through taxes | 6/19/2013 7:57 AM |
| 70 | Widen trail but not at the expense of the river bank. No 4 lane highway . Distance Increase. Great space! | 6/19/2013 7:38 AM |
| 71 | -A biker that is running people off trail. -Winter conditions are great. -Signage say slow down on bikes. | 6/18/2013 3:42 PM |
| 72 | Need more garbage cans. | 6/18/2013 3:36 PM |
| 73 | Enjoy the greenery . | 6/18/2013 3:33 PM |
| 74 | :) | 6/18/2013 2:34 PM |
| 75 | really enjoy walking the dog along this trail. | 6/18/2013 2:18 PM |
| 76 | looks nice | 6/18/2013 2:07 PM |
| 77 | signage is inconsistent and unenforceable. makes people disregard the signs. need safe passage under Victoria bridge. people walk along riverbank anyway s. all winter snow was plowed into a barricade fence on either side of Victoria bridge. and ended at fence with no way to get around except to trudge through 3-4 feet of snow or walk near the river bank and under bridge. | 6/18/2013 2:02 PM |
| 78 | appreciate the trails very much | 6/18/2013 1:56 PM |
| 79 | bring small businesses onto the trail | 6/18/2013 1:54 PM |
| 80 | wonderful summer and winter | 6/18/2013 1:51 PM |
| 81 | Victoria park | 6/18/2013 1:38 PM |
| 82 | nice when bathrooms open. nice when people pick up garbage. | 6/18/2013 1:35 PM |
| 83 | like to see the police on bikes | 6/18/2013 1:31 PM |
| 84 | snow is always cleared | 6/18/2013 1:27 PM |
| 85 | great for families. nice and open | 6/18/2013 1:21 PM |
| 86 | nice trail. good foliage. needs more publicity . | 6/18/2013 12:23 PM |
| 87 | enjoy system. more trails - expand. | 6/18/2013 12:12 PM |
| 88 | nice trail. needs more advertising - promotion of trail. | 6/18/2013 12:09 PM |
| 89 | not enough change from last years survey. separation of bikes and walkers. need to have more signs and warnings to watch for pedestrians | 6/18/2013 12:06 PM |
| 90 | walking / running very important to health. | 6/18/2013 12:03 PM |
| 91 | 33rd and idlywld trail is dirty . | 6/18/2013 11:59 AM |
| 92 | moved from Calgary almost a year ago. this is great and should be applauded. maintain and grow to even better. | 6/18/2013 11:55 AM |
| 93 | also bird watches | 6/18/2013 11:53 AM |
| 94 | love the trails | 6/18/2013 11:52 AM |
| 95 | easy access. love trails for self and my kids | 6/18/2013 11:51 AM |
| 96 | more water stations | 6/18/2013 11:49 AM |
| 97 | love the trails. they are important. | 6/18/2013 11:42 AM |
| 98 | great system. glad to have it. | 6/18/2013 11:33 AM |
| 99 | did a good job cleaning snow off trails this winter | 6/18/2013 11:32 AM |
| 100 | would like to see her tax money that is going to move the Mendel go to trails instead. | 6/18/2013 11:29 AM |
| 101 | Saskatoon has the best trails of any city she has visited. do not destroy prairie dog holes and habitat on the trail - provides wildlife value | 6/18/2013 11:27 AM |
| 102 | don't privatize or sell | 6/18/2013 10:52 AM |
| 103 | keep it up | 6/18/2013 10:50 AM |
| 104 | In regards to question 19, no opinion. | 6/17/2013 3:38 PM |
| 105 | Water fountain on north side of train bridge. | 6/17/2013 3:35 PM |
| 106 | It's a nice day :) | 6/17/2013 3:28 PM |
| 107 | Security cameras every 300-500m. More girls in bikinis. More manicured beach/lounging area. Bungee jump off train bridge. Have dog poop bags available for people who forget or don't bring enough. | 6/17/2013 3:26 PM |
| 108 | Likes the trails, they are great. | 6/17/2013 3:20 PM |
| 109 | Water fountains. More parking. | 6/17/2013 3:18 PM |
| 110 | Off-leash dog areas. Bike ramps on stairs on both sides. In regards to question 20, Support if needed. It depends where it comes from. | 6/17/2013 3:16 PM |
| 111 | Exit of Innovation Place roots coming through the path. | 6/17/2013 3:14 PM |
| 112 | In regards to question 20, it depends on what it is being spent on. | 6/17/2013 3:12 PM |
| 113 | Keep up the good work. | 6/17/2013 3:02 PM |
| 114 | Graffiti is cleaned up quickly. More garbage cans at regular intervals. | 6/17/2013 3:00 PM |
| 115 | In regards to question 20, depends what funding is used for and where it comes from. | 6/17/2013 2:47 PM |
| 116 | Love the trails. | 6/17/2013 2:12 PM |
| 117 | Winter trail maintenance. | 6/17/2013 2:07 PM |
| 118 | the beaches are great. the dogs can swim. the parks are really good. | 6/17/2013 2:01 PM |
| 119 | Think it is great. Continuation of question 18: Some places the benches face the bridge which is not that pretty to look at. They should face the river which is nicer to look at. Also, the sign at East Train Bridge is incorrect. It says we are Diefenbaker Centre but we are not. This is confusing to visitors from out of town. She is not sure if other signs are incorrect. | 6/17/2013 1:59 PM |
| 120 | bigger area needed - there are so many users. bridges necessary on west side of river for muddy spots and on lower parts of the riverbank. more garbage cans. water fountain with dog fountains needed (3 tier). | 6/17/2013 1:49 PM |
| 121 | Could cut grass along sides of trail more. | 6/17/2013 1:48 PM |
| 122 | In reference to question 20, how much funding? | 6/17/2013 1:46 PM |
| 123 | Recycling bins near garbage cans. More activities to draw people in who wouldn't typically use the trail. | 6/17/2013 1:36 PM |
| 124 | Wider trails would be great. | 6/17/2013 1:32 PM |
| 125 | great for what we do. parking lot security . | 6/17/2013 1:29 PM |
| 126 | Important to community . It's really nice to have this kind of environment in the community . | 6/17/2013 1:27 PM |
| 127 | too many fast cyclists. kids and dogs getting hurt and dogs may attack. | 6/17/2013 1:26 PM |
| 128 | road getting to Sutherland beach dog park. parking lot in spring is very muddy . | 6/17/2013 1:20 PM |
| 129 | The more the better. | 6/17/2013 1:14 PM |
| 130 | mosquitos | 6/17/2013 1:13 PM |
| 131 | having a dog park at Sutherland beach is importance and love coming here. | 6/17/2013 1:11 PM |
| 132 | Better connectivity to the river - the road is very dusty - a wider trail would be better. | 6/17/2013 1:10 PM |

Meewasin Trail Survey May-June 2013

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|-----|---|--------------------|
| 133 | love it. | 6/17/2013 1:03 PM |
| 134 | Great spot to visit. | 6/17/2013 12:57 PM |
| 135 | Happy with grasslands and noticing everything else manicured. Grasslands are bird hotspot. *In proper use of vehicles on trails will limit longevity of trails. Uses several trails several times a day with the family. | 6/17/2013 12:54 PM |
| 136 | bring only dogs that can / should be off leash. | 6/17/2013 12:52 PM |
| 137 | It's nice to have a multi-use trail. | 6/17/2013 12:48 PM |
| 138 | moved for easier trail access. | 6/17/2013 12:25 PM |
| 139 | dog poop - pick it up! | 6/17/2013 12:20 PM |
| 140 | Sometimes bathroom doors are locked during the day. | 6/17/2013 12:20 PM |
| 141 | june to august - there should be ambassadors on the trail. | 6/17/2013 12:13 PM |
| 142 | doing a good job. | 6/17/2013 12:11 PM |
| 143 | Pedestrians and cyclists share the park well. | 6/17/2013 12:11 PM |
| 144 | snow removal could be quicker. | 6/17/2013 12:09 PM |
| 145 | need more dog mess signage. | 6/17/2013 12:04 PM |
| 146 | North end industrial needs more trails. | 6/17/2013 12:02 PM |
| 147 | I love it. fabulous. really enjoy it. | 6/17/2013 11:51 AM |
| 148 | like that snow is cleared in winter. | 6/17/2013 11:48 AM |
| 149 | happy . remove snow in winter. clean in spring. | 6/17/2013 11:46 AM |
| 150 | bathrooms at meewasin park - taps don't work properly. want hands free taps and countertops need repair. | 6/17/2013 11:43 AM |
| 151 | WASHROOMS GOOD IN SUMMER. | 6/17/2013 11:00 AM |
| 152 | CLEAN UP RIVER IN SPRING. PEOPLE DUMP THINGS IN THE RIVER LIKE TVS. POLICE DO NOT RESPOND IN A TIMELY MANNER. BIKERS WITH NO BELLS | 6/17/2013 10:56 AM |
| 153 | SEPARATE BIKES FROM WALKERS BY MARKING TRAIL. | 6/17/2013 10:54 AM |
| 154 | More garbage cans for dog waste especially around the University. | 6/17/2013 10:53 AM |
| 155 | Keep expanding. | 6/17/2013 10:47 AM |
| 156 | Good use of river valley | 6/17/2013 10:41 AM |
| 157 | Rustic, peaceful, don't put more things in. It is nice and open. | 6/17/2013 10:39 AM |
| 158 | Beautiful, separated from road is good. | 6/17/2013 10:33 AM |
| 159 | More activities for the public, people have to get outside more. | 6/17/2013 10:32 AM |
| 160 | LOVE THE TRAIL. | 6/17/2013 10:30 AM |
| 161 | BELLS ON BIKES ARE GREAT. SIGNS NEEDED FOR RULES OF TRAILS. STATUES AND VIEWS GREAT FOR SHOWING OUT OF TOWNERS. | 6/17/2013 10:28 AM |
| 162 | This is the best river valley they have lived by! | 6/17/2013 10:24 AM |
| 163 | support if beneficial | 6/17/2013 10:23 AM |
| 164 | long leashes are dangerous. great job. thanks for clearing snow in winter. | 6/17/2013 10:20 AM |
| 165 | Moved here for the trails! | 6/17/2013 10:19 AM |
| 166 | Think it's lovely. | 6/17/2013 10:14 AM |
| 167 | enjoy the trails very much. | 6/17/2013 10:12 AM |
| 168 | more consistent communication about trail clearing in winter - maybe on website. need to know in morning before leave for work if trail will be cleared. | 6/17/2013 10:10 AM |
| 169 | main reason I live at north end and close to river. love non-manicured parks and riparian area trails. | 6/17/2013 10:08 AM |
| 170 | good work. | 6/17/2013 10:07 AM |
| 171 | keep expanding | 6/17/2013 10:05 AM |
| 172 | thanks for survey | 6/17/2013 10:03 AM |
| 173 | paint yellow line dividing pedestrians and bikes. paths could be straighter. | 6/17/2013 10:01 AM |
| 174 | good job | 6/17/2013 9:52 AM |
| 175 | bikes don't ring bell to note passage (signal). this is dangerous to elderly and young. education for motorists to accept cyclists on the road. integrate services with city. clean trails (sandy on bridges). | 6/17/2013 9:46 AM |
| 176 | excellent ski trails | 6/17/2013 9:23 AM |
| 177 | more dog bags available | 6/17/2013 9:15 AM |
| 178 | Support is dependent on if trail is continuously used for other events and closed to the public. | 6/17/2013 8:44 AM |
| 179 | support - depends on what is being done. great job for bikes. maps needed in north end. | 6/17/2013 8:40 AM |
| 180 | Like it! | 6/17/2013 8:36 AM |
| 181 | Loves the trail. | 6/17/2013 8:34 AM |
| 182 | Very happy with trail. | 6/17/2013 8:30 AM |
| 183 | Loves the trail. | 6/17/2013 8:25 AM |
| 184 | trails are part of the reason moved to SK. | 6/17/2013 8:25 AM |
| 185 | extend trail to Waniskewin | 6/17/2013 8:22 AM |
| 186 | need separation between cyclists and runners / walkers. need more of a visible police presence. | 6/17/2013 8:14 AM |
| 187 | great for the neighbourhood. | 6/17/2013 8:08 AM |
| 188 | try to separate between cyclists and pedestrians on the trail. need wider trails. | 6/17/2013 8:07 AM |
| 189 | free parking is good at the Mendel. | 6/17/2013 8:04 AM |
| 190 | free parking is good at the Mendel. | 6/17/2013 8:03 AM |
| 191 | better signage and maps with distance markers. | 6/17/2013 8:01 AM |
| 192 | Clearer trails in winter. | 6/17/2013 7:54 AM |
| 193 | Already participated in the survey at another point - just had another point to add: idling by the weir - bad for idling. Need some no idling policies / bylaws. | 6/17/2013 7:37 AM |
| 194 | I really enjoy riding my bike along the trail. | 6/17/2013 7:36 AM |
| 195 | I believe the meewasin trail is a fantastic part of the Saskatoon riverbank. It is important to maintain both the paved trail and the dirt singletrack below it. Proper building of singletrack by IMBA standards will ensure that any new singletrack is built in a sustainable way. | 6/15/2013 1:51 PM |
| 196 | Very appreciative of the trails; has only been in town for a year. Especially enjoys River Landing. | 6/14/2013 3:25 PM |
| 197 | Thanks for the trails; they are accessible. | 6/14/2013 3:23 PM |
| 198 | Coffee shop at North | 6/14/2013 3:18 PM |
| 199 | Coffee shop at North | 6/14/2013 3:16 PM |
| 200 | Love it. | 6/14/2013 2:57 PM |
| 201 | None | 6/14/2013 2:40 PM |

Meewasin Trail Survey May-June 2013

| | | |
|-----|---|--------------------|
| 202 | Good tourist place | 6/14/2013 2:18 PM |
| 203 | Thanks for doing the trail | 6/14/2013 12:26 PM |
| 204 | Good snow clearing this year | 6/14/2013 12:24 PM |
| 205 | We love it! | 6/14/2013 12:21 PM |
| 206 | Best part of Saskatoon | 6/14/2013 12:12 PM |
| 207 | Love the improvements - Please keep the off leash park by the golf course. | 6/13/2013 4:21 PM |
| 208 | Off-leash dog park does not go with bikes and pedestrians. Someone will get hurt. | 6/13/2013 4:09 PM |
| 209 | Love it, it's beautiful. | 6/13/2013 3:43 PM |
| 210 | Quite lovely . | 6/13/2013 3:37 PM |
| 211 | Thanks Meewasin, you guys rock! | 6/13/2013 3:35 PM |
| 212 | Cycling paths need to be marked. Garbage cans at weir. | 6/13/2013 3:23 PM |
| 213 | "Keep up the good work Meewasin" | 6/13/2013 3:12 PM |
| 214 | Good winter clearing this year | 6/13/2013 2:52 PM |
| 215 | Love it! | 6/13/2013 2:13 PM |
| 216 | Love the trails! | 6/13/2013 2:11 PM |
| 217 | It's a little annoying trying to avoid the construction. | 6/13/2013 1:21 PM |
| 218 | N/A | 6/13/2013 1:05 PM |
| 219 | I love the trails and feel completely safe and never had any issues with people on bikes or pedestrians. Tell the police that since cars don't drive on the trail monitoring cyclist speeds on Meewasin will have ZERO impact on reducing bike/car collisions http://goo.gl/aR38y . I do agree cyclist need to respect pedestrians at ALL times, but this tactic is not logical. One suggestion (even though it may not be Meewasin's) is when major reno's need to be done to the train bridge by the Weir, add one more plank to the width of the path. It's just a wee bit narrow when people are crossing paths. Although it is nice for some forced human interaction that we are loosing touch with these days. | 6/13/2013 11:05 AM |
| 220 | The South Saskatchewan River is this city's most valuable asset. The MVA trail network provides access for all to this beautiful resource. It is of great recreational value, but also serves as an important corridor through the city for those who prefer to self-propelled transportation. The year-round value of the Meewasin trail cannot be overestimated. Snow clearing in the winter is another aspect that is greatly appreciated. | 6/13/2013 10:20 AM |
| 221 | SINCE THE CITY IS TRYING TO GET MORE BIKE FRIENDLY THEY SHOULD CONCENTRATE MORE ON SAFETY AND CRATING AND MAINTAINING TRAILS ON WEST BANK FROM MENDEL TO WATER TREATMENT PLANT. ELIMINATE SHARED BIKE /CAR SINGLE FILE ALLOWANCE FROM QUEEN ST TO 33RD STREET . THIS IS JUST STUPID CONSIDERING THERE ARE 4 ROUTE FOR A BIKE ON EITHER SIDE OF SPADINA. CLEARLY SHOW SIGNS SHOWING PROPER TRAIL ETIQUETTE FOR BIKES AND PEDESTRIANS | 6/12/2013 10:34 PM |
| 222 | I would like to see more off road trail opportunities. The trails we do have are recognized as some of the best urban mtn biking anywhere, however as the Meewasin trail extends and dog walking areas grow some of these previous mtn bike trails have been consumed or are now much busier with walkers - most of which are more than willing to share trails but others definitely have a sense of entitlement and confrontations do occur. Expect there are just as many cyclists who are not being respectful enough of walkers as well. Bottom line is that there is a clear need for cooperation and sharing between various user groups but there also needs to be enough off road trail network that folks are not tripping on each other in these high use areas | 6/10/2013 1:00 PM |
| 223 | I visited from B.C. I use Stanley Park regularly and believe you have just as beautiful of a spot but are not utilizing it. Please consider a "Donate a Metre" fundraiser. Which they used very successfully in Kelowna, BC for the Mission Creek Greenway | 6/9/2013 8:13 PM |
| 224 | A more integrated place in planning for mountain bike trails. | 6/9/2013 7:15 AM |
| 225 | I'm an executive member of the NBR mountain biking club here in Saskatoon. The MVT is vital to our club's activities; we use the extensive off-pathway singletrack networks along the river especially Sutherland beach for club social rides, training nights and youth teaching clinics. As the city grows, the number of trail users has grown--walkers, runners, cyclists. The trails can be a busy place these days! It is not uncommon to startle a dog walker or hiker as we make our way along the riverbank. Our hope is that the MVA considers us an important and legitimate trail user group and keeps our needs in mind when planning for the future. Perhaps additional signage could be added to trail entrances reminding users of good trail etiquette and the type of user they may encounter if venturing off the main paved or gravel pathway. We enjoy the MVT so much that our club holds regular trail maintenance nights during the spring and summer month where we cut grass, trim brush growth, and clear deadfall to keep the singletrack trails usable. Please consider us when you are planning for the years ahead. Thanks, -- Brad Turk http://www.nbrcycling.ca | 6/8/2013 7:10 PM |
| 226 | The MVA trail is probably the best feature of Saskatoon. I run, bike and roller blade and occasionally walk as well. When I have out of town visitors the MVA trail is a primary destination that I want them to experience on their visit. | 6/7/2013 9:25 PM |
| 227 | I also use the "unofficial" single track trails in the riparian areas of the riverbank. They are a wonderful experience for users and represent the best network of single track trails in Saskatchewan! | 6/7/2013 1:10 PM |
| 228 | path should be straighter, paint yellow dividing line | 6/6/2013 3:58 PM |
| 229 | thanks for the survey | 6/6/2013 3:51 PM |
| 230 | keep expanding | 6/6/2013 3:48 PM |
| 231 | good work | 6/6/2013 3:46 PM |
| 232 | main reason im living in north end, and close to rhe river -love non manicured parkes, and riparian area trails | 6/6/2013 3:44 PM |
| 233 | -more consistant communication about trail clearing during the winter. could put updated on website, want to know when i leave in the morning if the trail is cleared | 6/6/2013 3:40 PM |
| 234 | i enjoy the trails | 6/6/2013 3:36 PM |
| 235 | long do leashes are dangerous, great job, thanks f'or clearing snow in the winter | 6/6/2013 3:26 PM |
| 236 | support if beneficial | 6/6/2013 3:21 PM |
| 237 | -like stone statues -great view -signs on "rules of the trail" -bells are great | 6/6/2013 3:13 PM |
| 238 | more dog bags available | 6/6/2013 3:06 PM |
| 239 | exelent Ski trails | 6/6/2013 3:04 PM |
| 240 | -bikers dont ring bell to note passing -dangerous to the elderly and young -education for motorists to accept bikers on road | 6/6/2013 2:44 PM |
| 241 | good job | 6/6/2013 2:26 PM |
| 242 | none | 6/6/2013 2:23 PM |
| 243 | not enough change from last years survey . seperation of bikers and padestrians. need more signs and warnings for bikers to watch for padestrians | 6/6/2013 2:17 PM |
| 244 | none | 6/6/2013 2:10 PM |
| 245 | none | 6/6/2013 2:07 PM |
| 246 | none | 6/6/2013 2:02 PM |
| 247 | none | 6/6/2013 1:59 PM |
| 248 | none | 6/6/2013 1:56 PM |
| 249 | none | 6/6/2013 1:52 PM |
| 250 | nice escape from city , nice plants and greenery | 6/6/2013 1:49 PM |
| 251 | keep the sight as natural as posible, expand the tail system | 6/6/2013 1:44 PM |
| 252 | nice trail, but it needs more publicity , seems to be well kept secret | 6/6/2013 1:39 PM |
| 253 | Overall you are doing a fantastic job !!! One spot has to be worked on quickly : the connection between the river trail and the 33rd Ave Trail. It is NOT RESPECTED by motorists and it is very dangerous. | 6/5/2013 6:02 PM |
| 254 | Trail use is part of our daily life, commuting to work and walking/riding with family for recreation. Need better connections to the trails. We took my son's kindergarten class out for trails day and they had to walk on the road along Balmoral because there are no sidewalks to the trail. | 6/5/2013 2:57 PM |
| 255 | i LOVE the meewasin. I live out of the city and this is the one feature in teh city that would be a push for us to move back!! | 6/5/2013 7:47 AM |
| 256 | Meewasin needs funding to be able to keep the riverbank and other natural areas preserved for future generations. Meewasin keeps the riverbank beautiful and protected so we may all enjoy it and not risk having it disappear to private use. Please keep up the good work! Thanks. | 6/4/2013 8:20 PM |

Meewasin Trail Survey May-June 2013

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|-----|--|--------------------|
| 257 | MVA Trail is the single most important asset to the City of Saskatoon. With continued maintenance and improvement it will continue to be such an asset. The trail could be improved to be even more useful for commuters (better connections to roadways). For instance, a trail could loop under the Broadway bridge on the downtown side, to make it easier to reach Spadina Cr. from the Broadway bridge. Also, there could be better connections to the hospital (hopefully addressed with construction of the Children's Hospital). The trail (if widened sufficiently) could have separated bike lanes and pedestrian portions (less conflict between bikes/pedestrians - more efficient for commuting). Lot's more ideas, those are just a few of them. | 6/4/2013 9:51 AM |
| 258 | general overall pretty positive although near the Mendel recently on a narrow part of the trail there were 2 or 3 persons on bikes going very, very fast. | 6/3/2013 10:15 AM |
| 259 | I think the MVA trail is one of Saskatoon's best features. It impressed me when we were deciding to move here over 20 years ago and is one of the reasons we chose to live near the river. | 6/3/2013 10:04 AM |
| 260 | The MVA trail is in my top three favorite things in Saskatoon!!! I moved here from Toronto where they have wrecked their waterfront. That every one here can appreciate such an amazing public trail along the river is incredible and I hope people here know how lucky they are. I really appreciate how quickly the trail is cleared in the winter too. (Totally understandable that this year you gave up on some stretches though!) Thank you for all your hard work!!! | 6/3/2013 6:34 AM |
| 261 | The Meewasin trails are one of the best things about Saskatoon. I just took a Cree class and found out that the word "Meewasin" means "excellent" or "great" - these trails couldn't have a more fitting name. Keep up the Meewasin work! | 6/1/2013 8:19 PM |
| 262 | We use the cat walks from AE Adams quiet often but there are no pedestrian signs when coming out of either cat walk (to cross whiteswan) so usually we run across whiteswan darting traffic in order to get to the Meewasin trail..... | 5/30/2013 6:48 PM |
| 263 | Love the Trail!!! | 5/30/2013 2:18 PM |
| 264 | I think longboarders should be allowed on all areas of the trail if they stay at a reasonable speed and respect other trail users when passing | 5/30/2013 1:44 PM |
| 265 | I support increased trail funding and also donate to this already. The amount of trail users is astounding. Excellent for community health and a strong place to congregate. Would love to see massive trail expansion north and south on both sides of river. | 5/30/2013 1:16 PM |
| 266 | enjoy nature and walking along the trail. | 5/30/2013 10:49 AM |
| 267 | I love it! | 5/30/2013 10:46 AM |
| 268 | Very happy they moved to Saskatoon! | 5/30/2013 10:13 AM |
| 269 | it is very clean and very safe | 5/30/2013 10:10 AM |
| 270 | No comment | 5/30/2013 10:07 AM |
| 271 | No comment | 5/30/2013 10:03 AM |
| 272 | people should use them to keep healthy | 5/30/2013 10:01 AM |
| 273 | no comment | 5/30/2013 9:58 AM |
| 274 | The trail is just about perfect, loving doing the run in this city, it is a beautiful city. don't know about supporting trail - don't live here. | 5/30/2013 9:56 AM |
| 275 | it is most important part of the city, defines the city and without this trail i'd move. | 5/30/2013 9:52 AM |
| 276 | I used my GPS to navigate the trails. The trail is very pretty and it seems very important to the city. | 5/30/2013 9:50 AM |
| 277 | no comment | 5/30/2013 9:47 AM |
| 278 | I think a gem in the city. | 5/30/2013 9:45 AM |
| 279 | Thanks for doing the trail | 5/30/2013 9:41 AM |
| 280 | New section of trail surprised they paved a section through off-leash. Not really safe for running and cycling now | 5/30/2013 9:34 AM |
| 281 | No comment | 5/30/2013 9:31 AM |
| 282 | I think the Meewasin trail is extremely, extremely important and very strongly support my tax dollars going towards the trail. This gives us balance. Makes this city wonderful both summer and winter. It is essential to everyone especially when living downtown. Good job at Gab Dumont. | 5/30/2013 9:29 AM |

Meewasin Trail Survey Sept-Oct 2012

| | | |
|-----|--|--------------------|
| 62 | great, makes commute shorter | 2/22/2013 2:03 PM |
| 63 | volunteer donation for using the trail that is easy to do ie: website | 2/22/2013 2:02 PM |
| 64 | like the expansion | 2/22/2013 1:59 PM |
| 65 | It's awesome | 2/22/2013 1:48 PM |
| 66 | The north addition on the west side of the river is great | 2/22/2013 1:40 PM |
| 67 | leave water on longer in season at fountains | 2/22/2013 9:58 AM |
| 68 | appreciate that the trail is here and want to see it continue | 2/22/2013 9:55 AM |
| 69 | Reason to be proud of the city - beautiful! | 2/22/2013 9:52 AM |
| 70 | beautiful trail, attraction to visitors | 2/22/2013 9:35 AM |
| 71 | Woods in trail trail should be cared for better. Pay attention to water erosion on east side between broadway and university bridge. Building construction shouldn't encroach at university campus. | 2/22/2013 9:33 AM |
| 72 | I love the trails, great for the city! I bike, walk & use to run. Use it alot! | 2/21/2013 2:34 PM |
| 73 | none | 2/21/2013 9:19 AM |
| 74 | great asset to the city | 2/21/2013 9:17 AM |
| 75 | great asset to city as a visitor, come 4 times per year | 2/21/2013 9:15 AM |
| 76 | nice, good weather. | 2/21/2013 9:13 AM |
| 77 | trail is what makes Saskatoon | 2/21/2013 9:11 AM |
| 78 | just how much she appreciates integrated to community . shouldn't be a second thought. | 2/21/2013 8:54 AM |
| 79 | the best parks in the city! | 2/21/2013 8:51 AM |
| 80 | none | 2/21/2013 8:48 AM |
| 81 | all good | 2/21/2013 8:39 AM |
| 82 | no other | 2/21/2013 8:37 AM |
| 83 | emphasize connectivity between City to Meewasin, Meewasin to City , always have to get off the trail | 2/21/2013 8:13 AM |
| 84 | very beautiful | 2/21/2013 8:10 AM |
| 85 | stop slumping | 2/21/2013 8:08 AM |
| 86 | used as a local way of transport when living in city park to avoid traffic, happy with trail - Meewasin saved the city's soul | 2/21/2013 8:01 AM |
| 87 | exercise stations, restaurants and cafes over looking water, too narrow (dividing line) | 2/21/2013 7:58 AM |
| 88 | lived by river for years, important place to your life | 2/21/2013 7:54 AM |
| 89 | I really enjoy the trail, glad I don't have to take a car downtown | 2/21/2013 7:52 AM |
| 90 | overall, great job preserving the area. "It really make the city " | 2/21/2013 7:50 AM |
| 91 | want mendel gallery to be function centre and restaurant, want restaurants along the trail where you can look at the river, should have line down centre for passing and be wide enough to pass, walkers shouldn't wear headphones | 2/21/2013 7:48 AM |
| 92 | need washrooms all year | 2/21/2013 7:41 AM |
| 93 | exercise stations, restaurants and cafes over looking water, too narrow (dividing line) | 2/21/2013 7:39 AM |
| 94 | bikes often going too fast; speed limit for bikes; likes stairs at river landing, good workout; bird poop under Idywyld bridger should be cleaned; likes trail, good exercise place for a city | 2/20/2013 2:16 PM |
| 95 | Support depends on what funding is for and if I have a say | 2/20/2013 2:09 PM |
| 96 | Trail is important to city - love it! | 2/20/2013 2:02 PM |
| 97 | important to out of town visitors (attraction) | 2/20/2013 1:59 PM |
| 98 | Best thing saskatoon has going for it is the trail and River Landing. | 2/20/2013 1:59 PM |
| 99 | nice feature | 2/20/2013 1:56 PM |
| 100 | one of best things happened in saskatoon over the last few decades throughout changing governments | 2/20/2013 1:53 PM |
| 101 | looking forward to wanuskewin link, pedestrian pathway underneath bridges. | 2/20/2013 1:46 PM |
| 102 | none | 2/20/2013 1:46 PM |
| 103 | looking forward to wanuskewin link, pedestrian pathway underneath bridges. | 2/20/2013 1:45 PM |
| 104 | kind of dark at night. Really like running out here! | 2/20/2013 1:36 PM |
| 105 | Lot of ppl don't know its here, just discovered the improvements recently . Lots of prairieland exhibition people come here on breaks and stuff. Nice and quiet. | 2/20/2013 1:34 PM |
| 106 | happy that can now longboard!! Excited about new bridge! | 2/20/2013 1:30 PM |
| 107 | Gab trail is muddy for a couple of months in the spring. doesn't get plowed. Gab Dumont disn doesn't have much in western direction (near washrooms). Excited to have it connect to other side! | 2/20/2013 1:22 PM |
| 108 | I enjoy it! Looking forward to connection to Wanuskewin for bikes. | 2/20/2013 11:58 AM |
| 109 | need more garbage receptacles - dog poop on trails | 2/20/2013 11:55 AM |
| 110 | she really enjoys the trail, meets friendly people. | 2/20/2013 11:55 AM |
| 111 | maintenance not construction | 2/20/2013 11:50 AM |
| 112 | none | 2/20/2013 11:49 AM |
| 113 | Basic maintenance | 2/20/2013 7:45 AM |
| 114 | Poor flooring, large gaps bikes get stuck; widen bridge path to make more room for cyclists and walkers; safety measures | 2/20/2013 7:38 AM |
| 115 | Closing the parking lots at night doesn't help; need more sitting places; track teams take over the trail and coach even shouted at them ~20ppl (aiden bowmen track team coach) | 2/19/2013 1:04 PM |
| 116 | gratitude for them! | 2/19/2013 1:02 PM |
| 117 | used to run here, now walk here. Hopfully running again soon. Greenspace is important in the city! Thinks its terrific! | 2/19/2013 12:59 PM |
| 118 | Add a beer vendor! | 2/19/2013 12:57 PM |
| 119 | build more trails | 2/19/2013 12:51 PM |
| 120 | It is the key to keeping tourist and for locals to show visitors. So many places to walk to on the trail. Sports team show case the city . | 2/19/2013 12:49 PM |
| 121 | Being used more and more by cyclists. Wish cyclists were more cautious around pedestrians/runners. Cyclists going too fast. | 2/19/2013 12:47 PM |
| 122 | absolutely beautiful! | 2/19/2013 12:44 PM |
| 123 | It's beautiful keep up the good work | 2/19/2013 12:43 PM |
| 124 | enjoys the public art at river landing namely the concrete canoe tips. | 2/19/2013 12:36 PM |
| 125 | Love Saskatoon for the trails | 2/19/2013 12:34 PM |
| 126 | I like the way it is always getting better | 2/19/2013 12:32 PM |
| 127 | barrier for pigeons at buckwold bridge - not attractive | 2/19/2013 12:31 PM |
| 128 | increases value of city ; great to develop along river; lived in multiple cities i.e. london uk, berlin, winnipeg and cities in ontario and greatly value saskatoon's trail system. | 2/19/2013 12:24 PM |
| 129 | Great | 2/19/2013 12:21 PM |

Meewasin Trail Survey Sept-Oct 2012

Q21 General comments

Answered: 185 Skipped: 106

| # | Responses | Date |
|----|--|--------------------|
| 1 | EXTEND THE TRAIL TO WANESKEWIN AND DAKOTA DUNES ALONG THE RIVER. EXTEND THE TRAIL OUT VALLEY ROAD TO PIKE LAKE. | 2/26/2013 1:10 PM |
| 2 | GREAT TIME. | 2/26/2013 1:00 PM |
| 3 | TRAIL IS KEY FEATURES OF OUR CITY. MAKES IT PRIDE OF THE PRAIRIES. | 2/26/2013 12:58 PM |
| 4 | -IS THERE A SPEED LIMIT FOR BIKES? IF YES, POST LIMIT. -MORE EDUCATION FOR USERS. WHY WERE THE POLICE USING RADAR ON THE TRAILS? | 2/26/2013 12:51 PM |
| 5 | -EXTENDING TRAIL IN GABRIEL DUMONT WITH PAVEMENT. -SPEED LIMIT SIGNS IF THERE IS A LIMIT. -UNDER UNIVERSITY BRIDGE ON WEST SIDE OF RIVER SHOULD HAVE A WIDER TRAIL. -IT WOULD BE NICE TO HAVE PAINTED LINES DOWN THE MIDDLE OF THE TRAILS. | 2/26/2013 12:45 PM |
| 6 | VERY IMPORTANT TO THE CITY TO HAVE THIS TRAIL SYSTEM. | 2/26/2013 12:40 PM |
| 7 | 20. TAXES ON CONDOS ARE VERY HIGH SO DO NOT SUPPORT INCREASES FOR MEEWASIN TRAIL. | 2/26/2013 12:39 PM |
| 8 | -HAVE A ZIPLINE ACROSS THE RIVER. -MAIN TOURIST ATTRACTION FOR THE CITY IS OUR TRAILS. | 2/26/2013 12:33 PM |
| 9 | -BEST THING IN THE CITY. - I USE IN WINTER FOR SKIING AND WALKING. -I SKATE AT THE RINK. | 2/26/2013 11:10 AM |
| 10 | -RIVER LANDING SHOULD HAVE LOTS OF SECURITY FOR WALKERS - STROLLERS. -KEEP IT UP. | 2/26/2013 11:05 AM |
| 11 | -GREAT. -COMPARED TO VANCOUVER TRAIL - IT IS JUST AS GOOD. | 2/26/2013 11:03 AM |
| 12 | POOR ASPHALT FOR ROLLERBLADING IN PLACES. | 2/26/2013 11:00 AM |
| 13 | FOCUS ON IMPROVING WHAT THEY HAVE RATHER THAN EXPAND | 2/26/2013 10:54 AM |
| 14 | AWESOME TRAIL! | 2/26/2013 9:52 AM |
| 15 | great asset | 2/26/2013 9:44 AM |
| 16 | keep extending | 2/26/2013 9:39 AM |
| 17 | -CONCERN ABOUT EROSION OF BOTTOM TRAIL ON EAST BANK. -HUGE ADVOCATE FOR THE TRAIL. -PREFER MOVE NATURAL TO DEVELOPED LANDSCAPED AREAS. | 2/26/2013 9:35 AM |
| 18 | 7. OCCASIONALLY. | 2/26/2013 9:32 AM |
| 19 | HUGE ASSET TO THE COMMUNITY | 2/26/2013 9:30 AM |
| 20 | THE TRAIL IS GOOD ADDITION TO THE COMMUNITY | 2/26/2013 9:27 AM |
| 21 | JUST MOVED HERE AND THE TRAIL MAKES ME HAPPY TO LIVE HERE | 2/26/2013 9:23 AM |
| 22 | ENJOYING MY VISIT | 2/26/2013 9:22 AM |
| 23 | -UNIVERSITY BRIDGE NORTH SIDE TRAIL TOO HAVE ROW -HAD RAMPS FOR BIKES TO ENTER AND EXIT TRAIL -PAVE GRAVEL PARTS -OLD PAVEMENT FIXED - DANGEROUS HOLES | 2/26/2013 9:14 AM |
| 24 | "BEAUTIFUL" | 2/26/2013 9:10 AM |
| 25 | -SENIOR, SCARRED OF DOGS AND BIKERS -LIKE WHEN COPS ARE BIKING ALONG TRAIL -DOGS ON LEASH! | 2/26/2013 8:59 AM |
| 26 | -DELIGHT -GREAT TREASURE | 2/26/2013 8:56 AM |
| 27 | -SPLIT THE TRAIL FOR SAFETY, WALKERS AND RUNNERS ON ONE SIDE AND BIKERS ON THE OTHER SIDE. | 2/26/2013 8:50 AM |
| 28 | SAFETY AT NIGHT - MORE POLICE BIKERS - MORE LIGHTS - TOO DARK | 2/26/2013 8:45 AM |
| 29 | work in city and use trail when here | 2/26/2013 8:43 AM |
| 30 | ENJOY COMING OUT TO THE TRAIL | 2/26/2013 8:42 AM |
| 31 | more dirt trails for bikes | 2/26/2013 8:13 AM |
| 32 | 18. FEELS LIKE MEEWASIN SPENDS MONEY ON NOTHING (E.G. PATH WAS CLOSED TO PUT WOOD CHIPS AROUND THE TREES. HE THOUGHT THAT WAS NOT NECESSARY, THE TREES HAVE BEEN AROUND FOR 50+ YEARS). -WHY NOT ARE WE NOT CUTTING DEAD TREES OFF THE PATH? HE WANTED TO VOLUNTEER FOR FREE BUT HAS BEEN TURNED AWAY. | 2/26/2013 8:03 AM |
| 33 | water park | 2/26/2013 8:02 AM |
| 34 | 20. SUPPORTS BY PICKING UP GARBAGE. WOULD SUPPORT FUNDRAISERS BUT IS ONE INCOME SUPPORTED AND CAN'T DO MUCH TO DONATE. -SHE'S SASKATOON SHINES ON WATER. FILLS HER KAYAK WITH GARBAGE. GIVES BACK TO MEEWASIN. -SHE USES THE TRAIL FOR SPIRITUAL, KAYAKING, WALKING, BIKING, SKIING. | 2/26/2013 7:57 AM |
| 35 | DONATES \$65 ANNUALLY FOR MARATHON | 2/26/2013 7:47 AM |
| 36 | important to fit design work with river, to make good use of the river | 2/26/2013 7:46 AM |
| 37 | 17. HURRY ON FREEWAY PART. 18. PUT BUTCHART GARDENS BY THE UNIVERSITY TO FREEWAY BRIDGE. -MARK DISTANCE ON TRAILS (WHAT HAPPENS WHEN YOU CROSS BRIDGE) -PUT MAPS UP SHOWING DISTANCE BETWEEN BRIDGES. | 2/26/2013 7:44 AM |
| 38 | bikers and walkers to share; education (signage, widening) of trail | 2/26/2013 7:42 AM |
| 39 | I love it!; work is great - referring to effort of creating trail and making it usable | 2/26/2013 7:39 AM |
| 40 | MAKES CITY NICER. | 2/26/2013 7:37 AM |
| 41 | 6. TYPICALLY VISITS OFF PEAK TIMES -MORE BOAT RAMPS -BETTER AT OFF-PEAK -WIFE- ONLY SAFE IN DAYLIGHT HOURS -WOULD LIKE TO SAY "CAMERAS ON THE TRAIL" | 2/26/2013 7:28 AM |
| 42 | "HAVING IT AS A COMMUTER AND RECREATION TRAIL MAKES IT VERY DANGEROUS." "WALK FOR THE MEEWASIN TRAIL" "FEELS SAFER BIKING ON THE TRAILS THAN ON CITY STREETS OR PARKS." | 2/26/2013 7:25 AM |
| 43 | Strongly support the trail; snow removal has been really really good | 2/26/2013 6:56 AM |
| 44 | Parked car at River Landing before using trail for running/fitness | 2/26/2013 6:53 AM |
| 45 | I LOVE IT. | 2/25/2013 2:50 PM |
| 46 | 17. IMPERATIVE. SIGNS ARE NOT AS VISIBLE AS SHOULD BE, NOT CONVENIENT OR IN ADVANCE. SIGNS ABOUT TREES, ETC. | 2/25/2013 2:47 PM |
| 47 | 17. BIKERS - AWAY FROM TRAFFIC. | 2/25/2013 2:42 PM |
| 48 | SAD VICTORIA BRIDGE BEING DESTROYED BLOCKING THE TRAILS. (MENTIONED 3 TIMES). | 2/25/2013 2:40 PM |
| 49 | LIKES, AWESOME. | 2/25/2013 2:37 PM |
| 50 | BIKES ARE SECOND CLASS ON BOTH TRAIL AND ROAD. PUTS THE CITY ON THE MAP BECAUSE OF MEEWASIN. | 2/25/2013 2:34 PM |
| 51 | GREAT TO WALK - NICE. | 2/25/2013 2:27 PM |
| 52 | TRAFFIC BRIDGE BE PED/CYCLE | 2/25/2013 2:25 PM |
| 53 | BEAUTIFUL TRIP. NO CONCERNS. GOOD FOR MENTAL HEALTH. | 2/25/2013 2:22 PM |
| 54 | -ENJOY WALKING. -AWAY FROM TRAFFIC, RELAXING. -BIKES SHOULDN'T BE ON BRIDGE. | 2/25/2013 2:16 PM |
| 55 | KEEP IT UP. | 2/25/2013 2:08 PM |
| 56 | FANTASTIC. BEST PART OF THE CITY. | 2/25/2013 2:02 PM |
| 57 | ITS GOOD. | 2/25/2013 1:56 PM |
| 58 | NICE PLACE TO GO. | 2/25/2013 1:54 PM |
| 59 | check train bridge maintenance, planks and screws; spadina is a heritage road - recognize it; very supportive of Meewasin | 2/22/2013 2:19 PM |
| 60 | trails awesome! | 2/22/2013 2:07 PM |
| 61 | lights, especially in the winter. excellent work clearing the snow! | 2/22/2013 2:06 PM |

C. INTERCEPT SURVEY

Meewasin Trail Survey

Location: _____ **Date:** _____ **Time:** _____
Surveyor: _____ **Weather:** _____

1. Gender

- ☐ Female ☐ Male

2. Age group? (check only one)

- ☐ Under 18 ☐ 45-54
☐ 18-24 ☐ 55-64
☐ 25-34 ☐ 65 and over
☐ 35-44

3. What is your postal code?

4. How did you get here today?

- ☐ Walk ☐ Drive alone
☐ Bicycle ☐ Carpool
☐ Transit ☐ Other

5. What best describes the primary activity of your trip today? (check all that apply)

- Recreation? Transportation?
☐ Hiking ☐ Commuting to work
☐ Dog walking ☐ Traveling to school
☐ Running ☐ Traveling to shopping
☐ Biking
☐ Roller blading
☐ Skateboarding
☐ Enjoying nature
☐ Other ☐ Other

6. When do you typically visit the Meewasin Trail?

- ☐ Monday ☐ Morning
☐ Tuesday ☐ Afternoon
☐ Wednesday ☐ Evening
☐ Thursday
☐ Friday
☐ Saturday
☐ Sunday

7. How frequently do you visit the Meewasin Trail?

- ☐ Daily ☐ Monthly
☐ Weekly ☐ Other

8. How long to you intend to be here today? (not including travel time to the trail)

- ☐ Less than one hour
☐ 1-2 hours
☐ 2-4 hours
☐ More than 4 hours

9. What distance do you intend to travel on the trail today?

10. What is your destination? (reference map)

11. Where did you enter?

12. Where do you intend to exit?

13. In general, do you feel safe visiting the Meewasin Trail?

- ☐ Yes ☐ No

14. If no, what concerns you? (illegal activity, theft, wildlife, etc.)

15. Please tell us about your trail experience.

| | Great | Good | Fair | Poor |
|-------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. Trail conditions | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Usability of maps and signs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Interactions with other visitors | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Parking | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. Restrooms | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

* For any "Poor" answers above, please cite specific issues (use back if necessary, note question number)

16. What specific improvements would you like to see on the trail?

17. How would you rate the Meewasin Valley Trail's value to the community?

- ☐ Not important
☐ Somewhat important
☐ Important
☐ Very important

18. Please rate your support for increased trail funding:

- ☐ Do not support
☐ Somewhat support
☐ Support
☐ Strongly support

19. General Comments (use back if necessary):

D. TRAIL ASSESSMENT QUESTIONS

TRAIL ASSESSMENT QUESTIONS

- Is this a blind corner?
- What condition is the asphalt? Excellent? Good? Needs Repair? Because knowledge of asphalt conditions was limited when this study began. Excellent – new or fairly new; Good – minor trail defects cracks were visible – cracks hadn't opened up; Needs Repair – major trail defects the asphalt is in disrepair, vegetation coming through the asphalt. The asphalt was in structural distress. After further research and understanding of how asphalt degrades our team reviewed the trail with this knowledge: Is it raveling? It is pitting? Is structural distress occurring?
- Is there a concern with the edge e.g. trip hazard, drop off trail edge?
- Check accessibility? This questions allowed our team to go into the database and assess whether or not the trail meets Meewasin's goal of 5% grade/slope.
- Is pruning needed? Where is the vegetation overhanging the trail and impeding safety?
- Is the trail narrowing e.g. vegetation creep?
- Do curb cuts exist at trail entry points?
- Do crosswalk signs exist at entry points?
- Is there a retaining wall and what condition is it in
- What condition are the stairs in if they exist
- Is there a tertiary trail (monkey trail)
- Does the trail abruptly end? Is it closed
- Is there graffiti
- Is the trail near traffic
- Is there a drainage erosion problem?
- Material (asphalt, crusher dust, concrete, pavers, wood)
- Type (primary, secondary, tertiary)

E. VIEWS AND VISTAS

LIST OF VIEWS TO BE MAINTAINED:

Views and vistas create connection and a sense of place. The Meewasin Valley has lost many of these connection to the river valley due to the limited management of vegetation. Meewasin, with the City of Saskatoon, need to work to connect the people with the river. Below are a list of views that are recommended site for vegetation removal.

- The lookout north of the Mendel.
- Meewasin Riverworks (Weir) – maintain the views from the promenade to the river. Plant material is too obtrusive in the area. Maintain the plants around the stair area so they do not encroach on the hard surfaces. Standards for how close planting can be to the edge need to be created/abided by. Keep the area along the boardwalk open to the Weir to see the pelicans and cormorants.
- Mendel to Meewasin Riverworks (Weir) – open up three strategically placed views along this section of trail. Thin the plant material around the parking lot and the accessible trail.
- At the top of the Broadway Bridge (east bank), three benches were installed with great views overlooking Downtown into Kiwanis Memorial Park. The plant material in front of the bench bays seating nodes should be maintained.
- Gabriel Dumont Park – currently there are open site lines across the river. Quickly the sand bar willow is encroaching. This plant should be kept at bay and maintained so as not to repeat what happened at the Mendel with all the site lines being taken away.
- Existing bench bays and seating nodes along the Trail that have plant material obstructing the view include:
 1. Victoria Park – open the bench bays and a few other locations;
 2. Friendship Park – bench bay is shrouded in plant material and on a blind corner;
 3. Benches on west side of Sid Buckwold Bridge;
 4. Gabriel Dumont Park;
 5. Rotary Park – open up views around picnic benches;
 6. University Trail; and
 7. Cosmopolitan Trail.
- River Landing Phases 1 & 2 – keep open along the entire length. If plant material begins to grow in the rip rap it should be promptly removed.
- Kiwanis Memorial Park – open up a few views. Maintain the view behind the Bessborough Hotel and the Thompson Belvedere (both lookouts) by opening views to the University Bridge.
- University Bridge Trail (Spadina Crescent East) – Keep open from Kiwanis Memorial Park to the Shakespeare on the Saskatchewan Site at the Mendel.
- Where views are currently open along the Trail keep them open (i.e. Cosmopolitan Park Lookout and Capilano Lookout)

F. DARK SKY AND SAFETY

DARK SKY & SAFETY

Safety is always at the forefront for Meewasin. A consistent comment received from trail users who participated in the intercept trail survey, conducted in conjunction with Alta Planning + Design (Alta), suggests that lighting will make the trail safer at night (Alta Planning + Design, 2014). The notion that light creates a safer environment is a common perception.

The retina is what translates light into nerve signals allowing us to see under conditions that range from starlight to sunlight; the human eye is highly adaptable to varying levels of light, although time is needed for the eye to adjust to different illumination levels. (Wikipedia, 2014)

The design of trails or parks in the natural environment must consider the ambient light and complement it with pathway and park lighting while striving to maintain the natural eco-systems. The goal is to find that balance between creating a sense of safety while not interrupting the natural systems.

For the past century, cities have used electricity to light the interior and exterior environments. Research shows this can disrupt the natural rhythms of living organisms in the plant and animal kingdoms. It has been shown that over lighting the night sky and indoor environment can interrupt the natural circadian rhythm and suppress melatonin production in humans. One of the more recent and startling discoveries is the link to increased medical conditions, such as breast cancer and other cancers, depression, insomnia, and cardiovascular disease (Chepesiuk, 2009, p. 15).

Artificial light can cause disorientation in animals, as they may be attracted to artificial light, and have an effect on the light-sensitive cycles of many species. (IDA) Fatal Light Awareness Program (FLAP) is an organization dedicated to turning building lights off. This example is cited as it is most well-known recorded number of how the built environment affects wildlife. In 2013 Environment Canada released a study that indicates approximately 270 million birds die every year in Canada with 95% of deaths being caused by indirect human factors (Loney, 2014).

Losing the night sky accounts for some alarming anecdotes that have been recounted, including “The First World Atlas of Artificial Night Sky Brightness” (v. 328 Royal Astronomical Society) reports “two-thirds of the U.S. population and more than one-half of the European population have already lost the ability to see the Milky Way with the naked eye” (Chepesiuk, 2009, p. A22). Another interesting fact to consider is when the 1994 earthquake knocked out the power in Los Angeles, apparently “many anxious residents called local emergency centers to report seeing a strange “giant, silvery cloud” in the dark sky. What they were really seeing—for the first time — was the Milky Way, long obliterated by the urban sky glow” (Chepesiuk, 2009, p. A21). Another significant factor to consider is the energy consumption and greenhouse gas emissions (GHG) when considering lights. The city of Nanaimo reports that 15% of energy costs go toward street lighting (Connery, Winter Hiver 2013, p. 15).

However, light is not inherently bad; it has contributed to the extended work day, and has allowed an extended leisure time into the later evening hours allowing recreational activities to

occur. Light can be viewed as a means of creativity - creating a playful space balanced with the understanding where it is appropriate and inappropriate. When considering lights, a number of questions need to be asked: at what point does light become annoying or inefficient? Where is the balance in the need for light with the ability for a playful juxtaposition of lighting buildings, streets, parks, and pathways?

When considering light, it is important to consider how much light is needed and what are acceptable lumen levels? Once again, this varies depending on the need and what the light is used for: task lighting requires more light than accent lighting and/or ambient 'space' lighting (Connery, Winter Hiver 2013). When considering the brightness, it is important to consider the light's wave length; red and white lights have a visible long-wavelength which can cause more disorientation among migrating birds whereas blue and green wavelengths do not contain visible long-wavelengths and do not disrupt the migrating birds (Connery, Winter Hiver 2013, p. 14).

It is also important when lighting parks and pathways to light effectively. In general, the purpose of lighting parks and pathways at night is to promote safety, but lights that are too bright can be ineffective. An overly lit area has the ability to interfere with the eyes' ability to adapt to darker areas. Lit pathways are considered movement predictors (Crime Prevention Through Environmental Design) (SafeGrowth). "If only certain paths are lit, criminals can more easily predict the paths of pedestrians. These are sometimes referred to as 'channelized routes' or 'movement predictors'" . (Harnik, Donahue, & Thaler) There is a fine balance of too much light and not enough light - not only does light potentially curb bad behaviour but it also has the ability to increase/encourage bad behaviour such as site tagging.

When considering light in design it is important to ensure the light does not contribute to the artificial skyglow. There is natural skyglow that is emitted from stars, sunlight scattered by space dust and atmospheric gases. There is also artificial skyglow that is emitted from cities which can illuminate the night sky for great distances (Light Pollution Abatement Committee of the Royal Astronomical Society of Canada, 2011). Los Angeles' skyglow can be seen from 200 miles away. (Chepesiuk, Environmental Health Perspectives, 2009) With the advancing development in LED and solar technologies there are ways to save and use lighting that uses a fraction of the power of incandescent and makes it easier to incorporate solar panels. Frenchy's Field in Santa Fe, New Mexico, used LEDs along pathways that are activated by motion and change brightness depending on ambient conditions. (Harnik, Donahue, & Thaler)

People often express that available (street or other overhead) lighting on sidewalks or paths is insufficient at night, but providing more or brighter overhead luminaries on the same alignment may be an expensive solution if foliage intercepts much of the light (bollard lighting might be considered in this case).

Considerations:

- Review all lights in and near Meewasin's Jurisdiction to ensure they comply with dark sky policies that already exist.

- Develop a policy for exterior building and parkway lighting in conjunction with the City of Saskatoon.
 - Downward projecting lights;
 - Visibility of light source;
 - Reason and need for lighting in each particular area;
 - Lower lights adjacent to roads that border natural areas within Meewasin's Jurisdiction to promote a healthier eco-system. Consider lights that change brightness depending on ambient conditions;
 - Reflective paint for fog lines or centre path lines. City of Saskatoon Bylaw #6884 (The Bike Bylaw) clearly states that the use of a front light and rear reflector or light must be used during the period from 30 minutes after sunset to 30 minutes before sunrise or at any other time when conditions of poor visibility exist (City of Saskatoon, 2011, p. 3);
 - Directed or lower lights on trails and pathways. This will help with lighting the path rather than the sky. (i.e. bollard lighting rather than pole lighting); and
 - Convert to solar lighting as funding is available.
- Consider the cost of lighting. Is the lighting feasible and cost effective?
- Ensure there is no negative impact associated with outdoor lighting;
- As new technologies emerge consider their value (i.e. StarPath from Protec. This is creative traditional lighting. This is not currently available in North America_;
- Consider the waste;
- Consider working with local groups to get people out on the trail later after dark – community activities that take back the night; and
- Join the International Dark-Sky Association.



Image 1 (Pro-Teq)



Image 2 (Madison, 2016)



Image 3 (First Light Technologies, 2016)



Image 4 (Philips Lumec)

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G. INSPECTION TEMPLATE LOCAL ROAD RESEARCH BOARD

Trail Name: _____

Trail Segment: _____

Inspection Date: _____

Inspector Name: _____

PAVED TRAIL INSPECTION TEMPLATE

Follow-up Performed By: _____

Follow-up Date: _____

| Inspection Items: | | ✓ if "Yes" | Inspection Comment/Location | ✓ if Maintenance is Complete | Follow Up Comments | Photos Taken During Inspection: Y/N |
|-------------------|--|------------|-----------------------------|------------------------------|--------------------|-------------------------------------|
| 1 | Pavement condition | | | | | |
| | a. Are there cracks, surface pitting, potholes, heaves or other deficiencies in the trail surface condition? | | | | | |
| 2 | Pavement markings | | | | | |
| | a. Are pavement markings fading or chipping? | | | | | |
| 3 | Overhead tree/brush trimming | | | | | |
| | a. Is there less than 10-feet of vertical clearance across the trail and clear zones? | | | | | |
| | b. Do the trail clear zones need to be cleared of woody vegetation? | | | | | |
| 4 | Intersection sight lines (road, driveway, other trail, sidewalk) | | | | | |
| | a. Does vegetation within the trail corridor need to be cleared to maintain sightlines from/to trail? | | | | | |
| 5 | Rain gardens | | | | | |
| | a. Is there standing water more than 48 hours after a rain event? | | | | | |
| | b. Are there weeds/volunteer plants growing in the rain garden? | | | | | |
| | c. Is sediment accumulating anywhere in the rain garden? | | | | | |
| | d. Do any rain garden plants need to be replaced? | | | | | |
| | e. Is more mulch needed? | | | | | |
| | f. Is there erosion or gullyng? | | | | | |
| | g. Is there trash or debris in the rain garden? | | | | | |
| 6 | Erosion evidence/damage | | | | | |
| | a. Is there any erosion damage to the trail or shoulders? | | | | | |
| 7 | Drainage structures & culverts | | | | | |
| | a. Are any culverts clogged with debris? | | | | | |
| | b. Are any catch basins clogged or blocked? (trailhead parking lots) | | | | | |
| | c. Is there any erosion near culverts? | | | | | |
| 8 | Ditch clearing | | | | | |
| | a. Is there debris in the ditches? (trash, branches, sediment, etc.) | | | | | |
| | b. Is there standing water in the ditches? | | | | | |
| | c. Do ditches need mowing? | | | | | |

| | Inspection Items: | ✓ if "Yes" | Inspection Comment/Location | ✓ if Maintenance is Complete | Follow Up Comments | Photos Taken During Inspection: Y/N |
|----|--|------------|-----------------------------|------------------------------|--------------------|-------------------------------------|
| 9 | Bridge/tunnel/boardwalk (Non-structural inspection) | | | | | |
| | a. Is there any graffiti that needs to be cleaned? | | | | | |
| | b. Are the railings bent, broken or in disrepair? | | | | | |
| | c. Is the decking in disrepair? (nail heads sticking up, cracks, etc.) | | | | | |
| | d. Is the paint or surface treatment chipping or cracking? | | | | | |
| | e. Is there any spalling? | | | | | |
| | f. Is there sediment accumulation on the trail? | | | | | |
| | g. Are the light fixtures in good shape? | | | | | |
| | h. Is there any visual sign of damage to the substructure? | | | | | |
| 10 | Railroad crossings (Non-structural inspection) | | | | | |
| | a. Is the crossing in disrepair? (not flush with trail, large gaps, etc) | | | | | |
| | b. Is trail signage at the railroad crossing blocked by vegetation or other obstructions? | | | | | |
| 11 | Trail amenities | | | | | |
| | a. Are any bike racks, trash receptacles, kiosks, picnic tables or benches broken or in disrepair? | | | | | |
| | b. Is there any sign of vandalism? | | | | | |
| | c. Do the concrete pads around amenities need repair? | | | | | |
| 12 | Pet stations | | | | | |
| | a. Do the pet station bags need to be re-filled? | | | | | |
| 13 | Restrooms (portable toilets) | | | | | |
| | a. Does the toilet need to be serviced? | | | | | |
| | b. Has the toilet been vandalized or is it in disrepair? | | | | | |
| | c. Is the concrete pad significantly cracked and does it require repair? | | | | | |
| 14 | Signage | | | | | |
| | a. Are any trail signs blocked by vegetation for other obstructions? | | | | | |
| | b. Is there any physical damage to trail signs? | | | | | |
| | c. Are connecting bolts and anchorages intact? | | | | | |
| 15 | Fences (chain link, wood) | | | | | |
| | a. Are there any holes or gaps in the fence fabric? | | | | | |
| | b. Are there any loose, bent or broken fence posts? | | | | | |
| | c. Are there any loose connections between the fence and posts? | | | | | |
| 16 | Sediment/debris on trail | | | | | |
| | a. Is there any sediment on the trail? | | | | | |
| | b. Is there any debris on the trail (storm, trash, etc.) | | | | | |
| 17 | Lighting | | | | | |
| | a. Does the fixture need to be replaced or repaired? | | | | | |
| | b. Does the light hardware need to be repaired? (pole, mast, etc.) | | | | | |

H. TRAIL INFORMATION – ASSET REPLACEMENT

Trail Infrastructure - Cost Analysis

| Description | Cost | Unit | Notes |
|-----------------------------|-------------|--------------|--|
| Cost Analysis A | \$338 | lineal meter | Reconstruct Asphalt Trail @ 3m Complete Fees - Design, engineering and construction fees |
| Cost Analysis B | \$288 | lineal meter | Reconstruct Crusher Dust Trail @ 3m Complete Fees - Design, engineering and construction fees |
| Cost Analysis C | \$1,568 | lineal meter | Reconstruct Asphalt Trail @ 3m - Complete Fees - Design, engineering and construction fees (complicated grades with retaining walls - meeting accessibility) |
| Cost Analysis D | \$386 | lineal meter | Reconstruct Asphalt Trail @ 4m Complete Fees - Design, engineering and construction fees |
| Cost Analysis E | \$579 | lineal meter | Reconstruct Trail to 6m Complete Fees - Design, engineering and construction fees |
| Cost Analysis F | \$772 | lineal meter | Reconstruct Trail to be separated Asphalt Trail - 2 - 4.5m pathways Complete Fees - Design, engineering and construction fees |
| Crusher Dust Patching | \$ 35.00 | l.m. | Minor work needed |
| Asphalt Patching | \$ 50.00 | l.m. | Based on the cost the City of Saskatoon used in 2014 |
| Asphalt Overlay | \$ 90.00 | l.m. | Based on the cost the City of Saskatoon used in 2014 |
| Crack Sealing | \$ 4.50 | l.m. | Based on the cost the City of Saskatoon used in 2014 |
| Urban Bench* | \$ 1,350.00 | each | |
| Rustic Benches on footings* | \$ 500.00 | each | |
| Urban Waste Receptacle* | \$ 2,000.00 | each | |
| Rustic Waste Receptacle* | \$ 500.00 | each | |
| Pruning | \$ 25.00 | lineal meter | This cost is high and was discussed with two three different companies. Because the work was throughout the entire Meewasin valley it was hard to come up with a lump sum cost. This provides an estimate for the funds required to attend to this work. If the work is tendered a more accurate number can be assigned to this line item. |
| Drinking Fountain* | \$ 8,000.00 | each | |

The costs above are based on previous construction contracts over the past two years with an inflation and gross factor of 15% used to accommodate Meewasin staff time and design and engineering fees associated with the work.

* These items do not include installation fees - only replacement fees

I. SUPPORTING ARTICLES

Overcrowding on MVA trail one reason for Segway delay

Question: Why has there been a delay in granting a licence to the owner of the company that would like to offer Segway rentals? It seems we're behind the times on this.



**DON
ATCHISON**

Ask the Mayor

I am told that SGI will not even licence the motorized vehicles at this time.

Mayor Atchison: There are a couple of issues here. I am told SGI at this time will not licence these motorized vehicles. They would probably have to cross a roadway to get to the MVA trail. The City is looking at Segways, and where a rental location might work. The other part of the equation is the Meewasin Valley Authority trail system. That is such a popular trail that through the downtown area now, it is over capacity. It is difficult to get all the pedestrians and cyclists on there, never mind motorized vehicles. What I believe we need to do is double the width of the paved trail over a substantial area of the trail, especially downtown. That would help make it safer for everyone. If we are over capacity already, why would you add more congestion onto these trails right now? The City of Saskatoon puts over \$1 million a year into maintaining the trails. That's just on the maintenance end of it. We are investing another \$717,000 in taxpayer dollars that go directly to the MVA.

Question: What will have to happen for the entrepreneur or others to get a licence for Segway rentals?

Mayor Atchison: Governments don't always move fast. I am hoping this will have a resolution in the foreseeable future, so we can have the Segways here, too. They point to other cities that have them now. But I don't think that happened overnight. It's unfair to say, "They have them there, so why don't we?" As I said earlier

RECREATE ON THE MEEWASIN TRAIL

By D. Grant Black, AOL Travel Canada

According to a 2004 study by the UK's Nature and Psychological Well-being, "within urban and semi-urban settings, access to green, open spaces can have a beneficial effect."

Fortunately, Saskatoon's early city planners already figured that out when they decided the South Saskatchewan River valley should be largely left to the enjoyment of its citizens. So did the provincial government in 1979 when they created the Meewasin Valley Authority (MVA), a conservation organization dedicated to conserving the natural and cultural heritage resources of the South Saskatchewan River Valley, both in and around Saskatoon.

While Meewasin's jurisdiction does centre in Saskatoon, it actually covers approximately 60 kilometres along the river through Saskatoon, the R.M. of Corman Park and from Pike Lake in the southwest to Clarke's Crossing in the northeast. Meewasin encompasses over 40-square-kilometres, which includes the South Saskatchewan River, conservation areas, parks, museums, interpretive centres, the University of Saskatchewan lands, canoe launches, community links and Riverfront at River Landing, a new public river project that aims to attract residents, visitors and business to downtown Saskatoon with a combination meeting place, performance site and recreation area.

There's also the Meewasin Valley Trail, one of the great urban trail systems in Canada. (Meewasin is Plains Cree for "beautiful.") The Meewasin Trail, a Trans-Canada Trail section, stretches for 21 kilometres along the South Saskatchewan River, including central Saskatoon where you'll find plenty of parks for intimate picnics and family barbeques. This undulating riparian ribbon also serves as a peaceful path for day hikes, in-line skaters, cyclists and it's an ideal running route where I've been test-driving my new Reebok RealFlex running shoes.

Starting this summer, Saskatoon Bicycle Rentals will operate at River Landing across from the Saskatoon Farmers' Market. Based in an 18-foot trailer, the new company's rentals include Dutch-style commuters, cruisers, mountain bikes, tandems, adult tricycles, children's bikes, picnic baskets plus historical tours.

The Meewasin Valley Trail continues southwest to several mixed conservation-recreation areas. Here are some Meewasin Valley sweet spots near Saskatoon worth checking out that offer vehicle access - at least to the parking lots:

Chief Whitecap Park, a few clicks south of the city off Grasswood Road, is a former rifle range that now offers scenic hiking trails and a beautiful view of the South Saskatchewan River. Cranberry Flats, eight km south of Saskatoon off Highway 219, offers a scenic, natural area with large riverside beaches and a wheelchair accessible trail to a valley lookout. Wilson Island, visible from Cranberry Flats' lookout point, was the site of a Sea Cadet Training camp, 1943-1951.

Beaver Creek Conservation Area, 13 km south of Saskatoon, contains one of the few uncultivated short-grass prairie sites left in Saskatchewan. This microcosm of the Meewasin Valley features a prairie habitat and diverse flora and fauna plus a sheltered creek and a river valley. An interpretive centre and staff provide opportunities to discover nature during the four seasons along a selection of five nature trails. Public programs include Moon Hikes, Perseid Meteor Showers and Heritage Hoopla. The Fred Heal Canoe Launch, 20.5 km by river south of Saskatoon, is the place to put in your canoe or kayak for a scenic five-hour paddle back to the city. This is a great river vantage point for bird, animal and plant life spotting enroute.

Check out the Meewasin Valley Authority's website for trail maps and more information on how to locate these natural attractions. A great start-off point is at the Meewasin Valley Interpretive Centre (402 Third Avenue South) near the historic Traffic Bridge in downtown Saskatoon.

For more information, visit meewasin.com/facilities/trail.

Source: [AOL Travel Canada](#)

Repair bill for Meewasin trails pegged at \$16M

BY PHIL TANK, THE STARPHOENIX OCTOBER 17, 2014



Nola Stein, project manager for the Meewasin Valley Authority, shows off areas of the trail system which are in need of repair

Photograph by: Greg Pender, The StarPhoenix

Nearly half of the Meewasin Valley Authority's trail system in Saskatoon needs repair or upgrades, an effort estimated to cost \$16 million over the next nine years.

Unfortunately, the MVA lacks a guaranteed funding source to try to keep up with the expectations of a rapidly growing city that places a high value on the trails, chief executive Lloyd Isaak said Thursday.

Besides the \$16 million in upgrades, which covers 44.5 per cent of the 47 kilometres of trail that snake

along the South Saskatchewan River valley or connect to it, a yearlong assessment of the trail system has identified 6.6 km of trail gaps that would cost \$8 million to complete, he said.

"We want to demonstrate to this community that we have a dilemma. The point is that we have an issue here we need to face. There's no financial (mechanism) on the horizon to do this. So how are we going to tackle this?"

Isaak said the MVA has been very successful attracting corporate donors to build new extensions of the trail system - the campaign to raise \$8 million to extend the riverbank trail to the north and south is near its goal, he noted - but has had more trouble raising money to address the established system's state of disrepair.

Other financing needs include \$500,000 to refurbish site furnishings and signage, and \$150,000 to establish location signs along the trails.

The ideal width of the trail to accommodate cyclists and pedestrians has been set at three metres - which is particularly important given the needs of a growing population - but nearly two-thirds of the trail does not meet this standard.

This includes some of the most well-used paths, like the stretch near the Mendel Art Gallery, where the trail narrows to 1.7 metres in spots.

Isaak said to meet the expectations of residents as expressed in a 2013 opinion survey, the MVA needs to secure more money from its "statutory funding" partners - the city, the provincial government and the University of Saskatchewan.

Nola Stein, the MVA project manager who conducted the trail assessment, pointed out some stretches of trail were built 30 years ago and need to be replaced rather than just patched.

"We're also getting to the end of this asphalt's life," Stein said. "Asphalt lasts about 30 years. All we're doing at this point is a Band-aid type approach. We haven't been able to keep pace with our failing infrastructure. Our funding is falling behind."

Meewasin contracted Alta Planning and Design, an American company that specializes in cycling and pedestrian design, to project increased trail use as Saskatoon grows.

The projection suggests the number of trail users could double over the next 30 years.

One of the busiest sections near the Mendel Art Gallery, for example, which sees 400 users over a two-hour peak volume today, could see nearly 1,000 users in the afternoon peak by 2043, according to the company.

In a 2013 opinion poll of Saskatoon residents, 93 per cent said they moderately or strongly agreed the MVA should continue with improvement to existing infrastructure, the highest rate of approval of eight activities. Extension of trails got 90 per cent strong or moderate agreement from poll respondents.

Fast Consulting Community Intelligence conducted the poll of 500 Saskatoon residents by phone in July 2013.

It is considered 95 per cent accurate, with a 4.4. per cent margin of error.

Unfortunately, funding has declined in real dollars from \$33 per person per year 30 years ago to \$9 per person per year today, Isaak said.

"We don't have the resources to get to (improvements)."

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Trail Tracks

- The Meewasin Valley uthority built the first 10 A kilometres of the trail system in 1981.
- 11,597 trail visitors counted (fall 2012, spring 2013).
- Trail users are 57 per cent pedestrians and 43 per cent cyclists.
- Dogs represent eight per cent of trail traffic.
- More men used trails in the fall of 2012, while more women used trails in spring of 2013.
- Of 47 kilometres of trail studied, 53.39 per cent was deemed to be in good condition, 0.16 per cent was assessed as excellent and 44.50 per cent needs repair.
- Only about one-third of trail meets the minimum width standard of three metres.
- It's estimated it would cost \$24.65 million to repair trails and signage, plus complete the gaps in the trail system over nine years.

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Previous

Next



Nola Stein, project manager for the Meewasin Valley Authority, shows off areas of the trail system which are in need of repair

Photograph by: Greg Pender, The StarPhoenix



Former MVA chair frustrated with inadequate funding

BY BETTY ANN ADAM, THE STARPHOENIX AUGUST 29, 2014

Drastically eroded funding to the Meewasin Valley Authority is part of the reason why Jack Vicq says he recently resigned as board chair of the organization charged with conserving a healthy river valley balanced with development for human use.

"I was getting frustrated with lack of support of the government of Saskatchewan and the City of Saskatoon, lack of keeping up with inflation," Vicq said.

The Meewasin trail has not been able to keep up with Saskatoon's growing population.

Increasing numbers of cyclists, walkers and runners are creating a need for wider trails; weather and use are wearing out the pavement and wooden benches, and expansion of the city itself is outgrowing the trails, especially in the northeast end of the city, he said.

There are already signs that River Landing needs expansion from the Traffic Bridge to the Broadway Bridge, and the downtown interpretive centre is "past its best before date," Vicq said.

Despite the growing use, there has been inadequate growth in funding from the three statutory partners responsible for the MVA - the province, the city and the University of Saskatchewan, each of which provides roughly \$1 million per year.

As the city's population has increased, funding has dropped by a whopping 74 per cent per capita "in real dollars" over the last 32 years, Vicq said.

The MVA received \$9.12 per capita in 2014, compared to \$33 in 1982, he said.

No one at Meewasin expects the same level of funding it received in 1982, but it is becoming difficult to do the job required by the MVA Act, he said.

Meewasin would be able to do most of the jobs on its "to do list" if it received funding

somewhere between 1982's level and today's, he said.

Vicq said he knows Meewasin isn't the only organization shortchanged for infrastructure dollars - the city's roads need help and the health region's facilities are hurting.

As governments try to keep taxes down, they tell organizations to do more with less.

"What Meewasin has found out is sometimes you have to do less with less," and "get in line for public dollars," he said.

The City of Saskatoon, which in the past followed the province's lead on funding the MVA, this year stepped up and increased its contribution by four per cent.

Funding from the province remained stagnant; the university passed on a two per cent increase it received from the province.

The funding crunch will eventually affect Meewasin's ability to attract and keep good staff, Vicq said.

"We compete with the city and the province for the kinds of people we need in parks and planning. We have struggled. Meewasin has been successful, but that's going to be a problem," he said.

Staff include a landscape architect, a chartered accountant, a construction manager responsible for trail development, a manager who is on the development review committee, and a former teacher responsible for outreach programs.

Salaries for those highskilled jobs use up 75 per cent of Meewasin's statutory funding.

"We get the best people we can find. My worry is, how long will Meewasin be able to keep them if our funding doesn't keep up?" Meewasin sometimes also receives special grants, such as one from the city for trails around the new south bridge and one from the province toward the current \$8 million capital campaign that will expand the trail from Wanuskewin to Chief Whitecap Park.

Vicq said he also hopes donations from the community remain strong. Much of the \$8 million came from the public, as did money for the new Meewasin skating rink and River Landing.

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City puts the brakes on Segway plan

Entrepreneur wants business at River Landing

BY PHIL TANK, THE STARPHOENIX AUGUST 20, 2014



Jason Kawa, a high school teacher at E.D. Feehan, owns two Segways and wants to start a business offering tours of River Landing but red tape is keeping the motorized devices off city trails.

Photograph by: Greg Pender, The Starphoenix, The Starphoenix

Guided Segway tours are becoming popular tourist attractions across Canada, but a Saskatoon entrepreneur's plan to introduce the same attraction here remains stuck in neutral.

Jason Kawa, a high school teacher at E.D. Feehan, owns two of the personal transport vehicles and wants to start a business offering tours of River Landing on Segways, a two-wheeled lowspeed motorized vehicle on which the rider stands.

City officials are considering his proposal, but concerns about safety and a lack of rules governing what type of commercial enterprises can operate in city parks has stalled the project.

"I'm really hoping to do something down at River Landing and on the Meewasin trails," said Kawa, who thinks the trails and the riverbank provide an ideal location for his Segway plan. "It's been a little bit difficult because I just can't seem to get an answer.

"I know it's something new, but they're popping up all over Canada."

Kawa started his company two years ago with the purchase of two Segways, which cost between \$6,000 and \$7,000 each. He conducts private and corporate events with the Segways while he waits to expand his business.

Since the provincial Traffic Safety Act classifies the devices as motor vehicles, they are prohibited on roadways and restricted to use on private property.

Municipalities can approve the use of vehicles like Segways, which have a top speed of about 20 km/h, on sidewalks or trails, said SGI spokeswoman Kelley Brinkworth.

Guided Segway tours along the waterfront have become popular tourist attractions in Halifax and Edmonton and one just started this month in Calgary. Kawa points out the vehicles are quiet and environmentally friendly, since they operate via rechargeable batteries.

"I realize that there's some frustration that this isn't moving along," said Cary Humphrey, Saskatoon's manager of leisure services.

"The trails we have now are very, very busy and there have been times when there have been near-misses."

Humphrey said the Meewasin Valley Authority (MVA) is reviewing the capacity and condition of the trail system in the city and that review will help determine where an enterprise like Segway tours might best fit.

City staff are also creating a policy on commercial enterprises in the city's busier parks and expect it to be ready for city council's approval in November; then, ideally, it could be implemented in 2015,

Humphrey said. Staff are also developing an active transportation plan for Saskatoon.

"We think it's an intriguing idea," said Mike Velonas, the MVA's manager of planning and conservation. "And Meewasin is generally interested in ideas to help animate the river valley."

Velonas said he shares the city's concerns about safety, pointing out there is already some conflict between various trail users like cyclists and pedestrians. The MVA's trail study, which is expected to be completed soon, will help address some of those issues, he said.

However, Randy Fernets, director of industry development and sport with Tourism Saskatoon, said he thinks the city needs to do more to help facilitate attractions like Kawa's project. "We're trying to get the city to be enablers, rather than them being the 'no' people all the time," Fernets said.

City hall needs to help make River Landing more of an attraction, especially since the planned private development has not materialized, Fernets said.

"If there's an entrepreneur that's going to set up, he wants to set up in a place where there's lot of people every day."

City hall has also become "a lot more vigilant" when it comes to safety concerns, he said. "What is stopping us from moving forward? The city needs to help us," Fernets said. "It's risk management gone too far, we feel." ptank@thestarphoenix.com

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Bike lanes a waste

BY HAROLD KROEGER, THE STARPHOENIX SEPTEMBER 26, 2014

On a recent walk on the stretch of the Meewasin Trail from Ravine Drive to the weir and back, the count of cyclists using the trail instead of using the dedicated bicycle lanes that follow both sides of Spadina Crescent only a few metres away was 38 to eight.

It was a warm fall afternoon, and the trail was heavily used. Cyclists obviously prefer to dodge pedestrians, baby strollers, dogs, skateboards and rollerbladers rather than use the lanes the city has set aside for their use.

As a bike enthusiast, it saddens me to suggest to city council that it be cautious about the amount of resources that it allocates to ungrateful cyclists.

Harold Kroeger

Saskatoon

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Case for bike lanes

BY STEPHAN SIMON, THE STARPHOENIX SEPTEMBER 30, 2014

After one afternoon's worth of observation, Harold Kroeger (SP, Sept. 26) seems to think that what he saw is evidence that bike lanes are unnecessary. I would contend the exact opposite.

Is it really surprising that 80 per cent of the cyclists he saw preferred a path that was separated from vehicular traffic, even if that means sharing with other non-vehicular users?

How many of the cyclists he saw were commuters versus recreational cyclists? How many were children? The city and MVA have made the Meewasin Trail an inviting place, so it's not surprising that people favour it. If I were commuting along that route I would use the road, but if my kids and I were out for a bike ride, the MVA trail it would be.

If you don't feel safe on the road, you're not going to use the road.

I commute to work by bike from the time the snow clears to the time snow falls, and I use the MVA trail - though a different section of it - as part of my route. Not because it's shorter or faster, but because I avoid having to share the road with vehicles. When I do have to share the road, I favour streets with lower traffic volume, such as 24th street or Fourth Avenue.

I don't mind sharing with vehicles, but if there is an easily available, safe, separated alternative, I'll use it.

Stephan Simon

Saskatoon

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J. SITE FURNISHINGS

SITE FURNISHING

Installation Details

All furniture has specific installation details and is to be installed according to the manufacturer's recommendations.

Meewasin's Rustic bench was designed by Meewasin and typically is placed on native soil or crusher dust with no break between the ground and the sawn end of the lumber. In recent years the construction crew has applied a piece of pressure treated plywood to the feet of the bench as well as treated the entire bench with Cloverdale Sunfast Waterborne (Low VOC Exterior Wood Finish) finish to help extend the life of these benches.

Recommendation – all benches, waste receptacles, and drinking fountains (existing and new) are to be installed on a concrete pad.

BENCH STYLES

- **Urban** (Image 1) – These benches are found along the Meewasin Trail within city limits and typically in the manicured parks. Other parks and areas with a more natural setting will have the rustic bench. The (old) urban bench is at the end of its service life. Meewasin is working to replace the older style benches with a new bench. This new style, pictured in Image 15, will be easier to replace if parts are damaged. The new style is surface mounted with a concrete footing.



IMAGE 1

- **Rustic** (Image 2)– These are inexpensive benches to produce but care during installation is needed to help them last as long as possible. Installation should be on concrete footing as well provide a spacer between the concrete and the bottom legs of the bench. These benches should not be within city limits except where sites are more natural sites such as: Gabriel Dumont Park, Peggy McKercher Conservation Area, Crocus Prairie, Saskatoon Natural Grasslands, Forestry Farm, and St. Joseph School.



IMAGE 2

- **Mendel** (Image 3)– these benches were recently upgraded with new tops which will encourage their sale. The new tops are made by Maglin, a Canadian company, and made of Ipe wood. The site is instantly warmed by the presence of wood creating a more inviting place. This was an adaptive reuse of the existing bases.



IMAGE 3

- **River Landing** (Image 4,5,6) – Meewasin and the City of Saskatoon worked together to manage the redevelopment of River Landing in 2004. The

site has a focus on the social, cultural, and commercial while maintaining free public access to the river front. In the future this site will be managed by a separate board. River Landing has its own identity but Meewasin continues to operate a donor bench program with seating blocks and benches to choose from.



IMAGE 4



IMAGE 5



IMAGE 6

- **Rotary Park (Image 7)** – These are a special bench order and are not stocked. All benches in Rotary Park should match this style. It is recommended to either remove the old brown City of Saskatoon benches or replace them with the Rotary Bench or Meewasin's urban bench. These benches are beginning to degrade and recommend replacing in the future with a bench that is not subject to fading.



IMAGE 7

- **Kiwanis Memorial Park (Image 8)** – The City of Saskatoon's Facilities Department maintains these benches. These benches are in need of an upgrade according to the city staff who maintain these benches. After consulting with City of Saskatoon staff it is evident these benches are expensive to maintain on a yearly basis. The frame is a cast frame and is costly to replace. They require painting up to twice in a season. This is a highly visible park with just under half of the benches in need of some type of repair.



- **Meewasin Riverworks (Weir) (Image 9)** - These benches are in great shape but due to the nature of the plant material, aggressive pruning yearly will be required so each bench has a view of the weir. This is a discussion that should be held yearly with the Parks Department at the City of Saskatoon.



IMAGE 9

Site Furnishing Styles

1. Urban Bench – L-2 6ft SURF IPE CUST

FairWeather Site Furnishings division of Leader Manufacturing, Inc.

1540 Leader International Drive

Port Orchard, WA 98367

Phone #1-800-323-1798

Fax #1-360-895-1284

6' Ipe Wood SM with options – Custom IPE wood contour bench with back. Two each of 2x6 boards (one at the top and one at the front seat edge, other boards to be standard 2x3), surface mount arms or no arms. Router to be the Meewasin logo left hand side of bench and plaque placement (3.25 x 3.25).

2. Urban Waste Receptacle – Custom 400W MLWR

Maglin Site Furniture – www.maglin.com

Ronay Shelton (rshelton@maglin.com)

4303 9th Street SE

Calgary, AB T2G 3C8

3. River Landing Waste Receptacle – Gretchen Litter

Landscape Forms

Model Napoleon / Surface Mount

Powerdercoat Colour: Titanium

431 Lawndale Avenue

Kalamazoo, MI 49048-9543

www.landscapeforms.com

4. River Landing Benches – Napoleon Benches

Landscape Forms

Model Napoleon / Surface Mount

Powerdercoat Colour: Titanium

Austin Backless AU999-06005-IPE

Austin Backed AU999-06004-IPE

431 Lawndale Avenue

Kalamazoo, MI 49048-9543

www.landscapeforms.com

5. Rotary Park Benches

Sudden Fun – Model is no longer available

6. Rotary Park Waste Receptacle

Sudden Fun – Model is no longer available

7. Rustic Bench – Rustic Bench

V&R Sawing
Eigenfeld Rd
Rosthern, SK S0K 3R0
(306) 232-5488

8. Trail Wayfinding Signs (Trail Head Signs) – no model number

Redekop Profiles
Kevin Redekop (orders@redekopprofiles.com / kredkop@redekopprofiles.com)
Hwy 16 West Twp Rd 380
P.O. Box 178A, RR#4
Saskatoon, SK
S7K 3J7 306-931-2481 ext 237

9. Drinking Fountain

Haws Drinking Fountain
Model #3500D

Contact local supplier (Acklands Grainger / Superior Safety) for replacement parts and new drinking fountains. Future Consideration would be for the installation of a bottle fill option on future drinking fountains. Because more and more people are recreating on the trail drinking fountains that have a bottle fill open would be appropriate in certain locations.

L. DONOR AMENITIES

DONOR AMENITIES

PLANT-A-TREE (PAT)

This program is very popular. Sites to be used for this program are valley wide, but most of the dedicated sites to date are well within city limits as this program is typically dependent on new plantings. Generally this program attracts people who can identify with an individual tree in a location they either live near or is within walking distance.

Donors prefer individual plantings for this program (i.e. street trees or single trees in planting beds). Afforestation type planting has yet to be used for this program. It has the opportunity to be very successful, but will require new information about the program and marketing brochures.

If the program remains as individual tree dedication, Meewasin will benefit from being accessed at the Development Review level. As part of Development Review, Meewasin will have the opportunity to take advantage of newly developed areas within its jurisdiction. This will assist in planning for future PAT site.

Mature trees are viable donation options to include in the program. The Spadina Promenade trees (from the Meewasin Park shelter to Meewasin Riverworks (Weir)) and Kiwanis Memorial Park are the only two places where mature trees have been dedicated. To make this a viable valley-wide option it will require further investigation to determine where there are non-dedicated mature trees at other sites (i.e. River Landing) that can be used.

The program offers deciduous, coniferous (only when available), shrubs, grassroots, and the Memorial Forest as options. Below is the current cost for the PAT program:

- Deciduous - \$150.00
- Coniferous - \$250.00
- Shrubs - \$50.00
- Grassroots – Amount determined by donor.
- Memorial Forest - Minimum donation of \$100.00
- Mature Trees - Not yet determined

A challenge within this program is the database management. Record keeping for this program is done separately from department to department which increases the probability of errors. It is recommended to consolidate the various techniques used to capture the PAT data.

The recommendation is to build on the GIS database started with during the Trail Study. This program should be part of the trail map to allow donors to donate to the program through an online interactive map. The database can be shared between administration and the Design and Development department to streamline record keeping. Identifiers could be used to track donor trees.

Memorial Forest: Develop an online map using the dollars donated to the program and illustrated in graphic form the dollars donated to the square metres planted.

Grassroots: An entry level donation that is part of the general fund. The grassroots is minimal in its popularity. Again, this program has no visibility and lacks donor participation. Better profile and a description of the program will help. This program is managed by the Donations Officer and has no impact on the Design and Development department.

BENCHES

This program is equally as popular as the Plant-A-Tree program, extending valley-wide with a variety of bench styles and sites to choose from for sponsorship. Although existing bench sites are available, donors often want a specific site or high profile location.

Typically donors prefer benches in their neighbourhood or along the route they always walk. Due to the large amount of undedicated benches in the Valley, it is recommended that Meewasin should no longer build new seating nodes unless they are along new trail segments, to meet Meewasin's policy of providing a rest node every 1,000 metres.

Meewasin should be the only organization to dedicate benches within its jurisdiction. In the recent past, two benches within Meewasin jurisdiction were dedicated by the City of Saskatoon and as such a new bench style was introduced (Victoria Park and Sutherland Beach).

Unless new trail is being built no new bench sites should be constructed until further notice. Meewasin has 275 undedicated benches at this time (Figure 1).

Bench Numbers – Dedicated and Not Dedicated

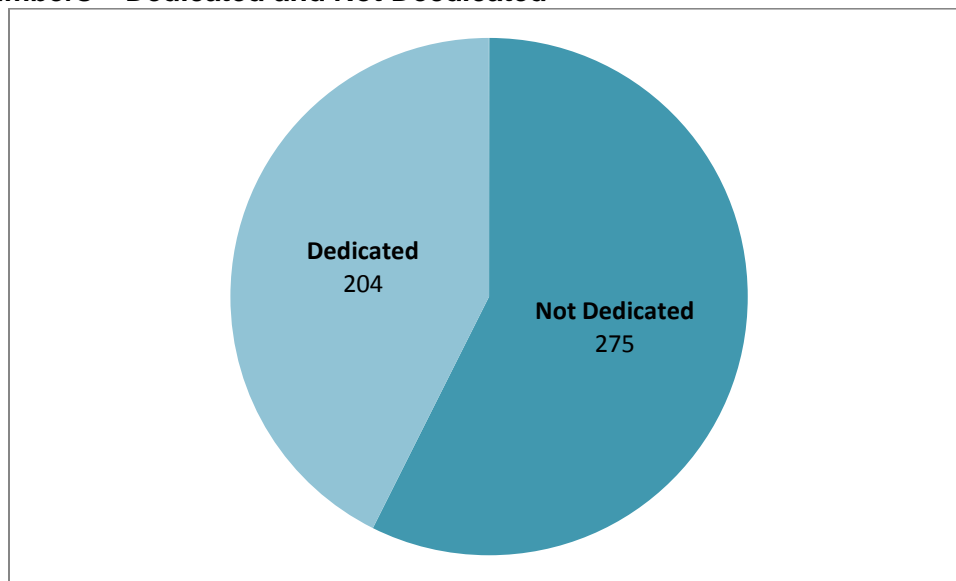


FIGURE 1– BENCH NUMBERS BY DEDICATED AND NOT DEDICATED

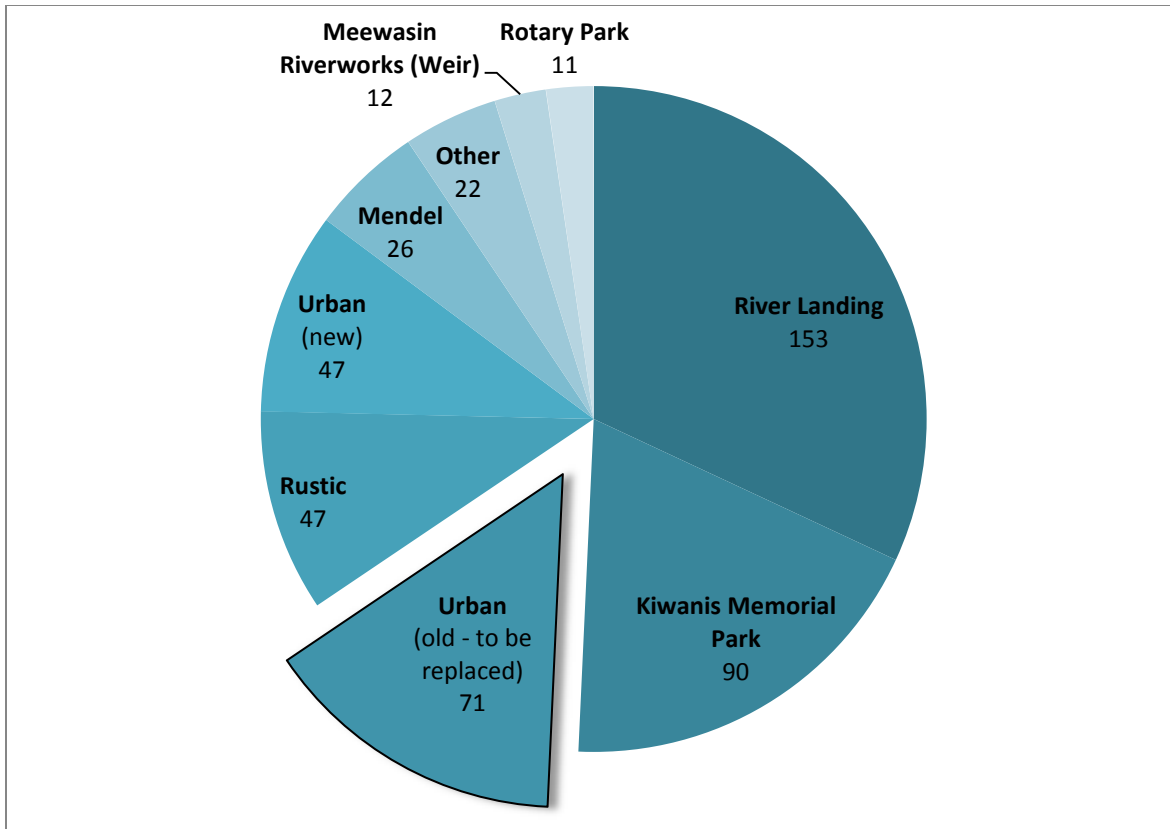


FIGURE 2– BENCH NUMBER BY STYLE AND SITE

Currently all benches purchased as a donation are processed manually. It is recommended to incorporate the purchase of benches through the proposed interactive online trail map. This information would be able to be incorporated into the data collected during this Trail Study. Bench purchases managed and completed online will reduce error allowing for better tracking. Donors will still be able to come in and purchase benches through the Donations Officer. In addition, the interactive trail map will allow the Donations Officer to use this online tool for consistent and up to date data management.

DRINKING FOUNTAINS

There are a number of drinking fountains along the Meewasin Trail. Every year the number of requests for more drinking fountains increases. The trail study intercept survey showed people routinely suggest that there could be more (Alta Planning + Design, 2014). The cost of installation is substantial and therefore new drinking fountains are looked at when new sites are being designed. Overall a drinking fountain requires a larger donation to meet health and plumbing codes.

Drinking fountains along the Trail meet Meewasin's long term objectives of providing a potable water source throughout the Valley. This program is limited to where it is reasonable to install drinking fountains.

Potential locations:

- Diefenbaker Park – South Donor Plaza
- Sanatorium Trail
- Sutherland Beach
- Crocus Prairie

The total number of existing drinking fountains is 14. Two of these drinking fountains are not dedicatable since they belong to the City of Saskatoon. There are also a number of old drinking fountains which need upgrading to meet health regulations (i.e. backflow preventer added to them). In the future it is important to consider providing a fountain that allows water bottles to be filled.

There is an ongoing operating impact for drinking fountains. This includes yearly service, open and close seasonally and any repairs should they get damaged. The City of Saskatoon have done a great job maintaining the drinking fountains and the public appreciate having access to them.

WASTE RECEPTACLES

This program has been in development for many years. There are a few waste receptacles that have been sponsored in the Valley. Generally when there is a donation towards a seating node it is for a bench and waste receptacle. There are approximately 120 waste receptacles that make up the Urban style. The older version of that style (Image 2) is at the end of its service life. Meewasin is updating the furniture in the Valley to continue with branding the Meewasin Valley and trail system. The new style (Image 3) is a better unit because of the lid to prevent garbage from blowing around the Valley.

The next step for Meewasin would be to introduce a recycling receptacle valley-wide (similar to River Landing or build a unit that attaches to the side of both the urban and rustic trash units to place bottles). This addition could accommodate the Meewasin logo to continue with branding the Meewasin Trail and Valley.

Placement of the urban receptacle is typically next to the urban bench. This style of receptacle is found within city limits along the more manicured parks and trail system. Where the sites are more natural the rustic waste receptacle (Image 3) and bench are to be used. Examples of locations for the rustic bench and waste receptacle within city limits: Gabriel Dumont Park, Peggy McKercher Conservation Area, Crocus Prairie, Saskatoon Natural Grasslands, and St. Joseph School.



IMAGE 1



IMAGE 2



IMAGE 3

BRICK PROGRAM

This donor program features engraved bricks for \$250 per brick at any location (see list below). This donation provides the donor with a partial tax receipt of \$150. Each brick will fit 25 characters, including spaces. This is a fairly successful program.

River Landing and Rotary Peace Plaza both use granite to replace the paving stones. In 2011, the Diefenbaker site (Saskatoon Road Runners Association Node), was added to the list of brick locations. This site was designed to re-use the paving stones for the engraving rather than introducing a new product such as granite. This change reduces Meewasin's overall cost for materials and labour while reducing its footprint.

Previous Program locations (Complete):

- Kiwanis Memorial Park entrance (near south parking lot at the Delta Bessborough Hotel).

Existing Brick Program locations:

- Rotary Peace Plaza (2004);
- River Landing (2007);
- Diefenbaker Drinking Fountain (2011); and
- Kinnear entry plaza (2011).

Potential New Sites Brick Program locations:

- Diefenbaker Park entry/donor plaza;
- Whiteswan entry/donor plaza; and
- Entry plazas at Chief Whitecap Park.

New Sites Brick Program locations:

- Factoria/Areva Seating Node (2014).

In summary, the programs discussed above are managed by two departments, Administration who manages the donation portion and Design and Development, who tracks amenities, builds new amenities, manages the replacement, and lifecycle maintenance.

By creating an online map that is shared by the departments it will help streamline the process and reduce error in documentation. By offering it to the public, the community support received to Meewasin over the years would be more evident. In addition, the donor program would have an easy to use interface available online.

FUTURE DONOR OPPORTUNITIES

There are many different options for creative donor opportunities. Below are ideas to consider:

- Meewasin Bike Racks;
- Meewasin Bike Repair Stations;
- Eco-counters;
- Recycling waste receptacle program;
- Native Grasslands (Appendix – Native Grasslands); and
- Trail Steward Program.

Bibliography

Alta Planning + Design. (2014). *Meewasin Trail User Survey Report*.

M. SUPPLEMENTARY OVERVIEW

Site Overview

Supplementary Document

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Trail Distances

Currently being updated to reflect new trail added in 2015.

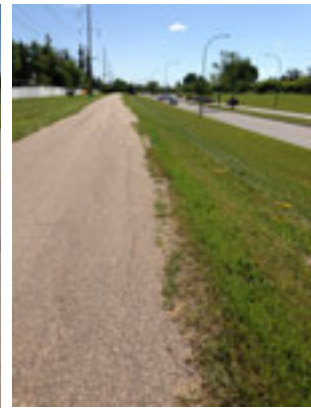
Attridge Drive Link

Existing Site Conditions:

- Built in 1995 – 1996;
- Asphalt and crusher dust trail;
- Asphalt section is showing signs of ageing with longitudinal cracking ;
- Vegetation growing through pavement;
- Vegetation is overhanging in the trail creating a blind corner and safety concerns;
- Crosswalk signs would reinforce that there is a shared use path crossing at intersections;
- No curb cuts (i.e. Rever Road); and
- Trail edge is deteriorating which is narrowing the trail.

Recommendation:

1. Complete replacement of asphalt;
2. Install curb cuts;
3. Install crosswalk signs; and
4. Prune vegetation for safety. Complete on a regular basis.



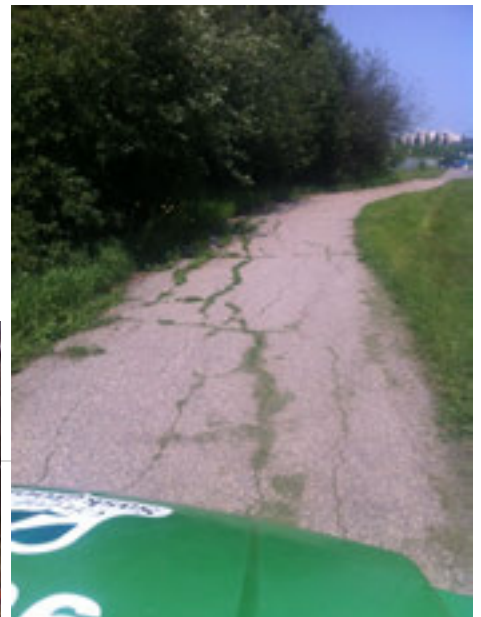
Cosmopolitan Park

Existing Site Conditions:

- Built in 1994;
- Longitudinal cracking throughout. Block cracking is beginning to appear;
- No curb cuts;
- Asphalt is aging – pitting appears to be happening;
- Pavement is heaving in sections;
- Tripping hazards – trail dropped 50-75 mm (2-3") at one entrance;
- Trail is narrow (average width <2.5 m);
- No trail count data for Primary Trail (trail closest to the river);
- Upper trail is very busy with approximately 150 people per hour (PPH);
- Seating nodes in disrepair;
- Entrance from 16th Street down to the Primary Trail does not meet accessibility;
- No accessible entrance from Broadway Bridge down to Primary Trail ;
- Stairs are rotting at 16th Street;
- Erosion problems along many sections of trail;
-
- Overgrown vegetation;
- Obstructions in the middle of the trail (i.e. light standards); and
- Slump damaged Tertiary Trail.

Recommendation:

1. Complete replacement of trail and stairs while addressing accessibility concerns;
2. Redesign Broadway entrance to make accessible;
3. Prune along entire trail length for safety (Primary and Secondary Trail). Complete regularly;
4. Install culverts where drainage is causing erosion;
5. Widen to accommodate volume (see page 25 of the Trail Study);
6. Monitor slope for movement; and
7. Repair Tertiary Trail.





CPR to Circle Drive North

Existing Site Conditions:

- Built in 1996;
- Asphalt is showing signs of ageing;
- Holes cracking and tripping exist throughout this section;
- Section of trail is narrow;
- No trail count data was collected;
- Trail at Circle Drive Bridge is not accessible;
- Trails to seating node overgrown – in need of replacement; and
- Blind corners at bridges both CPR bridge and Circle Drive North.

Recommendation:

1. Recommend replacement of trail and address any accessibility concerns at that time;
2. Redesign bridge access on the south side of Circle Drive Bridge to improve for accessibility;
3. Pruning along corners is needed. Vegetation is overgrown;
4. Recommend collecting count data; and
5. Prune along trail edge on a regular basis.



Crocus Prairie

Existing Site Conditions:

- Trail built in 2011;
- Trail is crusher dust;
- Trail is narrowing;
- Pruning around blind corners needed;
- Erosion across the path; and
- Blind corners exist.

Recommendations:

1. Weed management near compacted edges of trail;
2. Develop a maintenance schedule for crusher dust, similar to asphalt;
3. Recommend clearing in winter months; and
4. Prune along trail edge on a regular basis.



Crocus Prairie Link

Existing Site Conditions

- Trail built in 2009;
- Vegetation appearing in trail;
- Trail narrowing due to vegetation creep;
- Erosion near entrances; and
- Crosswalk signs needed.

Recommendations:

1. Recommend weed management near compacted edges of trail;
2. Address erosion challenges;
3. Recommend developing a maintenance schedule for crusher dust, similar to asphalt; and
4. Recommend clearing in winter.



Diefenbaker Park

Existing Site Conditions

- Trail built in 2013; and
- Trail is asphalt and crusher dust.

Recommendations

1. Recommend crack seal in 2015 followed by a slurry or fog seal in 2019;
2. Recommend weed management near compacted edges of trail;
3. See preventative maintenance section in Trail Study on page 49 for future maintenance; and
4. Prune along trail edge on a regular basis.



Factoria Link

Existing Site Conditions

- Trail built in 2011 and currently in excellent condition.

Recommendations

1. Recommend crack seal in 2015 followed by a slurry or fog seal in 2018;
2. Recommend weed management and drainage along eastern fence line; and
3. See preventative maintenance section in Trail Study on page 49 for future maintenance.



Forestry Farm Link

Existing Site Conditions

- Trail has deep and wide longitudinal cracking;
- Tripping hazards exist due to trail condition;
- Vegetation is overgrown where it is next to trail;
- Connecting trails to the Forestry Farm Link are in dire need of repair. Concrete is cracked and uneven, creating tripping hazards;
- Blind corners/junction exist;
- Edge concerns – possibly a function of the base gravel not extending beyond asphalt far enough; and
- Drainage concerns.

Recommendations:

1. Complete replacement and manage vegetation next to the trail to eliminate blind corners.



Friendship Park

Existing Site Conditions

- Trail built in approximately 2008;
- Trail is crusher dust;
- Trail is in good condition;
- The trail is a connection from Spadina Crescent East to 19th Street;
- The pedestrian cycling connection to the Broadway bridge is lacking; and
- Erosion problems under the bridge.

Recommendations:

1. Improve pedestrian and cycling connections to the Broadway Bridge; and
2. Improve conditions under the Broadway Bridge.

(No images were captured)

Gabriel Dumont Park

Existing Site Conditions

- Trail built in 1998;
- Trail is crusher dust;
- Erosion control needed to prevent/mitigate cross drainage; and
- Vegetation overgrown around washroom facility.

Recommendations

1. Recommend weed management near compacted edges of trail;
2. Install culverts where drainage is eroding trail;
3. Develop a maintenance schedule for crusher dust, similar to asphalt;
4. Develop a program to address trail washout due to high water flows in spring;
5. Recommend clearing in winter months; and
6. Vegetation management around washroom facility.



Innovation Place

Existing Site Conditions

- Trail built in 2001;
- Trail is asphalt;
- Trail is narrow and eroding along edges;
- Asphalt is pitted and starting to degrade;
- Vegetation is overhanging trail; and
- Rustic bench installed along trail.

Recommendations

1. Recommend complete replacement in near future;
2. Prune plant material above and beside trail; and
3. Replace rustic bench with urban style.



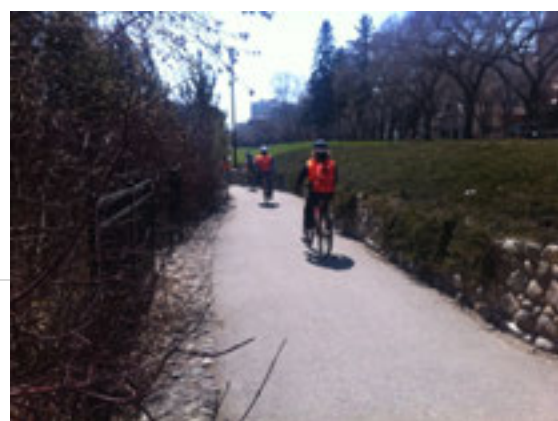
Kiwanis Memorial Park

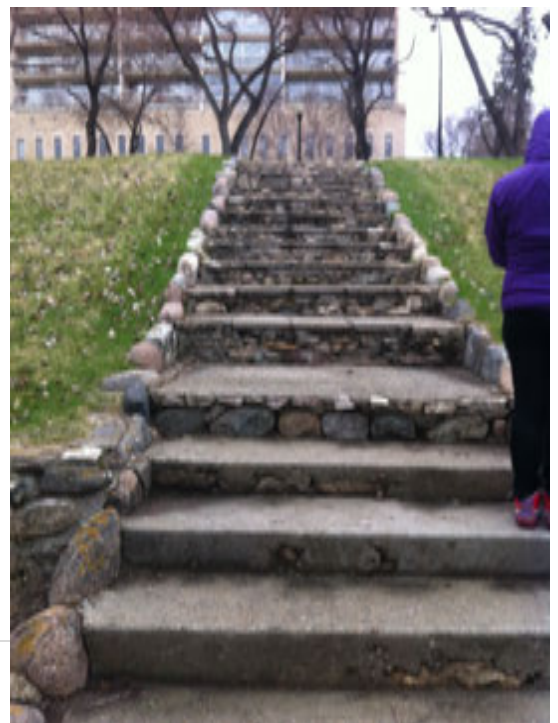
Existing Site Conditions

- Ramp at the Thompson Belvedere does not meet accessibility;
- Ramp is very narrow creating blind corners;
- South of Bessborough, the trail is less than 3.0 metre;
- Secondary trail is too narrow for service vehicles – damaging edge of trail;
- 35% of the benches have rotting wood;
- Area under the Broadway Bridge has sharp drop off edge. This area is derelict and needs to be cleaned up;
- Maintain views in this park;
- Vehicles cross trail to access boat launch causing erosion;
- Rock wall and stairs are beginning to fall apart; and
- New accessible trail had broken concrete at the base of the railing.

Recommendations

1. Rebuild the Secondary Trail (Type 1) in the park;
2. Rebuild remaining trail to widen to accommodate high usage;
3. Rebuild and widen the Thompson Belvedere section of the trail;
4. Manage vegetation at the Thompson Belvedere and other lookout;
5. Address the vehicular traffic that crosses the trail;
6. Address erosion along trail edge near and under the Broadway Bridge;
7. Plan for the wall and stairs in park; and
8. Manage signage in the park.







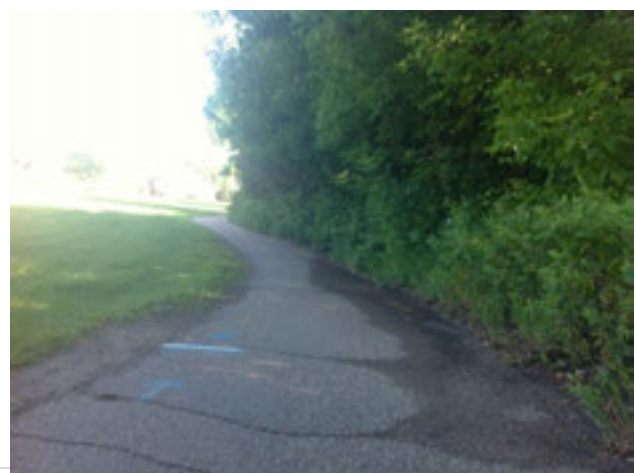
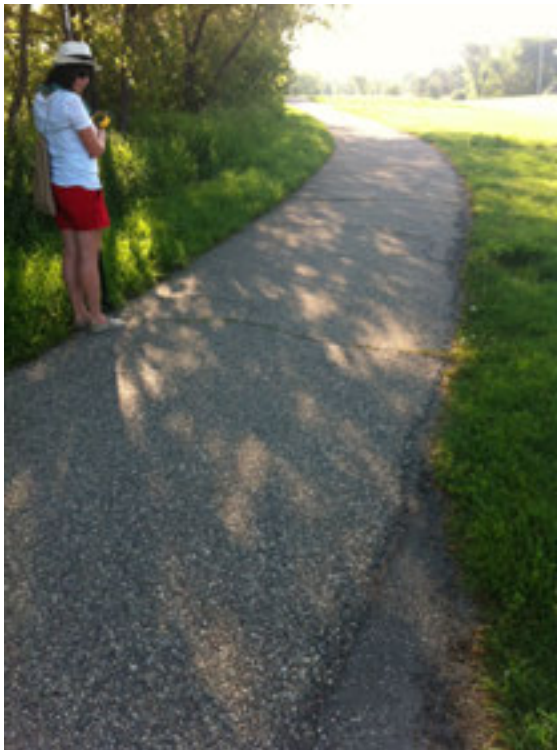
Meewasin Park

Existing Site Conditions

- Trail built in 1981;
- Trail is asphalt;
- Asphalt is pitted;
- Trail is narrow (under 3.0 metre) and eroding along edges;
- Asphalt is pitted and starting to degrade;
- Asphalt has been overlaid in the recent past ;
- Vegetation is overhanging and infringing on travel along trail;
- Rustic bench installed along trail;
- Missing curb cuts to access the trail; and
- Trail section that ends abruptly.

Recommendations

1. Recommend complete replacement and widen to meet the standard 3.0 metre;
2. Address accessibility;
3. Prune plant material above and beside trail; and
4. Replace rustic bench with urban style.





Meewasin Riverworks (Weir)

Existing Site Conditions

- Built in 2003;
- Trail is asphalt, concrete, and boardwalk;
- Erosion concerns at fishing platform; and
- Vegetation is overgrown.

Recommendations

1. Manage erosion at fishing platform; and
2. Manage vegetation yearly.



Mendel

Existing Site Conditions

- Trail built in 1989;
- Trail is asphalt and concrete pavers;
- Boardwalk is uneven creating a safety to the user;
- Accessible route is overgrown with plant material;
- Sections of trail exceed 5%. One is an entrance from the parking lot to the boat launch plaza the other is near the entrance at 33rd Street;
- The side slope from the Shakespeare entrance to the boat launch plaza exceeds 2%;
- There are blind corners;
- The width is less than 3.0 metre along most sections of the trail;
- Asphalt is aging;
- Trail was built in 1982 with upgrades over the years;
 - o Evening peak is 236 PPH; and
 - o Daily average is 163 PPH.
- Views need to be protected (opened up) in this area; and
- Vegetation is overgrown.

Recommendations

1. Recommend replacement of trail to widen for anticipated future use;
2. Rebuild boardwalk path;
3. Prune plant material above and beside trail; and
4. Address accessibility.





Peggy McKercher Conservation Area

Existing Site Conditions

- Built in 2010;
- Crusher dust is eroding in areas – culverts or other drainage measures may be needed;
- Water pooling in low sections of trail; and
- Vegetation growing through trail breaking down the integrity of the trail.

Recommendations

1. Rebuild trail;
2. Develop a maintenance program for the site; and
3. Connect to the Meewasin Trail system.



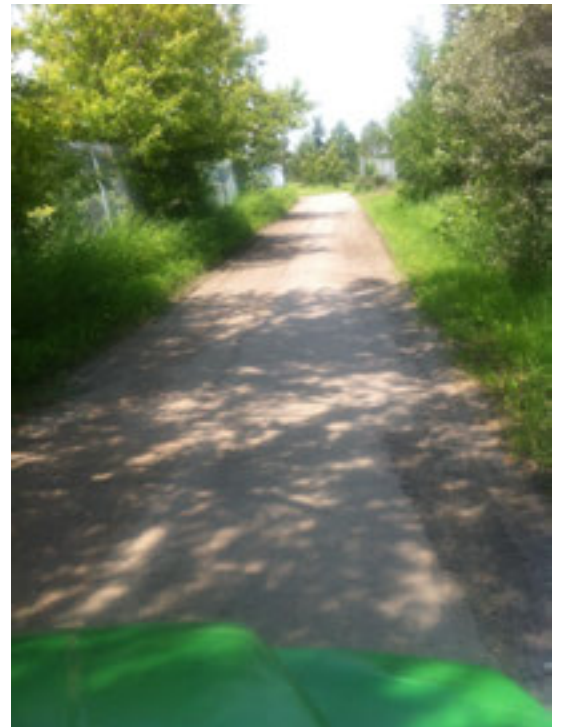
Preston Crossing Link

Existing Site Conditions

- Trail ends at Preston Avenue and leaves trail users with only a casual trail to follow;
- Asphalt is ageing;
- Water pooling in low sections of trail;
- Vegetation is growing through asphalt; and
- Horizontal and longitudinal cracking present along entire length.

Recommendations

1. Rebuild trail;
2. Develop a maintenance program for the site; and
3. Extend the connection to Preston Avenue
- 4.



River Landing Phase 1

Existing Site Conditions

- Built in 2008;
- Settling pavers; and
- Maintain pruning for views and vistas.

Recommendations:

1. May need to lift and relay pavers in future; and
2. Develop a maintenance program for pavers, furniture, and signage.



River Landing Phase 2

Existing Site Conditions

- Opened to the public in 2010;
- In excellent condition; and
- Maintain pruning and views.

Recommendations:

1. May need to lift and relay pavers in future; and
2. Develop a maintenance program for pavers, furniture, and signage.



Rotary Park and Peace Plaza

Existing Site Conditions

- Trail built in 1997;
- Trail is asphalt (currently crusher dust under the Traffic Bridge);
- Trail is narrow;
- Section of trail flood during high flows in spring and fall;
- Cracking asphalt with vegetation coming through trail;
- Losing views to Downtown; and
- Site furniture is ageing and breaking down.

Recommendations:

1. Develop a maintenance program for pavers, furniture, and signage;
2. Build Secondary Trail from parking lot;
3. Maintain views; and
4. Replace site furnishing.



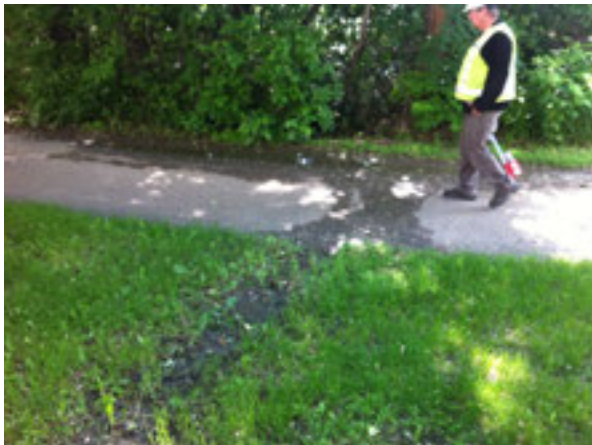
Sanatorium Trail

Existing Site Conditions

- Trail built in 2003;
- Trail is asphalt;
- Tripping hazards;
- Narrow trail;
- Vegetation overgrown – views to the river are lost; and
- Erosion next to trail and drainage across trail.

Recommendations:

1. Rebuild trail;
2. Manage vegetation; and
3. Address erosion and drainage.



Saskatchewan Crescent (Rotary Park to Gabriel Dumont Park)

Existing Site Conditions

- Trail is a City of Saskatoon sidewalk; and
- Sidewalk is narrow (1.5 metre).

Recommendations:

1. Improve this connection; and
2. Use wayfinding to direct trail users.

(No images were captured)

Saskatoon Natural Grasslands

Existing Site Conditions

- Trail built in 2003;
- Trail is crusher dust;
- Trail narrowing due to vegetation; and
- Vegetation overgrown – views to the river lost.

Recommendations:

1. Widen trail; and
2. Manage vegetation.



Silverspring Park (Forestry Farm Link)

Existing Site Conditions

- Asphalt is old and showing signs of structural distress;
- Tree roots coming through pavement – a section was recently overlaid with asphalt and roots are coming through from one season to the next;
- Trail is narrow - under 3.0 metre;
- Vegetation next to trail needs pruning; and
- Rutting and tripping hazards next to trail.

Recommendations:

1. Replace entire trail section; and
2. Widen trail to prevent rutting alongside the trail.



Silverwood Park

Existing Site Conditions:

- Trail built in 2012 and currently in excellent condition; and
- Weed problem next to trail after construction.

Recommendations:

1. Recommend crack seal 2015, followed by slurry seal/fog seal 2019;
2. Recommend weed management near compacted edges of trail;
3. See preventative maintenance section on page 49 in Trail study for future maintenance; and
4. Better weed management is needed particularly after new construction.



Southwest Trail

Existing Site Conditions

- Built in 2012 by the City of Saskatoon; and
- New asphalt trail.

Recommendations

1. Make connection to Sanatorium site a priority; and
2. Follow preventative maintenance schedule.

(No images captured)

Spadina North (Meewasin Washroom Shelter to Meewasin Riverworks (Weir))

Existing Site Conditions:

- Built in 1982;
- Asphalt trail;
- Sections subject to flooding during high water flows;
- Vegetation coming through trail;
- Tripping hazards;
- Urban and rustic furniture along this section of trail;
- Longitudinal cracking;
- Busy biking section of trail;
- Narrow trail;
- Vegetation overhanging trail;
- Erosion problem at fishing platform;
- Accessibility issues along this stretch of trail;
- Erosion next to edge of trail; and
- Graffiti and vandalism can be a problem along this section.

Recommendations:

1. Rebuild and widen trail;
2. Address accessibility;
3. Address desire lines;
4. Address graffiti immediately; and
5. Manage vegetation.





Sutherland Beach

Existing Site Conditions

- Trail built in 2003;
- Trail is asphalt and crusher dust;
- Currently an off leash recreational area;
- Trail is narrowing due to vegetation;
- Bypass trails are mown paths;
- Vegetation is overgrown; and
- Section of trail is over signed.

Recommendations:

1. Manage vegetation;
2. Manage trail edge to prevent narrowing of trail;
3. Address signage;
4. Build bypass trails; and
5. Complete Primary Trail section.





University Bridge

Existing Site Conditions:

- Trail built in 1984;
- Asphalt trail;
- Edge erosion;
- Erosion around University Bridge pier;
- Pipe eroding near bank;
- Secondary bypass trail (under bridge from Primary Trail) is not accessible, very narrow, and failing; and
- Good views.

Recommendations:

1. Rebuild secondary bypass trail to meet accessibility;
2. Address erosion along trail edge and bank; and
3. Maintain views.





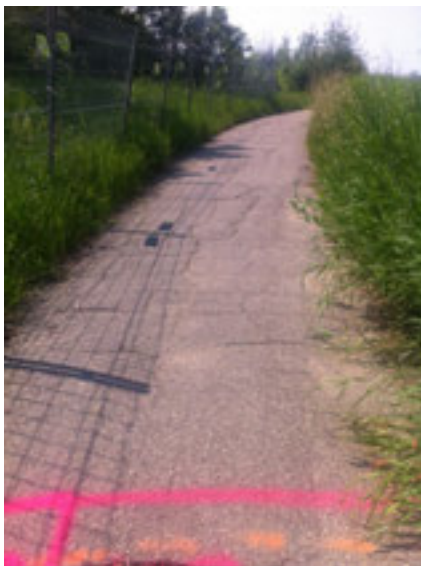
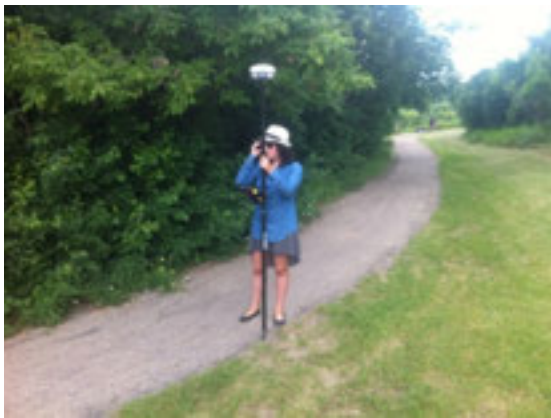
University Trail

Existing Site Conditions:

- Asphalt is showing signs of structural distress;
- Longitudinal and horizontal cracking;
- Narrower than 3.0 metre;
- Vegetation is over grown narrowing the trail;
- Drainage and erosion problems;
- Blind corners; and
- All trails leading to seating nodes are not accessible. They are too narrow and overgrown.

Recommendations:

1. Rebuild trails to seating nodes to make accessible;
2. Widen trail along entire section;
3. Prune entire section of trail; and
4. Address the sink hole at the pedestrian bridge.



Victoria Park

Existing Site Conditions

- Trail built in 1986;
- Trail is asphalt;
- Longitudinal cracking and tripping hazards;
- Vegetation growing through asphalt;
- Narrow trail; and
- Vegetation overgrown – views to the river are lost.

Recommendations:

1. Rebuild trail;
2. Widen trail; and
3. Manage vegetation.



Wanuskewin Road Trail

Existing Site Conditions:

- Built in 2010 (2014 section is an additional 4.0 km);
- Trail is asphalt and crusher dust; and
- In good condition.

Recommendations:

1. Recommend a crack seal in 2015, followed by slurry seal/fog seal in 2019; and
2. See preventative maintenance section on page 49 in Trail Study for future maintenance.

(No images captured. No map for the trail from 71st Street to Wanuskewin Heritage Park at this time)

Western Development Museum Link

Existing Site Conditions:

- Built in 2012;
- Trail is asphalt; and
- In excellent condition.

Recommendations:

- Recommend a crack seal in 2015 followed by a slurry seal/fog seal in 2019; and
- See preventative maintenance section on page 49 in Trail Study for future maintenance.

(No images captured)