

Saskatoon's Green Network Project: Defined Initiatives

Background

This appendix summarizes the eligible initiatives contributing to Saskatoon's Green Network project, which is planned for the City's Natural Infrastructure Fund (NIF) Large Project Stream application.

Green infrastructure is a system of natural, enhanced, and engineered assets that provide municipal and ecosystem services by protecting, restoring, or emulating nature. Saskatoon's Green Network project advances the implementation of green infrastructure comprehensively, through the lenses of Community, Governance, Open Space, Ecology, and Storm Water. Saskatoon's Green Network is defined through a series of interconnected initiatives that work to restore the urban environment and ecosystems, support climate action and nature-based solutions, and improve the quality of life for citizens and visitors.

As stated in the NIF guidance document, eligible City initiatives must be bundled into a single project proposal with a total funding request between \$3 million and \$20 million and submitted on or before December 15, 2021. For the purposes of this report, Saskatoon's Green Network is comprised of initiatives using the City's capital projects and project numbers.

Saskatoon's Green Network organizes initiatives into the following categories to align with the eligible project categories and expenditures provided in the NIF application guidance document:

1. Planting, enhancing, and restoring green space;
2. Naturalized water retention and diversion;
3. Hybrid infrastructure in urban areas for improved access and ecosystem services;
4. Community partnership initiatives towards reconciliation and equity in the Green Network; and
5. City capacity building, oversight, and project support.

For each initiative, the following information is provided:

- The capital project connected to the proposed NIF initiative;
- How the initiative contributes to Saskatoon's Green Network, implements the Green Infrastructure Strategy, and fulfills the NIF eligibility requirements;
- The proposed amount of the City's contribution, the maximum NIF contribution, and the total adjusted project cost;
- The status of the City's proposed funding contribution; and
- Expected outcomes and co-benefits of each initiative.

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1.0 Planting, enhancing, and restoring green space

The following initiatives will enhance, restore, and naturalize existing green spaces in the Green Network including parks, natural areas, and other open spaces.

1.1 Park enhancements, tree planting, naturalization, and community partnerships

Project: Park Upgrades, Enhancements & Repairs (P.00901)

Green Infrastructure Strategy Themes and Actions:

This project aligns with the following themes and actions from the Green Infrastructure Strategy:

Theme: Community – The Green Network facilitates placemaking, honours culture, and inspires community-led transformation.

Community Actions:

- Action 1: Design the Green Network to reflect our collective history, honour cultural diversity, and create a sense of belonging for all.
 - 1.3: Continue meaningful engagement with affected groups to design the Green Network through an equity and inclusion lens.
- Action 3: Increase food production in the Green Network.
 - 3.3: Work with and support partners to incorporate food and fruit production or traditional food systems into high priority urban areas.

Theme: Open Space – The Green Network links all Saskatoon residents to high quality, interconnected green space.

Open Space Actions:

- Action 7: Renew formal and informal green space in the Green Network to meet residents' needs.
 - 7.1: Identify high priority formal and informal green space to upgrade or redevelop.
 - 7.3: Implement Park upgrade plans starting in high priority areas.
- Action 10: Protect and grow the urban forest.
 - 10.4: Design sustainable tree planting sites to ensure adequate soil volume, quality, and space for trees.
 - 10.5: Develop community education and outreach programs to increase public awareness, stewardship, and partnerships.

Project Eligibility for Natural Infrastructure Fund:

The Park Enhancement and Naturalization work that is being proposed for the Natural Infrastructure Fund is eligible under the following categories of the fund:

- Planting and restoring greenspace
- Design elements that enhance access to greenspace

For example, the initiative meets multiple objectives:

- Increased vegetation – through tree planting, the establishment of new naturalized garden beds, and native plantings – will support biodiversity, create habitat for local wildlife, and sequester carbon;

<ul style="list-style-type: none"> • Trees will be planted to improve shading and mitigate temperature extremes in key locations – such as seating areas; • Storm water management will be improved in areas that have experienced drainage or grading issues; • Park upgrades to pathways, lighting, and furniture will improve access to nature and ecosystem services; • The quality of the parks selected for this work will be improved, and will benefit surrounding neighbourhoods and the community at large; • Programming will be developed to focus on the value of park, naturalized plantings, and the urban forest. • Partnerships will be developed to implement creative and community-oriented green infrastructure initiatives. 	
<p>Current Scope: The current scope of the 2022 and 2023 capital ask is to reduce the current backlog of park renewal and rehabilitation requirements associated with pathways, lighting, site furnishings, irrigation infrastructure, and play equipment. It will also fund some amenity building upgrades and drainage/grading improvements. The work includes one park in 2022 (Parkridge), and four in 2023 (John Avant, Forestry Farm Linkage, Robert Hunter West, and Balsam).</p> <p>Saskatoon’s parks are assessed on a 5-to-7-year cycle. Using this information, Administration selected the parks with the lowest quality rating scores for the 2022 and 2023 upgrades.</p>	<p>Revised Project with Additional Scope: The additional federal funding would support multiple landscaping enhancements, such as: 140+ trees planted; approx. 28 new naturalized garden beds (1120 m² total) plus additional native plantings in key locations; park entry and educational signage; and improved drainage, grading, and storm water management, such as the installation of subsurface drainage systems (including swales). It will also allow Parks to work with the Sustainability Department and other internal and external partners to design and implement: community, school, and/or Indigenous partnership projects; stewardship initiatives; and education and outreach. A portion of the funding had also been identified for a green infrastructure pilot and a raw/grey water feasibility study.</p> <p>If federal funding is in place by early 2022, Parks may also be able to fast-track some of its work and add another park to the 2022 or 2023 upgrade schedule.</p>
<p>Total Costs Current Project: 1,900,000 in 2022 1,900,000 in 2023 TOTAL 3,800,000</p>	<p>Total Cost Revised Project: 4,750,000 in 2022 4,750,000 in 2023 TOTAL \$9,500,000</p>
<p>Total City Eligible Contribution (40%): \$3,800,000</p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$5,700,000</p>	
<p>City Eligible Contribution Status and Project Readiness:</p> <ul style="list-style-type: none"> • Requires approval of 2022-2023 budget. 	

- Parks can meet the timelines and requirements of the Natural Infrastructure Fund and will be able to fulfill the Park Enhancement and Naturalization workplan, including future operating requirements.

Project Outcomes and Co-Benefits:

The Park Enhancement and Naturalization work will:

- Enable Parks to support multiple City objectives as outlined in, for example, the Strategic Plan, Urban Forestry Management Plan, Green Infrastructure Strategy, and Recreation and Parks Master Plan.
- Helps the City move towards achieve its 15-20% canopy cover by 2060 target, as recommended in the Urban Forestry Management Plan.
- Improve the quality of Saskatoon's Park infrastructure.
- Increase amount of and enhance access to naturalized areas throughout Saskatoon.
- Reduce maintenance costs related to mowing, weeding, and watering by transitioning more green space to naturalized plantings.
- Reduce flooding risks by improving drainage and storm water management.
- Provide more shaded locations through the establishment of additional trees.
- Enable community members to become involved in protecting, enhancing, and experiencing our city parks through education, programming, and stewardship initiatives.

1.2 Natural Infrastructure Pilots for Water Conservation Co-Benefits

Project: Water Conservation Capital Project P.02197:

1. Spray Pad and Paddling Pool Water Re-use Pilot
2. Naturalization to reduce irrigated areas

Green Infrastructure Strategy Alignment

This project aligns with the following themes and actions from the Green Infrastructure Strategy, the Water Conservation Program, Low Emissions Community (LEC) Plan, and Local Actions: Saskatoon's Adaptation Strategy (Adaptation) near-term priorities:

Theme: Community – The Green Network facilitates placemaking, honours culture, and inspires community-led transformation.

Community Actions:

- Action 1: Design the Green Network to reflect our collective history, honour cultural diversity, and create a sense of belonging for all.
 - 1.3: Continue meaningful engagement with affected groups to design the Green Network through an equity and inclusion lens.

Theme: Open Space – The Green Network links all Saskatoon residents to high quality, interconnected green space.

Open Space Actions:

- Action 7: Renew formal and informal green space in the Green Network to meet citizen needs.
 - 7.3: Implement park upgrade plans starting in high priority areas.
- Action 10: Protect and grow the urban forest.

- 10.4: Design sustainable tree planting sites to ensure adequate soil volume, quality, and space for trees.

Theme: Ecology - The Green Network conserved biodiversity, supports high quality habitat, and increased climate change resilience.

Ecology Actions:

- Action 12: Connect and naturalize the Green Network in built-up areas.
 - 12.1: Naturalize parks, storm water infrastructure, and other open space where appropriate.
 - 12.3: Increase the City's use of native species in restoration and naturalization work.

Theme: Storm Water – More rain is managed where it falls. Storm water is recognized as an important resource.

Storm Water Actions:

- Action 15: Increase the use of Low Impact Development.
 - 15.1: Incorporate Low Impact Development pilots into City projects to show leadership, prioritizing high-pedestrian areas such as BRT corridors and Downtown.
 - 15.5: Pilot raw water use projects.

Theme: Water Conservation Alignment – The City will lead by example, and outdoor City water use has a high potential for return on investment. Spray pad improvements are being explored from both a conservation and equity lens. Naturalized parks require little or no supplemental water after establishment. Transitioning 5% of current irrigated park area to a naturalized state could save 40 million litres of water per year. Optimizing irrigation equipment while maintaining healthy turf and vegetation could reduce water use in City parks by 10-20%.

- Action 3: Parks Watering Efficiency
- Action 4: Spray Pads Water Efficiency
- Action 5: Park Naturalization

Theme: LEC Alignment – Reduce water use

- Action 25: Decrease water use through efficiency, monitoring, and leak reduction.

Theme: Adaptation Alignment – Consider Green Infrastructure on Par with Grey Infrastructure

- Action 28: Species selection for resiliency - Support increased use of drought and pest-resistant and native plant species to reduce watering requirements, pest impact and improve biodiversity.
- Action 29: Retain moisture - Support increased soil and mulch/compost cover in planted areas to improve storm water retention and enhance plant viability

Project Eligibility for Natural Infrastructure Fund:

This project is eligible under the following categories of the Natural Infrastructure Fund:

- Planting and restoring green space
- Construction or restoration of naturalized water retention (naturalized storm water ponds, wetlands, and riparian restoration)
- Naturalized water diversion and infiltration (permeable land cover)

<p>Current Scope: The Water Conservation Strategy has identified 2 projects that are included in this proposal:</p> <ol style="list-style-type: none"> 1. Identify efficiency improvements that could reduce water use at spray pads without reducing service levels. 2. Conduct audits of 25 irrigation systems of a total of 391 to determine if service levels and design standards are exceeded, find over-spray and areas to naturalize 	<p>Revised Project with Additional Scope: <u>Spray Pad and Paddling Pool Water Re-Use Pilot:</u> The scope of the new project would identify and implement a water re-use system for irrigation to increase naturalized areas and shade trees adjacent to an existing spray pad. Options include exploring the use of bioswales to capture and treat water with natural/green infrastructure and exploring water capture via a cistern for re-use in the landscape. The project would include installing a bioswale or planting beds and shade trees to be watered from the adjacent spray pad. This would set a precedent for water reuse and landscape enhancements at all 51 spray pads and paddling pools in the city.</p> <p><u>Naturalization to reduce irrigated areas</u> The scope of the new project would include replacing irrigated green spaces with naturalized landscaping through modification of current irrigation systems to optimize watering efficiencies. With the additional funding we expect to transition some irrigated areas in approximately 6 parks to naturalized areas with native and drought tolerant plantings. This would be the first phase of transitioning 5% of irrigated area to naturalized area, approximately 30 hectares of park area.</p>
<p>Total Costs Current Project: \$631,829</p>	<p>Total Cost Revised Project: \$1,579,572</p>
<p>Total City Eligible Contribution (40%): \$631,829</p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$947,743</p>	
<p>City Eligible Contribution Status and Project Readiness: Funding of \$631,828.80 is secured to conduct this work. Implementation can begin as soon as grant funding approval is received.</p>	
<p>Project Outcomes and Co-Benefits: The project will:</p> <ul style="list-style-type: none"> • Enable Parks, Facilities and Sustainability to support multiple City objectives as outlined in, for example, the Strategic Plan, Urban Forestry Management Plan, Green Infrastructure Strategy, Draft Water Conservation Strategy, Recreation and Parks Master Plan, and the Corporate Climate Adaptation Strategy. • Help the City achieve its 15% water use reduction target, as set out in the Parks Business Plan 2020-2022 by re-using water from spray pads for landscape irrigation and contribute to the City's greenhouse gas reduction targets. 	

- Help the City achieve its goal to maximize water efficiency of spray pads and paddling pools
- Improve the quality of Saskatoon's park infrastructure.
- Increase amount of and enhance access to naturalized areas throughout the City.
- Provide more shaded locations through the establishment of more trees.
- Transition 5% of irrigated park area to a naturalized state to save 40 million litres of water per year

1.3 Natural Areas Management – Implementation and Restoration

Project: Natural Areas Management – Pilots and Policy Development (P.02390)

Green Infrastructure Strategy Themes and Actions:

This project aligns with the following themes and actions from the Green Infrastructure Strategy:

Ecology: The Green Network conserved biodiversity, supports high quality habitat, and increased climate change resilience.

Ecology Actions:

- Action 11: Protect, restore, and manage significant natural areas.
 - 11.2: Protect significant natural areas using a variety of available protection tools.
 - 11.4: Develop and implement site-specific management plans, including restoration of natural areas when required.

Project Eligibility for Natural Infrastructure Fund:

This project is eligible under the following categories of the Natural Infrastructure Fund:

- Planting and restoring green space
- Construction or restoration of naturalized water retention (naturalized storm water ponds, wetlands, and riparian restoration)
- Naturalized water diversion and infiltration (permeable land cover)

Current Scope:

The Natural Areas Management – Pilots and Policy Development business plan option covers a portion of work from the Green Infrastructure Strategy Implementation Plan's Natural Areas Management Program. The overall program will work towards protecting, managing, and restoring natural assets and ecosystems in the Green Network. The deliverables for this business plan option include:

1. The completion of two pilot Natural Area Management Plans;
2. Planning policy development to support natural area protection;

Revised Project with Additional Scope:

With the addition of Natural Infrastructure Funding, we will be able to increase the scope of work to:

- Implement the restoration and management findings from the Natural Area Management Plans at 2 high priority sites in 2023.
- Restoration, enhancement, and management activities could include invasive species removal; restoration plantings of native and locally-adapted grass, forb, and tree species; habitat management focusing on species at risk; and wetland restoration.

<p>3. Work to integrate natural area management into the City's asset management framework; and</p> <p>4. Establishment of an ongoing program and resourcing plan for natural areas management.</p>	
<p>Total Costs Current Project: \$1,240,000 <i>(\$290,386 ineligible)</i></p>	<p>Total Cost Revised Project: \$2,664,421 <i>(\$949,614 city contribution + \$1,424,421 NIF contribution + \$290,386 ineligible)</i></p>
<p>Total City Eligible Contribution (40%): \$949,614*</p> <p><i>*There are some ineligible items from the original scope, such as a portion of the policy development work under deliverable 2, which reduces the eligible contribution.</i></p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$1,424,421</p>	
<p>City Eligible Contribution Status and Project Readiness:</p> <p>Status of funding and approvals:</p> <ul style="list-style-type: none"> \$1,000,000 of the project is subject to approval in the 2022-2023 budget. It is the Natural Areas Management – Pilots and Policy Development project that has been prioritized within the RCE funding cut-off. \$240,000 is available through existing capital. <p>Project readiness:</p> <ul style="list-style-type: none"> This project has been scoped and is ready to proceed and be completed within the timeframes specified by the NIF. Meewasin has been identified as a candidate for project delivery partner. Management plan implementation and restoration work at various natural area sites is part of their ongoing work plan. 	
<p>Project Outcomes and Co-benefits:</p> <ul style="list-style-type: none"> Enhancement and restoration of significant natural areas and ecosystem services including biodiversity habitat, increased storm water infiltration, and connectivity to the greater Green Network Improved wildlife habitat for various target species of interest Education and community stewardship opportunities, such as citizen science, traditional land use, and school and community tours. 	

1.4 Meewasin-led Projects: Prairie Restoration and Accessibility in the Meewasin Valley

<p>Project: Prairie Restoration and Accessibility in the Meewasin Valley</p>
<p>Green Infrastructure Strategy Themes and Actions:</p> <p>Governance Theme – The Green Network is governed with an emphasis on partnerships and triple bottom line solutions.</p> <ul style="list-style-type: none"> Action 6: Redefine the partnership with Meewasin to achieve collective goals related to conservation, education, and development in the Green Network.

<ul style="list-style-type: none"> ○ 6.2: Collaborate on conservation, naturalization, and the development of trails, interpretive infrastructure, and amenities in areas of interest. ○ 6.4: Seek opportunities to collaborate on external funding. <p>Ecology Theme – The Green Network conserves biodiversity, supports high quality habitat, and increases climate change resilience.</p> <ul style="list-style-type: none"> ● Action 11: Protect, restore, and manage significant natural areas. <ul style="list-style-type: none"> ○ 11.4: Develop and implement site-specific management plans, including restoration of natural areas when required. 	
<p>Project Eligibility for Natural Infrastructure Fund: All planned work supports enhanced access to green space and natural water bodies and restoration and planting of green spaces.</p>	
<p>Current Scope: Meewasin has identified the following activities within its work plan that restores or enhances natural infrastructure in and near the City:</p> <ul style="list-style-type: none"> ● Northeast Swale Master Plan implementation ● Northeast Swale Dry Pond Restoration ● Valley-wide Resource Management restoration and land management ● Valley-wide naturalized plantings 	<p>Revised Project with Additional Scope: Natural Infrastructure funding would provide increased capacity for Meewasin to support valley-wide health and long-term stability for restoration and conservation planning and implementation. Specifically:</p> <ul style="list-style-type: none"> ● Implementation of the Northeast Swale Master Plan, dry pond restoration, valley-wide restoration, land management, and naturalized plantings can proceed with an expanded scope (i.e. increased area restored) that would otherwise take additional years to complete ● Additional sites such as Maple Grove and Beaver Creek Conservation Area can be added to the Master Planning work, which would otherwise not be possible within the current timeframe. These sites, while outside Saskatoon city limits, are visited frequently by city residents and important connection points of Saskatoon's Green Network to green spaces in the larger region. ● Some planned work such as design and replacement of the pedestrian bridge at Beaver Creek Conservation Area can also proceed earlier than expected.
<p>Total Costs Current Project: \$656,000</p>	<p>Total Cost Revised Project: \$1,640,000</p>
<p>Total Meewasin Eligible Contribution (40%): \$656,000 Projects listed above are currently within Meewasin's capital budget.</p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$984,000</p>	
<p>City Eligible Contribution Status and Project Readiness:</p>	

Project funding is secured and ready to proceed within the stated timelines. Beaver Creek bridge repair may be subject to coordination with City administration.

Project Outcomes and Co-benefits:

- Planned outcomes include natural area planning, land restored, and tracked visits to the Meewasin Valley.

1.5 Natural Areas Connectivity and Access

Project:

- Aspen Ridge (Greenway Landscaping P.01411)
- Aspen Ridge Linear Park and Drainage Channel P.01411/P.01574

Green Infrastructure Strategy Themes and Actions:

This project aligns with the following themes and actions from the Green Infrastructure Strategy:

Ecology: The Green Network conserved biodiversity, supports high quality habitat, and increased climate change resilience.

Ecology Actions:

- Action 11: Protect, restore, and manage significant natural areas.
 - 11.2: Protect significant natural areas using a variety of available protection tools.
 - 11.4: Develop and implement site-specific management plans, including restoration of natural areas when required.

Project Eligibility for Natural Infrastructure Fund:

This project is eligible under the following categories of the Natural Infrastructure Fund:

- Planting and restoring green space
- Naturalized water diversion and infiltration (permeable land cover)

Current Scope:

Greenway

The scope of this landscape project is to remediate the drainage culverts and begin to naturalize the greenway adjacent to the Northeast Swale. This type of landscape aims to increase the biodiversity and help protect the Northeast Swale from encroaching residential style landscaping. The work includes seeding, shrub bed planting, riprap of the culverts, maintenance, and establishment. The project began in 2020 and will be phased over three years. The first year (2020) included a cover crop and weed control throughout the project area.

Revised Project with Additional Scope:

Greenway

The revised project will include a plug planting program which will plant 7,298 native grasses and forbs throughout the 25,000 square meter site. The plug planting was part of the original design and will be beneficial to the site to be added back to the project to enhance the overall corridor. Native shrub planting will be included to enhance the length of the property (1.2km) that borders the Northeast Swale. This will provide additional habitat and plant biodiversity to the site. Lastly a compost alternative (biotic soil amendments - ECBVerydol) will be used to enhance the existing soil conditions to increase the success of the native grass and forb establishment. The soil has been exposed with little to no vegetation for over three (3) years. The original budget did not

<p><u>Linear Park and Drainage System</u> The project scope is the construction and associated landscaping of the linear park and drainage channel (11.98 ac) in Aspen Ridge near the Northeast Swale. The landscape design for the park and drainage channel are designed to complement each other. The Park and drainage system in Aspen Ridge stretch from Kalra Street to the Forebay (Henry Dayday Street) near Northeast Swale. The design intent for this park system is to provide a more traditional manicured linear park with a naturalized drainage channel adjacent. The work includes bridges, culverts, trail construction, site furnishings, lighting, irrigation, irrigated grass seed, trees and shrubs.</p>	<p>allow the soil amendment to be used throughout the entire site.</p> <p><u>Linear Park and Drainage System</u> This Park system connects the residents of Aspen Ridge to the Northeast Swale. As the site approaches the Northeast Swale the revised scope can incorporate and transition the site from a more manicured park at the south end (Kalra Street) and transition to a naturalized park at the Forebay (Henry Dayday) to help protect the Northeast Swale from encroaching invasive species. The revised scope will include the construction of a boardwalk rather than asphalt trail to allow the park to be accessible for all mobility levels while creating a naturalized park system as it nears the Northeast Swale. It will include a planting program with islands of trees, shrubs, native grasses, and forbs throughout and a plug planting program to enhance the drainage parcels.</p> <p><u>Additional naturalization and habitat plantings</u> With additional funding, further naturalization work in the Greenway, Linear Park, and other areas adjacent to the Northeast Swale will be possible to buffer important habitat from adjacent land use.</p>
<p>Total Costs Current Project:</p> <ul style="list-style-type: none"> • Greenway: \$426,253.00 (not incl. taxes) • Linear Park: \$1,410,000.00 (not incl. taxes) • Total = \$1,836,253 	<p>Total Cost Revised Project:</p> <ul style="list-style-type: none"> • Greenway: \$623,623.00 (not incl. taxes) • Linear Park: \$2,253,625.00 (not incl. taxes) • Additional naturalization: \$112,000.00 (not incl. taxes) • Total = \$2,989,248
<p>Total City Eligible Contribution (61%*):</p> <ul style="list-style-type: none"> • Greenway: \$426,253.00 (not incl. taxes) • Linear Park: \$1,410,000.00 (not incl. taxes) • Total = \$1,836,253 <p><i>*This project is proposing to contribute more than the minimum required 40% from the City's portion.</i></p>	
<p>Requested Natural Infrastructure Grant Contribution (39%*):</p> <ul style="list-style-type: none"> • Greenway: \$197,370.00 (not incl. taxes) • Linear Park: \$843,625.00 (not incl. taxes) • Additional naturalization: \$112,000 (not incl. taxes) 	

<ul style="list-style-type: none"> • Total = \$1,152,995 <p><i>*This project is not proposing to use the full 60% allowable under NIF</i></p>
<p>City Eligible Contribution Status and Project Readiness:</p> <ul style="list-style-type: none"> • <u>Greenway</u>: The funding is secured, and the project is underway with a project completion date of 2024. • <u>Linear Park and Drainage System</u>: The funding for this project is secured. A portion of the project will begin construction in 2022 and the remainder will be designed in 2022 and constructed in 2023. This project can meet the timelines of the program.
<p>Project Outcomes:</p> <ul style="list-style-type: none"> • <u>Greenway</u>: The Greenway is an ecological buffer designed to help protect the Northeast Swale. It includes a transitional Zone, a trail zone, and the ecological zone. The project goals and outcomes are to re-establish / naturalize the landscape to native grass, forbs and shrubs throughout the Greenway, increase the overall biodiversity by creating a pollinator corridor adjacent a residential development and create a unique space with diverse plant material for the residents to enjoy and connect to the Northeast Swale. • <u>Linear Park and Drainage System</u>: The outcome of the project is to transition the site back to its natural state. Before the neighbourhood construction this was a natural drainage channel. This program will help re-establish the landscape with native plant material creating a more naturalized park as it approaches the Northeast Swale. The intent of the landscape is to buffer and help protect the Northeast Swale from encroaching invasive species.

1.6 Dundonald Solar Farm Naturalization

Project: Utility Solar Scale Energy Implementation (P.01955)	
<p>Green Infrastructure Strategy Themes and Actions: This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Ecology: The Green Network conserved biodiversity, supports high quality habitat, and increased climate change resilience.</p> <p>Ecology Actions:</p> <ul style="list-style-type: none"> • Action 12: Connect and naturalize the Green Network in built-up areas. <ul style="list-style-type: none"> ○ 12.1: Naturalize parks, storm water infrastructure, and other open space where appropriate. ○ 12.3: Increase the City's use of native species in restoration and naturalization work. 	
<p>Project Eligibility for Natural Infrastructure Fund: This project is eligible under the following categories of the Natural Infrastructure Fund:</p> <ul style="list-style-type: none"> • Planting and restoring green space • Naturalized water diversion and infiltration (permeable land cover) 	
Current Scope:	Revised Project with Additional Scope:

<p>This project will be to implement naturalized landscaping at the upcoming Dundonald Avenue Solar Farm. At its meeting on November 1, 2021, the Standing Policy Committee on Environment, Utilities, and Corporate Services moved the motion for <i>Option 2, Implement Project with Naturalized Landscaping</i> be approved by City Council on November 22nd.</p>	<p>With the addition of Natural Infrastructure Funding, we will be able to increase the scope of work to enhance the process to establish the desired naturalized landscaping and will include the temporary use of irrigation measures to assist with the germination process. The estimated cost of this option is \$200,000 and will include mowing of grass, enhanced overseeding of native short grass and pollinator (wildflower) habitats, enhanced weed control and irrigation to promote successful germination.</p>
<p>The option to naturalize the existing project site landscaping with native grass and pollinator habitats to provide operational and biodiversity benefits were identified during the feasibility study of the project.</p>	
<p>The City's current plan is to gradually reseed and naturalize the landscaping with native grass and pollinator habitats along with the solar system. The estimated cost is \$35,000, which would cover mowing of grass, overseed of native grass and pollinator seeds and weed control. No irrigation is included and seed germination would rely on moisture from natural/climate sources.</p>	
<p>Total Costs Current Project: \$35,000</p>	<p>Total Cost Revised Project: \$200,000</p>
<p>Total City Eligible Contribution (40%): \$80,000</p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$120,000</p>	
<p>City Eligible Contribution Status and Project Readiness: Status of funding and approvals:</p> <ul style="list-style-type: none"> • The landscaping portion of this project can proceed pending approval of the Dundonald Solar Farm project at City Council on November 22, and pending approval in the 2022-2023 budget. <p>Project readiness:</p> <ul style="list-style-type: none"> • Pending final project approvals, site design and construction is planned for 2022, and project completion is anticipated by the end of 2023. 	
<p>Project Outcomes and Co-Benefits:</p> <ul style="list-style-type: none"> • Approximately 13 acres (5 hectares) of naturalized landscaping that provides biodiversity habitat, increased storm water infiltration, and connectivity to the greater Green Network • Increases public awareness of the co-benefits of joint climate mitigation and natural infrastructure projects • Showcases an innovative use for underutilized/degraded green spaces 	

2.0 Naturalized Water Retention and Diversion

The following initiatives will showcase innovative storm water management through natural infrastructure pilots and expansion.

2.1 Bioswale Expansion and Habitat Enhancements in an Industrial Area

<p>Project: P.01619.06 Storm Sewer Trunk and Collection Capacity Program</p>	
<p>Green Infrastructure Strategy Themes and Actions: This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Theme – Storm Water: More rain is managed where it falls. Storm water is recognized as an important resource.</p> <ul style="list-style-type: none"> • Action 14.2: Identify how green infrastructure can increase the storm system's capacity to respond to intense rain events. • 14.3: Evaluate opportunities to increase naturalization of existing storm ponds to improve water quality and habitat, while balancing community recreation and other considerations. 	
<p>Project Eligibility for Natural Infrastructure Fund: This project is eligible under the following categories of the Natural Infrastructure Fund:</p> <ul style="list-style-type: none"> • Construction or restoration of naturalized water retention or detention systems • Naturalized water diversion and infiltration 	
<p>Current Scope: The CN Industrial neighbourhood relies on a unique overland drainage network of bioswales and culverts. The project would create and restore the bioswale drainage system to improve storm water management and reduce the impact of climate change for the neighbourhood. The project would also upgrade the current culvert that drains the bioswale system to downstream wet pond. The hybrid system (bioswale and culvert) also improves storm water quality prior to entering the wet pond major system compared to the traditional grey sewer system.</p> <p>The current scope of the project is to create, restore, and improve the overland drainage system for the neighbourhood on Melville St (Brand Rd to Lorne Ave) and Portage Ave (Melville St to Edson St) with planned roadway and sanitary sewer work in the area (not part of the NIF application). The large culvert connection of the overland drainage system to the downstream wet pond would also be expanded for a section 75m (33%) of the culvert length.</p>	<p>Revised Project with Additional Scope: With additional funding, the project can expand in scope to:</p> <ul style="list-style-type: none"> • create, restore, and upgrade the bioswale and overland drainage system for Melville St and Portage Ave as described in the current scope • restore the drainage path through a bioswale system that will improve water quality prior to entering the downstream wet pond • add areas of Jasper Ave (Melville St to Portage Ave), Portage Ave (Jasper Ave to Edson St), and targeted drainage improvements along Edson St (Jasper Ave to Portage Ave) where deficiencies have been observed. • The connection culvert between the bioswale system and wet pond would be expanded for the 230m (100%).

Note: if the funding is not approved, the scope of work may be completed over a longer timeframe due to annual budget constraints	
Total Costs Current Project: \$3,080,000 <i>(\$2,576,000 eligible + \$504,000 ineligible)</i>	Total Cost Revised Project: \$6,944,000 <i>(\$2,576,000 city contribution + \$3,864,000 NIF contribution + \$504,000 ineligible costs)</i>
Total City Eligible Contribution (40%): \$2,576,000	
Maximum Natural Infrastructure Grant Contribution (60%): \$3,864,000	
City Eligible Contribution Status and Project Readiness: <ul style="list-style-type: none"> Funding requires approval of 2022-2023 budget. Construction would occur between 2022 and 2023 	
Project Outcomes and Co-benefits: <ul style="list-style-type: none"> Improved and functioning Green Infrastructure Hybrid overland drainage system Reduced flooding for properties in the project area Reduced financial burden on flood insurance, damages, time for inspection and repair on the City Prepare the neighbourhood for climate change and potential flood events Mitigate against the impacts of climate change Improve stormwater quality for the storm pond major system 	

2.2 Naturalizing Storm Ponds for Improved Habitat and Water Quality: Kensington, Brighton, and Elk Point

Projects: <ul style="list-style-type: none"> Kensington Storm Pond & Area Grading P.01407 Brighton Municipal Reserve and Storm Pond P.01576 Elk Point Elk Point Storm Pond P.01410 	
Green Infrastructure Strategy Themes and Actions: This project aligns with the following themes and actions from the Green Infrastructure Strategy: Theme – Storm Water: More rain is managed where it falls. Storm water is recognized as an important resource. <ul style="list-style-type: none"> Action 14.2: Identify how green infrastructure can increase the storm system's capacity to respond to intense rain events. 14.3: Evaluate opportunities to increase naturalization of existing storm ponds to improve water quality and habitat, while balancing community recreation and other considerations. 	
Project Eligibility for Natural Infrastructure Fund: This project is eligible under the following categories of the Natural Infrastructure Fund: <ul style="list-style-type: none"> Planting and restoring green space (e.g. green roofs) Naturalized water diversion and infiltration (e.g. rain gardens, bioswales) Design elements that enhance human access to nature. 	
Current Scope:	Revised Project with Additional Scope:

<p><u>Kensington</u> The project scope of this enhancement project is the associated landscaping (trees, shrubs, seeding) around the engineered storm ponds. Before construction of the storm ponds this site was a wetland. Currently, the proposed landscaping meets the standard Park Specification to seed the area to the standard Dryland Seed Mix.</p> <p><u>Brighton</u> The project scope includes landscaping of the municipal reserve around the storm ponds. The proposed landscape design meets the standard Park design with site furnishings, trail development, irrigation, irrigated seed mix for turf and trees and shrubs.</p> <p><u>Elk Point</u> The project scope included landscaping of the engineered storm ponds. The existing landscape is a mix of native and non-native grass. This site was a wetland prior to construction.</p>	<p><u>Kensington</u> The revised scope will alter the traditional landscape design and alter to develop a naturalized site. This will include the use of shrub beds, native grass seed, a plug planting program (native forbs and grasses), including a compost alternative. A biotic soil amendment (Verydol) will be used to promote healthy soil, ultimately enhancing the plant material throughout the site.</p> <p><u>Brighton</u> The revised scope will include the naturalization and establishment of native grass seed and forbs including plug planting. The additional work will also include a shelterbelt planting bed along the length of south property line of park. To promote healthy growth on the site a biotic soil amendment will be used to enhance the site.</p> <p><u>Elk Point</u> The revised scope will include an additional plug planting program to establish approximately 2500-5000 plugs including native grasses and forbs.</p>
<p>Total Costs Current Project:</p> <ul style="list-style-type: none"> • Kensington: \$252,200.00 (not incl. taxes) • Brighton: \$349,000.00 (not incl. taxes) • Elk Point: \$0 • Total = \$601,200 	<p>Total Cost Revised Project:</p> <ul style="list-style-type: none"> • Kensington: \$403,520.00 (not incl. taxes) • Brighton: \$558,400.00 (not incl. taxes) • Elk Point: \$ 104,000.00 (not incl. taxes) • Total = \$1,065,920
<p>Total City Eligible Contribution (56%*):</p> <ul style="list-style-type: none"> • Kensington: \$252,200.00 (not incl. taxes) • Brighton: \$349,000 (not incl. taxes) • Elk Point: \$0 • Total = \$601,200 <p><i>*This project is proposing to contribute more than the minimum required 40% from the City's portion.</i></p>	
<p>Maximum Natural Infrastructure Grant Contribution (44%)</p> <ul style="list-style-type: none"> • Kensington: \$151,320.00 • Brighton: \$209,400.00 • Elk Point: \$104,000 • Total = \$464,720 <p><i>*This project is not proposing to use the full 60% allowable under NIF.</i></p>	

<p>City Eligible Contribution Status and Project Readiness:</p> <ul style="list-style-type: none"> • Kensington: Secured funding, requires approval in 2022-2023 budget. The project will require approval to proceed. Construction and Design are constructing the storm ponds. Seeding to dryland mix is to take place in 2022. To alter the current scope the project will require design work in 2022 with construction beginning in the same year and coordination with Construction and Design. The completion date for this project can meet the timelines the program. • Brighton: Secured funding, requires approval in 2022-2023 budget. This project will require design and approval including coordination with Construction and Design. The costs associated with this project are based on estimated values. The project will be complete as per the program requirements. • Elk Point: Subject to budget approval and approval of the neighbourhood Concept Plan.
<p>Project Outcomes:</p> <p>The outcome of the project is to re-establish the landscape with native plant material to replicate a natural wetland and environment surround the storm ponds.</p>

2.3 Pond Naturalization and Natural Infrastructure at the Fire Training Grounds

<p>Project: Regional Fire Training Facility – Project #: 1971- P01971</p>	
<p>Green Infrastructure Strategy Themes and Actions:</p> <p>This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Theme – Storm Water: More rain is managed where it falls. Storm water is recognized as an important resource.</p> <ul style="list-style-type: none"> • Action 14.2: Identify how green infrastructure can increase the storm system’s capacity to respond to intense rain events. • 14.3: Evaluate opportunities to increase naturalization of existing storm ponds to improve water quality and habitat, while balancing community recreation and other considerations. 	
<p>Project Eligibility for Natural Infrastructure Fund:</p> <p>This project is eligible under the following categories of the Natural Infrastructure Fund:</p> <ul style="list-style-type: none"> • Construction or restoration of naturalized water retention or detention systems • Planting and restoring green space • Naturalized water diversion and infiltration 	
<p>Current Scope:</p> <p>In 2020, City Council approved the development of a new Fire Training Facility. Situated on a 40-acre footprint of land, the facility will allow for the comprehensive training and review of safety sensitive skill in a purpose built controlled environment. The current facility plan includes a pond that will allow for water capture from both precipitation and any</p>	<p>Revised Project with Additional Scope:</p> <p>With the addition of NIF, we will be able to increase the scope of work to:</p> <ul style="list-style-type: none"> • Naturalize and add additional natural infrastructure elements to the pond and surrounding area. • Complete tree planting work around the facility.

other water used during training evolutions. This pond will be used to hold the water so it can be recycled (reused) for subsequent training evolutions.	
Total Costs Current Project: \$250,000	Total Cost Revised Project: \$625,000
Total City Eligible Contribution (40%): \$250,000	
Maximum Natural Infrastructure Grant Contribution (60%): \$375,000	
<p>City Eligible Contribution Status and Project Readiness:</p> <p>Status of funding and approvals:</p> <ul style="list-style-type: none"> • The City's contribution is available in an existing capital budget. <p>Project readiness:</p> <ul style="list-style-type: none"> • Once funding is confirmed, the project can proceed within the funding timeframe. 	
<p>Project Outcomes and Co-Benefits:</p> <ul style="list-style-type: none"> • The outcome of the project is to re-establish the landscape with native plant material to replicate a natural wetland and environment surround the storm ponds. 	

3.0 Hybrid infrastructure in urban areas for improved access and ecosystem services

The following initiatives will showcase innovative natural infrastructure solutions for built-up urban areas such as downtown streetscapes, corridor planning areas, and rights-of-way such as berms and boulevards. These initiatives will also improve the community's access to or experience of natural infrastructure in Saskatoon.

3.1 Road diet for enhanced downtown tree canopy

Project: Urban Design – BIDS (P.02162): 20th Street East Streetscape	
<p>Green Infrastructure Strategy Themes and Actions: This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Theme: Open Space – The Green Network links all Saskatoon residents to high quality, interconnected green space.</p> <p>Open Space Actions:</p> <ul style="list-style-type: none"> • Action 8: Expand the Green Network by creating new publicly available green space or increasing green infrastructure. <ul style="list-style-type: none"> ○ 8.3: Design and implement green infrastructure expansion in areas of interest. • Action 10: Protect and grow the urban forest. <ul style="list-style-type: none"> ○ 10.4: Design sustainable tree planting sites to ensure adequate soil volume, quality, and space for trees. <p>Theme: Storm Water – More rain is managed where it falls. Storm water is recognized as an important resource.</p> <p>Storm Water Actions:</p> <ul style="list-style-type: none"> • Action 15: Increase the use of Low Impact Development. <ul style="list-style-type: none"> ○ 15.1: Incorporate Low Impact Development pilots into City projects to show leadership, prioritizing high-pedestrian areas such as BRT corridors and downtown. 	
<p>Project Eligibility for Natural Infrastructure Fund: This project is eligible under the following categories of the Natural Infrastructure Fund:</p> <ul style="list-style-type: none"> • Planting and restoring green space • Design elements that enhance human access to nature. 	
<p>Current Scope: In 2013, after a significant consultation process, Saskatoon's City Council adopted the City Centre Plan which identifies the block of 20th Street between Idylwyld and 1st Avenue as a Pedestrian Priority location. This project includes a "road diet" which will reduce the road width by approximately 4 meters, making room for street trees to be added, contributing to</p>	<p>Revised Project with Additional Scope: With the addition of Natural Infrastructure Funding, we will be able to expand the scope of work to:</p> <ul style="list-style-type: none"> • Extend the tree support infrastructure improvements to the next block and possibly further down 20th Street towards Spadina

Saskatoon's initiative to increase our urban tree canopy by 15-20% by 2060 (Urban Forestry Management Plan, 2021) and improving storm water management in the area.	<ul style="list-style-type: none"> • Increase the number of trees planted by 10-15 • Provide underground structural cells to support the tree's survival and growth • Allow better access to structural cells and irrigation for future maintenance. • Provide better irrigation for tree survival. • Provide more permeable surface to absorb storm water.
Total Costs Current Project: \$1,038,692.17	Total Cost Revised Project: \$2,596,730.43
Total City Eligible Contribution (40%): \$1,038,692.17	
Maximum Natural Infrastructure Grant Contribution (60%): \$1,558,038.26	
<p>City Eligible Contribution Status and Project Readiness:</p> <p>Status of funding and approvals:</p> <ul style="list-style-type: none"> • The City contribution is part of the capital budget ask under the 2022-2023 Urban Design project "20th Street East Streetscape" that, if approved, will come out of the Streetscape Reserve. <p>Project readiness:</p> <ul style="list-style-type: none"> • This project has been scoped and is ready to proceed and be completed within the timeframes specified by the NIF. 	
<p>Project Outcomes and Co-Benefits:</p> <ul style="list-style-type: none"> • Enhancement and improved ecosystem services of rights-of-way through tree planting, improved soil conditions, and storm water management • Biofiltration of salt and chemicals • Responsible use and management of vacant or underutilized spaces • Revitalized street scape in pedestrian priority locations 	

3.2 Piloting natural infrastructure solutions in empty tree wells

Project: Streetscape Rehabilitation Project (Cost Centre 585)
<p>Green Infrastructure Strategy Themes and Actions:</p> <p>This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Theme: Open Space – The Green Network links all Saskatoon residents to high quality, interconnected green space.</p> <p>Open Space Actions:</p> <ul style="list-style-type: none"> • Action 8: Expand the Green Network by creating new publicly available green space or increasing green infrastructure. <ul style="list-style-type: none"> ◦ 8.3: Design and implement green infrastructure expansion in areas of interest. • Action 10: Protect and grow the urban forest.

- 10.4: Design sustainable tree planting sites to ensure adequate soil volume, quality, and space for trees.

Theme: Storm Water – More rain is managed where it falls. Storm water is recognized as an important resource.

Storm Water Actions:

- Action 15: Increase the use of Low Impact Development.
 - 15.1: Incorporate Low Impact Development pilots into City projects to show leadership, prioritizing high-pedestrian areas such as BRT corridors and downtown.

Project Eligibility for Natural Infrastructure Fund:

This project is eligible under the following categories of the Natural Infrastructure Fund:

- Planting and restoring green space
- Design elements that enhance human access to nature.

Current Scope:

There are currently 48 tree wells in the Downtown Business Improvement District (BIDs) that can no longer support street trees for various reasons, such as conflicts with fire hydrants, utilities, driveways, alleys, parking lots, and street access. Alternative natural infrastructure solutions are being considered instead of replacing these sites with hardscaping. Vegetation at these sites is potentially difficult to establish due to difficult growing conditions (e.g., salt, foot traffic and less sun access). The purpose of this project is to investigate and trial appropriate plantings and designs that can potentially be successful in these sites.

The current available budget allocated to this project would allow approximately 2 to 4 tree wells to be restored with natural infrastructure.

Revised Project with Additional Scope:

With the addition of Natural Infrastructure Funding, the City will be able to expand the scope of work to plant an additional 4-6 tree well sites with natural infrastructure plantings.

Total Costs Current Project: \$20,000.00

Total Cost Revised Project: \$50,000.00

Total City Eligible Contribution (40%): \$20,000

Maximum Natural Infrastructure Grant Contribution (60%): \$30,000

City Eligible Contribution Status and Project Readiness:

Status of funding and approvals:

- The City contribution is available through the Streetscape Rehabilitation Project (Cost Centre: 585)

Project readiness:

- This project has been scoped and is ready to proceed and be completed within the timeframes specified by the NIF.

Project Outcomes and Co-benefits:

- Enhancement and improved ecosystem services of rights-of-way through tree planting, improved soil conditions, and storm water management
- Biofiltration of salt and chemicals
- Responsible use and management of vacant or underutilized spaces
- Revitalized street scape in pedestrian priority locations

3.3 Enhancing green spaces in Corridor projects through natural infrastructure pilots

Project: Corridor Planning Program (Capital Project 2541)

Green Infrastructure Strategy Themes and Actions:

This project aligns with the following themes and actions from the Green Infrastructure Strategy:

Community: The Green Network facilitates placemaking, honours culture, and inspires community-led transformation.

Community Actions:

- Action 1: Design the Green Network to reflect our collective history, honour cultural diversity, and create a sense of belonging for all.
 - 1.3: Continue meaningful engagement with affected groups to design the Green Network through an equity and inclusions lens.
 - 1.4: Work with the community to tell the story of Saskatoon's Green Network for many voices through public art, interpretive features, and other mediums.
- Action 2: Inspire citizen-driven transformation of the Green Network.
 - 2.2: Seek opportunities to incentivize green infrastructure in private and commercial areas.

Governance: The Green Network is governed with an emphasis on partnerships and triple bottom line solutions.

Governance Actions:

- Action 4: Invest in the Green Network within the City of Saskatoon.
 - 4.1: Improve Green Network planning by updating City work plans, policies, and initiatives to increase green infrastructure across Saskatoon.
 - 4.4: Define and appropriate service level and associated funding for the Green Network to prioritize future investments.
- Action 6: Redefine the partnership with Meewasin to achieve collective goals related to conservation, education, and development in the Green Network.
 - 6.2: Collaborate on conservation, naturalization, and the development of trails, interpretive infrastructure, and amenities in areas of interest.

Open Space: The Green Network links all Saskatoon residents to high quality, interconnected green space.

Open Space Actions:

- Action 7: Renew formal and informal green space in the Green Network to meet citizen needs.
 - 7.1: Identify high priority formal and informal green spaces to upgrade or redevelop.
 - 7.2: Increase coordination within the City, and with the community, to encourage informal green space renewal.
- Action 8: Expand the Green Network by creating new publicly available green space or increasing green infrastructure.
 - 8.1: Identify green infrastructure opportunities outside the existing Green Network.
- Action 9: Increase walkability and active transportation throughout the Green Network.
 - 9.2: Increase access to and within the Green Network, with an emphasis on walkability and multi-modal transportation.

Storm Water: More rain is managed where it falls. Storm water is recognized as an important resource.

Storm Water Actions:

- Action 15: Increase the use of Low Impact Development.
 - 15.1: Incorporate Low Impact Development pilots into City projects to show leadership, prioritizing high-pedestrian areas such as BRT corridors and Downtown.
 - 15.4: Encourage commercial, institutional, and residential installation of Low Impact Development and onsite storm water management through education and incentives.

Project Eligibility for Natural Infrastructure Fund:

- This project aligns with the implementation ideas included within the NIF.
- Categories supported by this work will include:
 - Planting and restoring green space
 - Construction or restoration of naturalized water retention or detention systems
 - Naturalized water diversion and infiltration
 - Improving active transportation

Current Scope:

City Council endorsed the Corridor Transformation Plan in January 2020. The Corridor Transformation Plan is a long-term visionary plan that highlights opportunities and methods for implementing the Corridor Growth Area objectives. The Transformation Plan provides direction for future Corridor Planning Program deliverables, which includes developing Corridor Plans for each of the 10 segment areas within the Corridor Growth Area. Additionally, Corridor Growth policies and land use policy districts were

Revised Project with Additional Scope:

With the addition of Natural Infrastructure Funding, we will be able to increase the scope of work related to the College Corridor Plan, to include detailed design of items in the plan that align with the Natural Infrastructure Funding.

The additional funding would allow for additional design work to be undertaken related to Public Realm. Resources for detailed design work could be contracted, to enhance the Public Realm Master Plan to the

<p>enshrined through the adoption of the Official Community Plan in June 2020.</p> <p>The first Corridor Plan – for the College segment – publicly launched in the Summer of 2021. Corridor Plans are expected to be conducted approximately annually until plans for all 10 corridor segments are completed.</p> <p>Each Corridor Plan will be developed through a collaborative and consultative process with land owners, area residents, local business owners, and other stakeholder groups. This process includes a coordinated administrative approach by working with internal partners to develop solutions and identify opportunities to achieve growth principles. Each Corridor Plan will include:</p> <ul style="list-style-type: none"> • Action items to mitigate impacts related to infill development such as storm water management, amenity space needs, or other issues identified through consultation. • A Land Use and Zoning strategy that includes zoning options and the identification of high priority sites. • A Public Realm Master Plan which focuses on improving the streetscape, enhancing open and green space, addressing traffic related issues, and implementing actions that encourage active transportation. • Long term strategies that include a phasing and funding plan for infrastructure upgrades, public realm improvements and land use policy implementation. 	<p>next step as part of the College Corridor Plan and Nutana Corridor Plan. This would position the Public Realm components of each Corridor Plan to be ready for implementation.</p>
<p>Total Costs Current Project: \$250,000 (Public Realm Master Plan component)</p> <p><i>Ineligible - \$150,000</i></p>	<p>Total Cost Revised Project: \$400,000</p> <p><i>(\$100,000 city contribution + \$150,000 NIF contribution + \$150,000 ineligible)</i></p>
<p>Total City Eligible Contribution (40%): \$100,000</p> <p><i>*There are some ineligible items from the original scope that are not proposed for the NIF.</i></p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$150,000</p>	
<p>City Eligible Contribution Status and Project Readiness:</p>	

This project can proceed with detailed Public Realm design work for the College Corridor Plan, and the Nutana Corridor Plan, within the timeframes specified in the NIF.

Project Outcomes:

- Detailed design for public realm implementation for the College Corridor Plan and Nutana Corridor Plan.

3.4 Sustainable tree planting sites in berms, buffers, and other hard-to-grow areas

Project: Park Development – Boulevard Development (P.00668)

Green Infrastructure Strategy Themes and Actions:

This project aligns with the following themes and actions from the Green Infrastructure Strategy:

Theme – Open Space: The Green Network links all Saskatoon residents to high quality, interconnected green space.

- Action 7: Renew formal and informal green space in the Green Network to meet citizen needs.
 - 7.1: Identify high priority formal and informal green spaces to upgrade or redevelop.
 - 7.2: Increase coordination within the City, and with the community, to encourage informal green space renewal.
- Action 10: Protect and grow the urban forest.
 - 10.4: Design sustainable tree planting sites to ensure adequate soil volume, quality, and space for trees.

Project Eligibility for Natural Infrastructure Fund:

This project is eligible under the following categories of the Natural Infrastructure Fund:

- Planting and restoring green space (e.g. green roofs)
- Naturalized water diversion and infiltration (e.g. rain gardens, bioswales)
- Design elements that enhance human access to nature.

Current Scope:

The 2022 and 2023 budget requests include \$120,000 in each year for: investigating planting requests, identifying appropriate plant sites, site preparation including soil amendments if required, tree planting, and the three-year establishment maintenance of trees in new residential neighbourhoods. It also includes supplemental establishment maintenance, as required, on approved tree planting by developers in new neighbourhoods. The planned budget years also include \$120,000 in each year for boulevard tree planting.

Revised Project with Additional Scope:

With the addition of Natural Infrastructure Funding, the City will be able to complete a feasibility study and pilot to enhance tree planting and survival rates in rights-of-way where growing conditions are currently unfavorable for tree planting and other natural infrastructure. The feasibility study would include an assessment of possible sites where tree planting could be enhanced (e.g., berms, buffers), a review of options to improve soil suitability and overall growing conditions, and an assessment of any regulatory or ownership constraints. The pilot

	would include a partnership with Construction and Design department to retrofit an existing berm or buffer for enhanced tree growth.
Total Costs Current Project: \$240,000	Total Cost Revised Project: \$600,000
Total City Eligible Contribution (40%): \$240,000	
Maximum Natural Infrastructure Grant Contribution (60%): \$360,000	
<p>City Eligible Contribution Status and Project Readiness:</p> <p>Status of funding and approvals:</p> <ul style="list-style-type: none"> The project is subject to approval in the 2022-2023 budget deliberations. <p>Project readiness:</p> <ul style="list-style-type: none"> Once the project is approved and funding is confirmed, the work can proceed within the timelines specified by the NIF. 	
<p>Project Outcomes and Co-Benefits:</p> <ul style="list-style-type: none"> Increased tree survival on currently degraded green spaces. Enable Parks to support multiple City objectives as outlined in, for example, the Strategic Plan, Urban Forestry Management Plan, Green Infrastructure Strategy, and Recreation and Parks Master Plan. Help the City achieve its 15-20% canopy cover by 2060 target, as recommended in the Urban Forestry Management Plan. Provide more shaded locations through the establishment of additional trees. Enable community members to become involved in protecting, enhancing, and experiencing our city parks through education, programming, and stewardship initiatives. 	

3.5 Greener roadways to reduce the urban heat island effect

<p>Project: Aspen Ridge (McOrmond Drive Streetscape: Roadway Streetscaping/Entrance Signs P.01411)</p>
<p>Green Infrastructure Strategy Themes and Actions:</p> <p>This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Open Space: The Green Network links all Saskatoon residents to high quality, interconnected green space.</p> <p>Open Space Actions:</p> <ul style="list-style-type: none"> Action 7: Renew formal and informal green space in the Green Network to meet citizen needs. <ul style="list-style-type: none"> 7.1: Identify high priority formal and informal green spaces to upgrade or redevelop. 7.2: Increase coordination within the City, and with the community, to encourage informal green space renewal. Action 8: Expand the Green Network by creating new publicly available green space or increasing green infrastructure. <ul style="list-style-type: none"> 8.1: Identify green infrastructure opportunities outside the existing Green Network.

<p>Project Eligibility for Natural Infrastructure Fund: This project is eligible under the following categories of the Natural Infrastructure Fund:</p> <ul style="list-style-type: none"> • Planting and restoring green space (e.g., planting beds) • Naturalized water diversion and infiltration (e.g., rain gardens, bioswales) 	
<p>Current Scope: This project is a streetscape enhancement for the arterial roadway, McOrmond Drive. The scope of work includes the installation of street furniture, unit paving, irrigation, plant material including street trees and two neighbourhood entry signs along McOrmond Drive.</p>	<p>Revised Project with Additional Scope: The revised scope will include the addition of centre median planting beds, irrigation for the centre median planters, structural soil cells and larger tree grates.</p>
<p>Total Costs Current Project: \$2,493,553.00 (not incl. taxes)</p>	<p>Total Cost Revised Project: \$3,357,953.00</p>
<p>Total City Eligible Contribution (74%*): \$2,493,553.00 (not incl. taxes)</p>	
<p><i>*Project can allocate more than the minimum 40% for the City's contribution</i></p>	
<p>Proposed Natural Infrastructure Grant Contribution (26%*): \$864,400.00 (not incl. taxes)</p>	
<p><i>*Project is not requesting the full amount allowable under NIF.</i></p>	
<p>City Eligible Contribution Status and Project Readiness: Funding for this project is secured and in place. The total costs are based on estimated costs. The project will be tendered in late 2021. Construction for Phase 1 of this project will begin April 2022. Phase 2 will be tendered in spring of 2022 and a construction start in the summer of 2022. Both phases of the project will have a completion date of October 2023. Phase 1: Fedoruk Drive to Feheregyhazi Boulevard; Phase 2: Feheregyhazi Boulevard to Henry Dayday Street.</p>	
<p>Project Outcomes: McOrmond Drive is 1.2 km arterial roadway. The added design elements will amplify and enhance the street appearance by creating a 'greener', healthier, more biodiverse corridor.</p> <p>The goal is a self-sustaining landscape, utilising some native plant material and hardy trees.</p> <ul style="list-style-type: none"> - The addition of the centre median will help increase the overall biodiversity of this wide arterial roadway. - The use of structural soil cells and larger tree grates will provide the street trees with an additional 8m³ of soil volume for a minimum of 10m³ per tree. - Lastly, the larger tree grate will increase the permeable surface around each tree by 3m² providing a larger surface area for rainfall to permeate. <p>Overall, these improvements will provide a healthier forest canopy, a friendlier pedestrian environment, and aim to reduce the overall heat island effect.</p>	

3.6 Community-led restoration of degraded medians and rights-of-way

<p>Project: Street Gardens Expansion (P.02390)</p>	
<p>Green Infrastructure Strategy Themes and Actions: This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Theme: Community – The Green Network facilitates placemaking, honours culture, and inspires community-led transformation.</p> <p>Community Actions:</p> <ul style="list-style-type: none"> • Action 1: Design the Green Network to reflect our collective history, honour cultural diversity, and create a sense of belonging for all. <ul style="list-style-type: none"> ○ 1.3: Continue meaningful engagement with affected groups to design the Green Network through an equity and inclusion lens. • Action 2: Inspire citizen-driven transformation of the Green Network. <ul style="list-style-type: none"> ○ 2.3: Develop a program and funding model to support community-led green infrastructure projects, citizen science, and bio-cultural management. • Action 3: Increase food production in the Green Network. <ul style="list-style-type: none"> ○ 3.3: Work with and support partners to incorporate food and fruit production or traditional food systems into high priority urban areas. 	
<p>Project Eligibility for Natural Infrastructure Fund: This project is eligible under the following categories of the Natural Infrastructure Fund:</p> <ul style="list-style-type: none"> • Planting and restoring green space • Design elements that enhance human access to nature. 	
<p>Current Scope: The Boulevard Gardening and Maintenance Guidelines Update and Program Expansion Options report resulted in the Council resolutions:</p> <ol style="list-style-type: none"> 1. That Option 2 be approved: Expand program to include centre medians and a centre median application process, subject to approval of \$50,000 in operating funding for 2022 onwards, to be brought forward to the 2022-2023 Business Plan and Budget deliberations; and 2. That a \$60,000 capital funding request for the development of a Feasibility Study and community engagement, to further expand the garden program, be brought forward to the 2022-2023 Business Plan and Budget deliberations. 	<p>Revised Project with Additional Scope: With the addition of Natural Infrastructure Funding, we will be able to expand the scope of work to:</p> <ul style="list-style-type: none"> • Implement and support demonstration Street Garden sites including restoration of degraded rights-of-way, and potentially community-led “de-pave” events where underutilized pavement is removed and replaced with gardens and natural infrastructure. Demonstration gardens can showcase best practices for gardening in the challenging growing conditions of these sites (e.g., salt and compaction resulting from nearby roadways).

<p>The Street Garden Program Centre Median Expansion (Street Garden Expansion) proposes expanding the gardening activity area to include centre medians. These areas are proposed because, while centre median gardening is not currently permitted in the Guidelines, citizens are nonetheless gardening in these spaces. It involves an application for centre median garden approval, that would include a letter of agreement between the gardener and the City of Saskatoon (City).</p> <p>Resolution 1 to further expand the program, is currently unfunded and resolution 2 has received \$51,500 from the Sustainability Reserve and the project scope has been adjusted.</p> <p>If Resolution 1 remains unfunded and no other funding source is identified, the Administration proposes applying the \$51,5000 to carry out resolution 1 in 2022-2023 at a reduced scope.</p>	
<p>Total Costs Current Project: \$51,500</p>	<p>Total Cost Revised Project: \$128,750</p>
<p>Total City Eligible Contribution (40%): \$51,500 (Sustainability Reserve)</p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$77,250</p>	
<p>City Eligible Contribution Status and Project Readiness:</p> <p>Status of funding and approvals:</p> <ul style="list-style-type: none"> Resolution 2 has been allocated \$51,500 through the 2021 Sustainability Reserve. and P.02390 capital project “Street Garden Expansion” has been established. Resolution 1 will be considered as an operating option during the 2022-2023 multi-year budget deliberations. If approved the total eligible funding available is \$100,000 from this source, increasing the City’s total eligible contribution to \$151,500, the maximum NIF contribution to \$227,250 and the total project to \$378,750. <p>Project readiness:</p> <ul style="list-style-type: none"> This project has been scoped and is ready to proceed and be completed within the timeframes specified by the NIF. 	
<p>Project Outcomes and Co-Benefits:</p> <ul style="list-style-type: none"> Enhancement and improved ecosystem services of centre medians, boulevards, and other rights-of-way through native species selection, improved soil conditions, and storm water management 	

- Biofiltration of salt and chemicals
- Responsible use and management of vacant or underutilized spaces
- Local food production is increased
- Civic participation and action will be encouraged in residential areas
- Program leads to an attractive, vibrant, and lively city through public land for gardening

3.7 Lighting for People and Wildlife in a Winter City

<p>Project: WintercityYXE (P2519)</p>	
<p>Green Infrastructure Strategy Themes and Actions: This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Theme – Ecology:</p> <ul style="list-style-type: none"> • Action 13: Improve biodiversity and ecosystem health throughout the Green Network. <ul style="list-style-type: none"> ○ 13.1: Develop dark sky and low noise zones, prioritizing sites to reduce ecological stress. • Action 1: Design the Green Network to reflect our collective history, honour cultural diversity, and create a sense of belonging for all. <ul style="list-style-type: none"> ○ 1.4: Work with the community to tell the story of Saskatoon’s Green Network from many voices through public art, interpretive features, and other mediums. 	
<p>Project Eligibility for Natural Infrastructure Fund: This project is eligible under the following categories of the Natural Infrastructure Fund:</p> <ul style="list-style-type: none"> • Design elements that enhance human access to nature. 	
<p>Current Scope: The WintercityYXE Strategy was received by City Council in September 2020. There are three relevant actions identified in the Strategy:</p> <ol style="list-style-type: none"> 1) Develop and implement Winter Design Guidelines. 2) Explore how outdoor spaces can be better used in the winter months. 3) Examine the need and benefit of a comprehensive winter lighting strategy and invest in projects that advance learning for the development of a lighting strategy. <p>The Winter Design Guidelines would provide developers direction for how sites could be best developed for Saskatoon’s winter climate. This includes but is not limited to:</p>	<p>Revised Project with Additional Scope: With the addition of NIF we will increase the scope of work to:</p> <ul style="list-style-type: none"> • Complete the Winter Design Guidelines with associated staff time and developer engagement. • Coordinate with Parks staff and other projects within the NIF proposal to complete an innovative lighting pilot at a park site that enhances residents’ experience of the park in the winter and achieves dark-sky lighting requirements. • Work with Parks staff to embed winter design considerations for landscaping, planting, and vegetation into the Parks upgrade project within the larger NIF proposal.

<ul style="list-style-type: none"> • Landscaping design, planting and vegetation; • Lighting guidelines including recommendations for parks and trails as well as minimizing light pollution 	
<p>Total Costs Current Project:</p> <ul style="list-style-type: none"> • \$50,000 for the development of Winter Design Guidelines • Additional funds to complete the lighting pilot would be allocated from other projects within the NIF application. 	<p>Total Cost Revised Project: \$125,000</p>
<p>Total City Eligible Contribution (40%): \$50,000</p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$75,000</p>	
<p>City Eligible Contribution Status and Project Readiness: The City's contribution is approved, and the project is ready to proceed within the timeframe of the grant.</p>	
<p>Project Outcomes and Co-Benefits:</p> <ul style="list-style-type: none"> • Improved accessibility to parks and green spaces year-round • Improved pedestrian experience of outdoor locations 	

4.0 Community Partnership Initiatives towards Reconciliation and Equity in Saskatoon's Green Network

The following initiatives will inspire and support community-led stewardship of Saskatoon's Green Network, with emphasis on Indigenous land uses and sustainable food system projects.

4.1 Indigenous Ceremonial Spaces in the Green Network

Project: Indigenous Initiatives – Urban Ceremonial Spaces (P.10042)	
<p>Green Infrastructure Strategy Themes and Actions: This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Theme: Community – The Green Network facilitates placemaking, honours culture, and inspires community-led transformation.</p> <p>Community Actions:</p> <ul style="list-style-type: none"> • Action 1: Design the Green Network to reflect our collective history, honour cultural diversity, and create a sense of belonging for all. <ul style="list-style-type: none"> ○ 1.3: Continue meaningful engagement with affected groups to design the Green Network through an equity and inclusion lens. <p>Theme: Governance – The Green Network is governed with an emphasis on partnerships and triple bottom line solutions.</p> <p>Governance Actions:</p> <ul style="list-style-type: none"> • Action 5: Develop a cooperative governance approach to Green Network provision and management. <ul style="list-style-type: none"> ○ 5.4: Partner with Indigenous communities and organizations to explore traditional land management and governance models for the Green Network. 	
<p>Project Eligibility for Natural Infrastructure Fund: This project is eligible under the following categories of the Natural Infrastructure Fund:</p> <ul style="list-style-type: none"> • Costs for the purpose of Indigenous consultation and engagement activities are eligible. • Design elements that enhance human access to nature. <p>This initiative will provide support and build capacity for all other initiatives within the NIF application to embed reconciliation and equity into project outcomes.</p>	
<p>Current Scope: This project is part of the Indigenous Initiatives budget request for 2022-2023. The City is working with Saskatoon Police Service, Meewasin Valley Authority, the University of Saskatchewan, Wanuskewin Heritage Park, and Saskatoon Tribal Council on development of urban ceremonial spaces.</p>	<p>Revised Project with Additional Scope: With the addition of Natural Infrastructure Funding, we will be able to increase the scope of work to:</p> <ul style="list-style-type: none"> • Complete additional engagement and partnership building • Design and implement ceremonial spaces in the Green Network for

	<p>Indigenous community members to practice, restore, reclaim, and revitalize their identities.</p> <ul style="list-style-type: none"> • Extend the term of the project manager
Total Costs Current Project: \$50,000	Total Cost Revised Project: \$125,000
Total City Eligible Contribution (40%): \$50,000	
Maximum Natural Infrastructure Grant Contribution (60%): \$75,000	
<p>City Eligible Contribution Status and Project Readiness:</p> <p>Status of funding and approvals:</p> <ul style="list-style-type: none"> • The Governance and Priorities Committee, at its meeting held on October 18, 2021, received a Report on Reconciliation, Equity, Diversity, and Inclusion. The Administration has submitted the associated Business Plan and Budget options for consideration during the 2022-2023 Business Plan and Budget discussions. <p>Project readiness:</p> <ul style="list-style-type: none"> • Early in 2022, Administration will begin the process of realigning some existing internal resources to form the planned Reconciliation, Equity, Diversity, and Inclusion (REDI) group. The outcomes of the Business Plan and Budget deliberations will inform how Administration then implements the plan. 	
<p>Project Outcomes and Co-benefits:</p> <ul style="list-style-type: none"> • Ceremonial spaces are included in the City's natural areas and other green spaces • Elders, Knowledge Keepers, Indigenous organizations, and front-line community members are partners in project implementation • Partnerships are established between the City and Indigenous communities from the outset of project planning so that cultural considerations can be meaningfully and authentically embedded into project design and implementation. • Equity and inclusion are embedded into the design and implementation of projects such as through the adoption of an ethical space framework • Creation of spaces in the City's Green Network that support cultural events, traditional land uses, and Indigenous ceremony • Indigenous people are provided with safe, no-barrier, permanent, and meaningful access to their cultures and languages to practice, restore, reclaim, and revitalize their cultures and identities. This is consistent with the Missing and Murdered Indigenous Women and Girls and Two-Spirit People Calls to Justice, the Truth and Reconciliation Calls to Action and the United Nations Declaration on the Rights of Indigenous Peoples. 	

4.2 Traditional Land Uses and Partnerships for Natural Infrastructure Restoration

Project: Traditional Knowledge and Land Use Assessment (P.02390)

Green Infrastructure Strategy Themes and Actions:

This project aligns with the following themes and actions from the Green Infrastructure Strategy:

Theme: Community – The Green Network facilitates placemaking, honours culture, and inspires community-led transformation.

Community Actions:

- Action 1: Design the Green Network to reflect our collective history, honour cultural diversity, and create a sense of belonging for all.
 - 1.2: In partnership with the community, complete a Traditional Land Use and Knowledge Assessment to identify cultural elements in the Green Network, and establish ways to conserve, honour, and revitalize these elements.
 - 1.3: Continue meaningful engagement with affected groups to design the Green Network through an equity and inclusion lens.

Theme: Governance – The Green Network is governed with an emphasis on partnerships and triple bottom line solutions.

Governance Actions:

- Action 5: Develop a cooperative governance approach to Green Network provision and management.
 - 5.3: Work with Wanuskewin to conserve their viewshed and support management of Opimihaw Creek.
 - 5.4: Partner with Indigenous communities and organizations to explore traditional land management and governance models for the Green Network.

Project Eligibility for Natural Infrastructure Fund:

This project is eligible under the following categories of the Natural Infrastructure Fund:

- Costs for the purpose of Indigenous consultation and engagement activities are eligible.
- Planting and restoring green space
- Design elements that enhance human access to nature.

This initiative will provide support and build capacity for all other initiatives within the NIF application to embed reconciliation and equity into project outcomes.

Current Scope:

Traditional Land Use and Knowledge Assessments (TLU&KA) invite Indigenous Elders, Knowledge Keepers', subject experts, and/or organizations to share stories and oral histories about Indigenous ways of life on a particular landscape, including the cultural and spiritual connection to the land. Assessments may provide recommendations for how those records can be acknowledged and incorporated in a respectful way into land use planning and other initiatives. Assessments may collect several types of records or data including:

- Elder and Traditional Knowledge Keepers' oral histories about Indigenous ways of

Revised Project with Additional Scope:

With the addition of Natural Infrastructure Funding, we will be able to increase the scope of work to:

- Implement early recommendations from the TLU&KA such as Indigenous-led restoration projects, upon the recommendation of Elders, Knowledge Keepers, and subject experts.
- Increase the scope of Indigenous engagement and partnership building to support Indigenous Initiatives and Sustainability Department's capacity in embedding equity, reconciliation, and cultural protocols into all projects submitted through this application.

<p>knowing and being, particularly the strong connection to the land</p> <ul style="list-style-type: none"> • Current and historical Indigenous land uses, ceremonies, culturally significant plants, events, or occurrences of a particular area • Archival and historical information about Indigenous groups • Maps of traditional land use patterns and practices that may illustrate the relationship between different features of the landscape, events, or the intersection of traditional and non-traditional knowledge • Site specific data such as habitat, trails, roads, rivers, presence of medicinal plants, grave sites, traplines, spiritually significant areas, traditional plant resources, or ecologically sensitive areas 	<ul style="list-style-type: none"> • Learnings and best practices from the TLU&KA will support other projects in the NIF application, such as embedding traditional knowledge into Natural Area Management Plans, or creation of cultural spaces within green spaces.
<p>Total Costs Current Project: \$225,000</p>	<p>Total Cost Revised Project: \$562,500</p>
<p>Total City Eligible Contribution (40%): \$225,000</p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$337,500</p>	
<p>City Eligible Contribution Status and Project Readiness: Status of funding and approvals:</p> <ul style="list-style-type: none"> • The City contribution is available through the P.02390 capital project (Traditional Land Use and Knowledge Assessment), received from the Sustainability Reserve funding allocation for 2021. <p>Project readiness:</p> <ul style="list-style-type: none"> • This project has been scoped and is ready to proceed and be completed within the timeframes specified by the NIF. 	
<p>Project Outcomes and Co-benefits:</p> <ul style="list-style-type: none"> • Partnerships are established between the City and Indigenous communities from the outset of project planning so that cultural considerations can be meaningfully and authentically embedded into project design and implementation. • Equity and inclusion are embedded into the design and implementation of projects such as through the adoption of an ethical space framework • Creation of spaces in the City's Green Network that support cultural events, traditional land uses, and Indigenous ceremony 	

4.3 Community-led pilots towards a sustainable food system

<p>Project: Sustainable Food Pilots – New Capital Project P.10013</p>
<p>Green Infrastructure Strategy Themes and Actions: This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p>

Theme: Community – The Green Network facilitates placemaking, honours culture, and inspires community-led transformation.

Community Actions:

- Action 1: Design the Green Network to reflect our collective history, honour cultural diversity, and create a sense of belonging for all.
 - 1.3: Continue meaningful engagement with affected groups to design the Green Network through an equity and inclusion lens.
- Action 2: Inspire citizen-driven transformation of the Green Network.
 - 2.3: Develop a program and funding model to support community-led green infrastructure projects, citizen science, and bio-cultural management.
- Action 3: Increase food production in the Green Network.
 - 3.3: Work with and support partners to incorporate food and fruit production or traditional food systems into high priority urban areas.
 - 3.4: Identify potential sites and partners to develop a food forest pilot project.

Project Eligibility for Natural Infrastructure Fund:

This project is eligible under the following categories of the Natural Infrastructure Fund:

- Planting and restoring green space
- Design elements that enhance human access to nature.

Current Scope:

This project includes a series of sustainable food system projects that implement recommendations in the Green Infrastructure Strategy and Solid Waste Reduction and Diversion Plan. For the purposes of the NIF application, this scope will focus on the Green Infrastructure Strategy pilots.

The full scope of the pilot projects include:

1. \$120,000 towards a traditional food system pilot project to work with and support partners to incorporate food and fruit production or traditional food systems into high priority urban areas. This item is funded through the Sustainability Reserve.
2. \$20,000 towards an edible foraging mapping pilot project. This item is funded through the Sustainability Reserve.
3. \$80,000 towards a food forest pilot project - Identify potential sites and partners to develop a food forest pilot project. This item is part of the unfunded capital request *Sustainable Food Pilots 2.0*, which is outside of funding cut-off in the prioritized RCE project list.

Revised Project with Additional Scope:

With the addition of Natural Infrastructure Funding, we will be able to expand the scope of work to:

- Proceed with the currently unfunded food forest pilot project.
- Expand the scope of the traditional food system and food forest pilot projects to include additional implementation work, which could include an expanded footprint of the pilot sites, additional natural infrastructure materials such as fruit trees, native and locally-adapted tree, shrub, grass, and forb species, and/or additional sites to pilot the approach.

Note that the edible foraging mapping pilot that is funded (\$20,000) would continue through current Sustainability Reserve funding but is not an eligible cost of the NIF so the scope would remain unchanged.

<p>Total Costs Current Project: \$220,000</p> <p><i>(\$120,000 for traditional food system pilot, \$20,000 for mapping – ineligible, and \$80,000 for food forest)</i></p>	<p>Total Cost Revised Project: \$320,000</p> <p><i>(\$120,000 for the eligible and funded city portion + \$180,000 from NIF + \$20,000 ineligible)</i></p>
<p>Total City Eligible Contribution (40%): \$120,000*</p> <p><i>*Available through the eligible portion of the Sustainability Reserve funded project of \$120,000 for a traditional food system pilot. \$20,000 for the edible foraging mapping pilot is ineligible. \$80,000 for the food forest pilot is currently unfunded so is not an eligible contribution. NOTE: if Sustainable Food Pilots 2.0 is funded at the 2022-2023 Business Plan and Budget Deliberations, the overall City contribution could increase by \$80,000 to \$200,000 to include the food forest pilot.</i></p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$180,000</p>	
<p>City Eligible Contribution Status and Project Readiness:</p> <p>Status of funding and approvals:</p> <ul style="list-style-type: none"> The City contribution of \$120,000 is available through the P.10013 capital project “Sustainable Food Pilot”, confirmed through the Sustainability Reserve. The capital budget option “Sustainable Food Pilots 2.0 - Food Forest, Food Waste Reduction & Food Waste Reclamation” for \$55,000 in 2022 and \$145,000 in 2023 will be considered at the 2022-2023 Business Plan and Budget deliberations. It is currently not a prioritized project. Approximately \$80,000 of this request was for the food forest pilot. <p>Project readiness:</p> <ul style="list-style-type: none"> This project has been scoped and is ready to proceed and be completed within the timeframes specified by the NIF. 	
<p>Project Outcomes and Co-Benefits</p> <ul style="list-style-type: none"> Showcase and demonstrate new and innovative approaches to community stewardship, public food production, and enhancement of degraded green spaces for future scalability Partnerships with front-line community organizations established Food production opportunities in the Green Network increased 	

5.0 City capacity building, policy work, oversight, and project support

The following initiatives will provide Project Management and subject matter expertise to the entire Natural Infrastructure Project including administration, oversight and reporting, engagement including Indigenous partnerships, capacity-building, and policy updates related to the initiatives. Salaries, wages and other incremental costs are an eligible expense but will require approval by Infrastructure Canada in advance of submitting the application.

5.1 Green Infrastructure Strategy Implementation – Oversight and Sustainment

Project: Green Infrastructure Strategy Implementation (P.02390.03 and P.02390.04)	
Green Infrastructure Strategy Themes and Actions: This project addresses the implementation chapter of the Green Infrastructure Strategy, including staffing, external funding opportunities, and monitoring the strategy.	
Project Eligibility for Natural Infrastructure Fund: Salaries, wages, and other incremental costs of recipient are eligible if approved in advance.	
Current Scope: Five short-term initiatives for early GIS implementation in 2020 and 2021: <ul style="list-style-type: none"> • Developing education materials about the green network, including promotion of biodiversity and urban agriculture. • Collaborating with Meewasin’s educational and public outreach programming to increase conservation, ecology, and natural and cultural resource awareness. • Developing a program to support green infrastructure projects through community and commercial grants or incentives. • Collaborating with the University of Saskatchewan, the school divisions, and other stakeholders around green space management. • Prioritizing sites, assessing risk, and developing management plans or restoration work for natural areas. 	Revised Project with Additional Scope: Due to COVID-19 delays in hiring, there is unallocated capital remaining from 2020-2021. The NIF application could utilize and leverage these funds for NIF administration and reporting, incremental staff capacity, GIS subject matter expertise for the funded initiatives, and to expand the scope of other initiatives within this request.
Total Costs Current Project: \$200,000	Total Cost Revised Project: \$500,000
Total City Eligible Contribution (40%): \$200,000	
Maximum Natural Infrastructure Grant Contribution (60%): \$300,000	
City Eligible Contribution Status and Project Readiness: Status of funding and approvals:	

- The City contribution is available through the following two existing capital projects Green Infrastructure Strategy P.02390.03 and P.02390.04 that were funded in 2020 and 2021.

Project readiness:

- This project has been scoped and is ready to proceed and be completed within the timeframes specified by the NIF. There is a risk to the overall project readiness and success if unfunded.

Project Outcomes and Co-benefits:

- Coordination between multiple departments to ensure projects align with GIS and NIF
- Successful NIF monitoring, reporting and submissions to meet deadline and requirements to secure funding.

5.2 Urban Forestry Management Plan Implementation

Project: Urban Forestry Management Plan Implementation (funding source(s) to be confirmed: CP1672, CP1666, and/or Deferred Tree Replacement Account)

Green Infrastructure Strategy Themes and Actions:

This project aligns with the following themes and actions from the Green Infrastructure Strategy:

Theme – Open Space: The Green Network links all Saskatoon residents to high quality, interconnected green space.

- Action 10: Protect and grow the urban forest.
 - 10.1: Ensure existing trees are protected, including through policy and bylaw updates.
 - 10.2: Review and improve existing programs related to tree watering, maintenance, inventory, and planting techniques.
 - 10.3: Continue to trial new tree species and increase biodiversity.
 - 10.4: Design sustainable tree planting sites to ensure adequate soil volume, quality, and space for trees.
 - 10.5: Develop community education and outreach programs to increase public awareness, stewardship, and partnerships.

Project Eligibility for Natural Infrastructure Fund:

Salaries, wages, and other incremental costs of recipient are eligible if approved in advance.

Current Scope:

This project addresses the implementation of the short-medium term recommended actions in the Urban Forestry Management Plan. The current scope includes 1 year of project management support to lead the implementation of the Urban Forestry Management Plan, focused primarily on the development of a Tree Protection Bylaw for trees on City property.

Revised Project with Additional Scope:

The additional funding would allow an additional 1.5 years of project management support to further advance the implementation of the Urban Forestry Management Plan. This would allow the continued dedication of a project manager to focus on a greater breadth and depth of initiatives including, for example: improvements to internal processes to ensure urban forestry considerations are included in

	decision making; opportunities to increase canopy cover; and urban forestry service level enhancements; amongst others.
Total Costs Current Project: \$132,000	Total Cost Revised Project: \$330,000
Total City Eligible Contribution (40%): \$132,000	
Maximum Natural Infrastructure Grant Contribution (60%): \$198,000	
City Eligible Contribution Status and Project Readiness:	
Status of funding and approvals: <ul style="list-style-type: none"> The City contribution is available through the Deferred Tree Replacement Account, which is utilized for tree replacement and/or enhancement of the urban forest. 	
Project readiness: <ul style="list-style-type: none"> This project is ready to proceed. 	
Project Outcomes and Co-benefits: <ul style="list-style-type: none"> Greater protection for trees on City property. Management, monitoring, and tracking of the urban forest. Dedicated support to further prioritize, define, and seek additional resources for urban forestry initiatives. Coordination between multiple departments, City strategies & procedures, and external stakeholders to ensure that the urban forest is adequately considered and protected when development or construction proceeds. 	

5.3 Indigenous partnerships, engagement, and consultation through a cultural liaison pilot

Project: Indigenous Initiatives – Cultural Resource Liaison (P.10042)
<p>Green Infrastructure Strategy Themes and Actions:</p> <p>This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Theme: Community – The Green Network facilitates placemaking, honours culture, and inspires community-led transformation.</p> <p>Community Actions:</p> <ul style="list-style-type: none"> Action 1: Design the Green Network to reflect our collective history, honour cultural diversity, and create a sense of belonging for all. <ul style="list-style-type: none"> 1.3: Continue meaningful engagement with affected groups to design the Green Network through an equity and inclusion lens. <p>Theme: Governance – The Green Network is governed with an emphasis on partnerships and triple bottom line solutions.</p> <p>Governance Actions:</p> <ul style="list-style-type: none"> Action 5: Develop a cooperative governance approach to Green Network provision and management.

<ul style="list-style-type: none"> ○ 5.4: Partner with Indigenous communities and organizations to explore traditional land management and governance models for the Green Network. 	
<p>Project Eligibility for Natural Infrastructure Fund:</p> <ul style="list-style-type: none"> • Costs for the purpose of Indigenous consultation and engagement activities are eligible. • This initiative will provide support and build capacity for all other initiatives within the NIF application to embed reconciliation and equity into project outcomes. 	
<p>Current Scope: An Indigenous Cultural Liaison will support the increase in Elder and Knowledge Keeper engagements with Committees, advisory groups, and work in the community. This role will also support cultural awareness programming and address an increasing number of department requests seeking guidance from Elders and Knowledge Keepers to incorporate Indigenous worldviews and history into projects and initiatives.</p>	<p>Revised Project with Additional Scope: With the addition of Natural Infrastructure Funding, we will be able to increase the scope of work to:</p> <ul style="list-style-type: none"> • Add 1-2 additional Indigenous Cultural Liaison staff/contractors to specifically support projects in this proposal, and help projects build capacity in incorporating equity analysis, anti-racism, and decolonization into the project approach. • Provide funding for Indigenous engagement including with the Indigenous Technical Advisory Group, Elders and Knowledge Keepers remuneration, and incremental expenses related to engagement and partnership building.
<p>Total Costs Current Project: \$119,000</p>	<p>Total Cost Revised Project: \$297,500</p>
<p>Total City Eligible Contribution (40%): \$119,000</p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$178,500</p>	
<p>City Eligible Contribution Status and Project Readiness:</p> <p>Status of funding and approvals:</p> <ul style="list-style-type: none"> • The Administration has submitted the associated Business Plan and Budget options for consideration during the 2022-2023 Business Plan and Budget discussions. <p>Project readiness:</p> <ul style="list-style-type: none"> • Early in 2022, Administration will begin the process of realigning some existing internal resources to form the planned Reconciliation, Equity, Diversity, and Inclusion (REDI) group. The outcomes of the Business Plan and Budget deliberations will inform how Administration then implements the plan. 	
<p>Project Outcomes and Co-benefits:</p> <ul style="list-style-type: none"> • The City has increased capacity to embed reconciliation, equity, diversity, and inclusion into projects 	

- Elders, Knowledge Keepers, Indigenous organizations, and front-line community members are partners in project implementation
- Partnerships are established between the City and Indigenous communities from the outset of project planning so that cultural considerations can be meaningfully and authentically embedded into project design and implementation.
- Equity and inclusion are embedded into the design and implementation of projects such as through the adoption of an ethical space framework

5.4 Natural Infrastructure Policy Support - Zoning Bylaw Updates

<p>Project: Comprehensive Zoning Bylaw Review (P.02300)</p>	
<p>Green Infrastructure Strategy Themes and Actions: This project aligns with the following themes and actions from the Green Infrastructure Strategy:</p> <p>Governance: The Green Network is governed with an emphasis on partnerships and triple bottom line solutions.</p> <p>Governance Actions:</p> <ul style="list-style-type: none"> • Action 4: Invest in the Green Network within the City of Saskatoon. <ul style="list-style-type: none"> ○ 4.1: Improve Green Network planning by updating City work plans, policies, and initiatives to increase green infrastructure across Saskatoon. ○ 4.4: Define an appropriate service level and associated funding for the Green Network to prioritize future investments. 	
<p>Project Eligibility for Natural Infrastructure Fund: Salaries, wages, and other incremental costs of recipient are eligible if approved in advance.</p> <p>This project will provide policy support to other initiative within the NIF proposal to help ensure that policies and processes are aligned with the overall project.</p>	
<p>Current Scope: The Zoning Bylaw No. 8770 last underwent a comprehensive review between 2007 and 2009. Industry trends and changes in the meantime have left gaps where the zoning does not address the desired uses effectively. Amendments are required to ensure alignment with the City's new Official Community Plan and other civic plans and studies such as the Green Infrastructure Strategy. A wide range of amendments were also identified that align with several strategic themes, including environmental initiatives. Identified topics that require additional funding to complete include but are not limited to:</p> <ul style="list-style-type: none"> • Completion of updated landscaping guidelines to compliment the proposed amendments to the 	<p>Revised Project with Additional Scope: With the addition of Natural Infrastructure Funding, we will be able to increase the scope of work to allocate additional staff resources to address policy updates related to Natural Infrastructure work, and especially related to natural infrastructure projects. These may include the updated landscaping guidelines including naturalized landscaping, green roof allowances, permeability requirements, and reviewing payment in lieu of parking options.</p>

<p>landscaping section of the Zoning Bylaw including providing alternative landscaping options to reduce water consumption and implementing requirement to support the City's urban tree canopy;</p> <ul style="list-style-type: none"> • Review of environmental initiatives to address environmental and sustainability recommendations provided by stakeholders, including but not limited to bonusing options and amendments for net zero buildings, regulations for green roofs, regulations that support net-zero homes including facilitating opportunities for solar panels, removing regulatory barriers for the redevelopment of infill sites; and, • Amendments to support parking regulations including options for payment in lieu of required parking facilities. 	
<p>Total Costs Current Project: \$400,000</p> <p><i>Eligible = \$100,000</i> <i>Ineligible = \$300,000</i></p>	<p>Total Cost Revised Project: \$550,000</p> <p><i>(\$100,000 city eligible + \$150,000 NIF + \$300,000 city ineligible)</i></p>
<p>Total City Eligible Contribution (40%): \$100,000</p> <p><i>Of the total project costs listed above, approximately \$100,000 is suggested for submission for the Natural Infrastructure Funding.</i></p>	
<p>Maximum Natural Infrastructure Grant Contribution (60%): \$150,000</p>	
<p>City Eligible Contribution Status and Project Readiness:</p> <ul style="list-style-type: none"> • Pending approval of the capital budget in the 2022-2023 Business Plan and Budget deliberations, this project can proceed within the timeframes specified in the NIF. 	
<p>Project Outcomes and Co-benefits:</p> <ul style="list-style-type: none"> • Relevant policies such as the Zoning Bylaw are updated to support and encourage natural infrastructure work with emphasis on existing policy gaps. • Actions are supported to ensure the City remains consistent between what it says it values and what it practices 	

5.5 Natural Asset Management Capacity and Level of Service Framework

Project: Corporate Asset Management Capacity (P.10043)

Green Infrastructure Strategy Themes and Actions:

This project aligns with the following themes and actions from the Green Infrastructure Strategy:

Governance: The Green Network is governed with an emphasis on partnerships and triple bottom line solutions.

Governance Actions:

- Action 4: Invest in the Green Network within the City of Saskatoon.
 - 4.1: Improve Green Network planning by updating City work plans, policies, and initiatives to increase green infrastructure across Saskatoon.
 - 4.4: Define an appropriate service level and associated funding for the Green Network to prioritize future investments.
 - 4.5: Evaluate the ecosystem services of the Green Network through the Natural Capital Asset Valuation process.

Project Eligibility for Natural Infrastructure Fund:

- Salaries, wages, and other incremental costs of recipient are eligible if approved in advance.
- This project will support and enhance other capital projects on the NIF application list so that our capacity in Natural Asset Management is aligned with natural infrastructure projects.

Current Scope:

This project will support building the maturity of the Corporate Asset Management System to better articulate the full lifecycle cost of infrastructure assets in alignment with desired level of services at an acceptable level of risk to support decision-making. The work includes implementing initiatives derived from the maturity assessment roadmap to create, implement, and continually improve asset management practices to ensure the City's assets are managed effectively. This includes development of a Corporate Asset Management Plan (one document) for all asset Classes, a Level of Service (LOS) framework and approved LOS for all asset services, and asset management updates to include total cost of ownership including capital, operating and growth costs and incorporate green infrastructure.

Revised Project with Additional Scope:

With the addition of Natural Infrastructure Funding, we will be able to increase the scope of work to advance current efforts to integrate natural assets into the Corporate Asset Management System. This will include procuring consultant services to assist the City in developing a level of service for high priority natural assets, analyzing future demand for natural assets so that appropriate service levels can be decided, and coordinating with City Departments in the development of Natural Asset Management Plans. Findings from this work will directly support several additional projects being submitted, including Natural Area Management Plans, Park Naturalization, Drainage Improvement projects, and streetscaping work.

Total Costs Current Project: \$140,000

Eligible for NIF - \$20,000

Ineligible - \$120,000

Total Costs Revised Project: \$170,000

(\$20,000 city eligible + \$30,000 NIF + \$120,000 ineligible)

Total City Eligible Contribution (40%): \$20,000

Of the total project costs listed above, approximately \$20,000 is eligible for the Natural Infrastructure Funding.

Maximum Natural Infrastructure Grant Contribution (60%): \$30,000
City Eligible Contribution Status and Project Readiness: This funding submission is subject to approval of the 2022-2023 budget. If budget approval is not received, the City contribution would be reduced to \$10,000. Project readiness: work has already occurred in 2021 to advance natural asset management. This has included a natural asset inventory and risk assessment with the Municipal Natural Asset Initiative, early work to adopt a level of service framework for natural assets, and an Asset Management Maturity Assessment for the City as a whole. However, more work is needed to integrate these projects with the City's existing asset management system.
Project Outcomes and Co-benefits: <ul style="list-style-type: none">• Asset management criteria with associated service levels developed for all projects in the funding application so that projects can be sustained over the long term.