2024-2034

GREEN ENVIRONMENT

10-YEAR
LONG-RANGE
STRATEGY

2024 ANNUAL REPORT

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City of
St.Albert
Cultivate Life

Green Environment Strategy - Annual Report
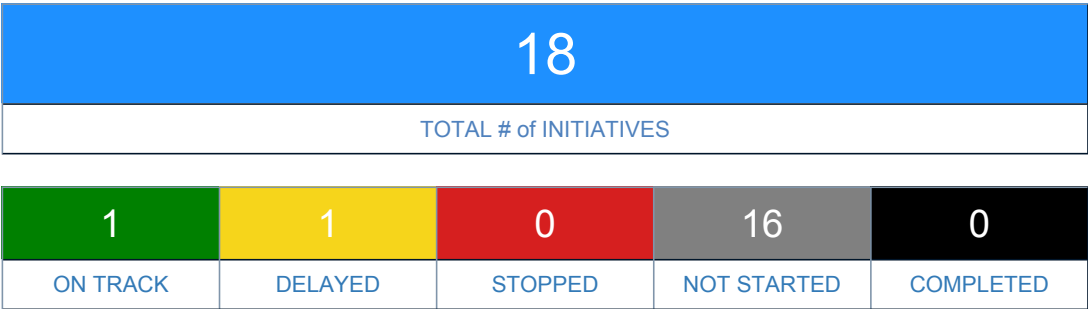Green Environment (Implementation)

Introduction

The Green Environment Strategy (GES) is a long-term plan developed by the City of St. Albert to guide operational activities that advance environmental sustainability over the next decade. It aligns with the City's Community Vision and Pillars of Sustainability, the Municipal Development Plan (*Flourish: Growing to 100K*), Council Strategic Plan, and the Services and Service Levels Inventory. The strategy builds on the green environment principles of the Municipal Development Plan, which emphasizes the protection and enhancement of natural features, biodiversity, water quality, and the urban forest. These principles are supported through four strategic directions: Biodiversity, Governance, Stewardship, and Watershed, which together provide a clear and actionable roadmap for environmental progress.

This Annual Report presents the City of St. Albert's progress in advancing the Green Environment Strategy 2024-2028 Implementation Plan. It supports transparency and accountability in achieving the City's environmental goals and includes the following sections:

	Biodiversity - Monitor, protect and enhance natural features, parks, and open spaces to maintain, sustain and enrich biodiversity.
	Governance - Develop and follow regulatory documentation for the protection of the environment. This could include regulations, guidelines, standards, policies and processes.
	Stewardship - Develop, maintain and enhance community environmental programs to foster a sense of stewardship of natural features, parks, and open spaces.
	Watershed - Protect wetlands and riparian areas and improve stormwater quality to contribute to the health of the watershed.

1. **Initiatives Summary** - This section highlights progress on key initiatives that support the Green Environment Strategy, focusing on the strategic directions prioritized during the year.

2. **Performance Measures** - This section provides an overview of performance measures that ensure the goals, objectives and results of the Green Environment Strategy are being achieved.

Initiatives Summary

18
TOTAL # of INITIATIVES

1	1	0	16	0
ON TRACK	DELAYED	STOPPED	NOT STARTED	COMPLETED

In its first year of implementation, the Green Environment Strategy focused on the initiation and progression of two of the 18 initiatives identified in the strategy, including Invasive Species Management and Natural Asset Integration. These initiatives have been developed to advance the Biodiversity strategic direction.

The Invasive Species Management initiative is part of the City's broader Integrated Pest Management (IPM) Plan, which helps to monitor and manage pest populations. In 2024, the initiative was completed through the identification of an invasive species list, including rationale for concern and severity of invasive species presence. It is anticipated that the update of the IPM Plan, which includes the details of the invasive species management initiative, will be completed in 2025.

The Natural Asset Integration initiative aims to incorporate natural assets into the City's asset management planning framework. This initiative is a continuation of work done with the Natural Asset Initiative in early 2024, where the City's natural asset management practices were evaluated to identify opportunities to better protect natural areas. Progress against this initiative includes identification of project funding and development of a project plan to guide 2025 implementation efforts.

Despite a minor delay, the Green Environment Strategy remains on track, with no significant risk of further delays. As we move into 2025, the strategy will continue advancing the Biodiversity strategic direction, while also launching initiatives that support the Watershed and Governance strategic directions.

Performance Measures

Charts

Number of Outfalls

DESCRIPTION

This measure tracks the total number of stormwater outfall locations within the city where runoff is discharged into natural water bodies. This measure helps identify the scale of the stormwater system and supports planning and environmental monitoring efforts related to water quality, infrastructure management and watershed health.

STRATEGIC DIRECTION ALIGNMENT

Watershed Governance

ANALYSIS

The following graph shows that the number of outfalls monitored through the City's annual program has remained consistent at 12 since 2020. These outfalls represent the locations with the largest catchment areas in the city, ensuring coverage of the most impactful drainage points. Maintaining consistency in monitoring allows for reliable year-over-year comparisons in water quality and facilitates targeted improvements to stormwater management.

Full Interactive Chart: Number of Outfalls

Number of Outfalls
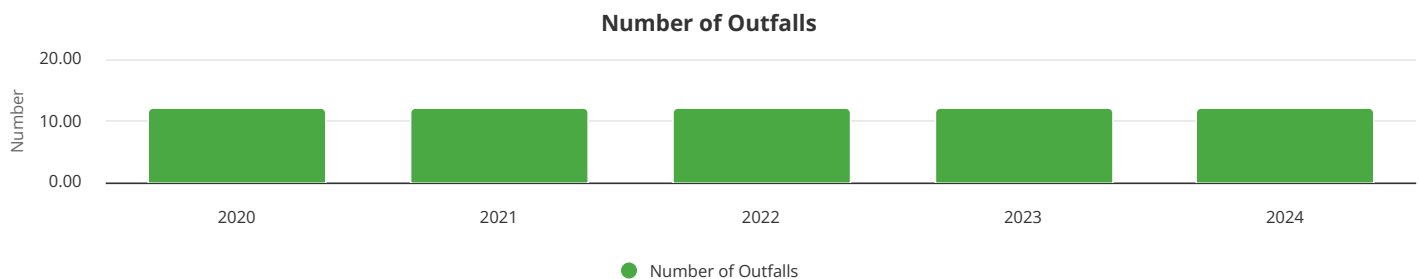
● Number of Outfalls

Number of Outfall Problem Areas Improved

DESCRIPTION

This measure tracks the number of stormwater outfall problem areas where the City has implemented mitigation strategies, such as installing oil and grit interceptors (OGIs). These efforts reflect the City's commitment to improving stormwater quality and reducing pollutant discharge into natural water bodies. Monitoring the number of improvements helps demonstrate tangible action toward environmental protection and watershed health.

STRATEGIC DIRECTION ALIGNMENT

Watershed Governance

Charts

ANALYSIS

The number of improved outfall problem areas in the following graph reflects the installation of oil and grit interceptors (OGIs) at high- and medium-priority stormwater discharge points. These installations are capital-intensive and depend on available utility budgets and project prioritization. A strategic plan for retrofitting key outfalls was developed prior to 2017 and significant progress has been made in addressing those identified as high or medium priority.

Since 2020, improvements have occurred in select years, with two problem areas addressed in 2020 and one in 2023. Recent changes to engineering standards now require these interceptors to be installed at the time of development, reducing the need for future retrofits. These units play a crucial role in preventing hydrocarbons and sediments from entering the Sturgeon River by using settling chambers and skimmers.

Full Interactive Chart: Number of Outfall Problem Areas Improved

Number of Outfall Problem Areas Improved

Legend: ● Number of Outfall(s)
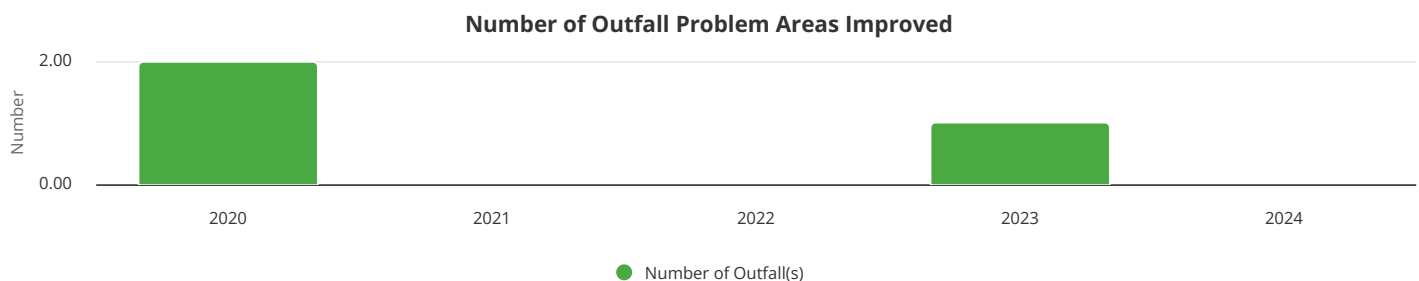
Density In Growth Neighbourhoods

DESCRIPTION

This indicator tracks the as-built residential density which is dwelling units that have actually been built and registered per net residential hectare in St. Albert's seven growth neighbourhoods (Chérot, Erin Ridge North, Jensen Lakes, North Ridge Phase 2 [Nouveau], Riverside, Ville Giroux and South Riel). It excludes established areas and infill sites. Comparing actual density to the planned density targets - as defined by relevant Area Structure Plans and Neighbourhood Plans - shows whether new development is using land efficiently and reducing long-term infrastructure and environmental footprints.

STRATEGIC DIRECTION ALIGNMENT

Watershed   Biodiversity   Governance
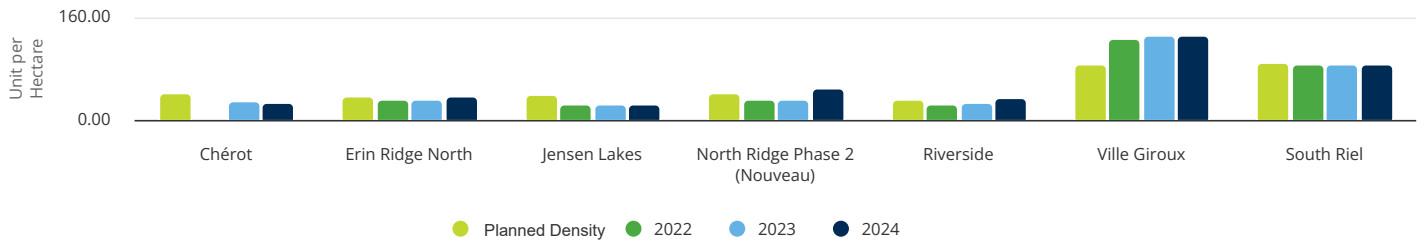
ANALYSIS

Average density in the growth areas continued to climb in 2024. South Riel and Ville Giroux remain the densest neighbourhoods, holding steady near 87 and 131 units/ha respectively that are above/almost the same as their original design targets. North Ridge Phase 2 rose to almost 50 units/ha as additional townhouse blocks were completed, while Riverside edged upward to 33 units/ha. Chérot, which recorded no units in 2022, reached 25 units/ha as its first phases built out. Only Jensen Lakes increased modestly to 23 units/ha, reflecting its predominance of single-detached lots. Taken together, the seven areas demonstrate a clear shift toward higher densities since 2020, aligning with Municipal Development Plan goals for compact growth and more efficient use of servicing land. Continued monitoring will confirm whether the newer neighbourhoods meet or exceed their planned densities once build-out is complete.

Full Interactive Chart: Average City Density

Charts

Average City Density (Planned Density Compared to Actual Annual Averages)

Y-axis: Unit per Hectare (0.00 to 160.00)

Categories: Chérot, Erin Ridge North, Jensen Lakes, North Ridge Phase 2 (Nouveau), Riverside, Ville Giroux, South Riel

Legend: ● Planned Density ● 2022 ● 2023 ● 2024

Environmental Construction Operations Plans (Number of Plans Submitted on Time)

DESCRIPTION

Environmental Construction Operations (ECO) Plans are required for construction projects that the City's Contractor Environmental Responsibility Package (CERP) checklist flags as having notable environmental risk. Each plan spells out how the contractor will protect soil, water and wildlife while work is underway. The measure records both the total number of plans received and how many arrive by the specified submission date. Receiving the plans before ground is broken gives City staff time to assess the proposed controls, request any changes, and schedule site inspections so that protective measures are in place from day one of construction.

STRATEGIC DIRECTION ALIGNMENT
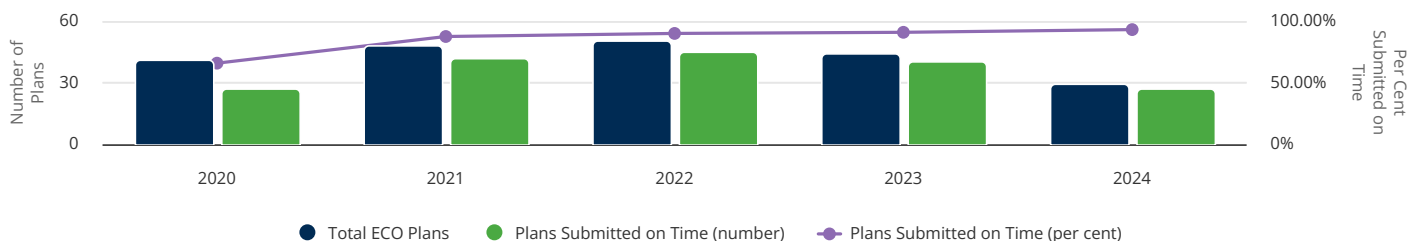
Watershed   Governance

ANALYSIS

The City received 29 ECO Plans in 2024, down from 44 in 2023 and 50 in 2022. This decline reflects a lighter capital project schedule rather than reduced compliance, because only projects flagged by the CERP checklist need a plan. Of the 29 plans, 27 arrived on or before the deadline, giving a 93 per cent on-time rate. This suggests that contractor training, clearer guidelines and the online submission portal are working. In other words, the trend of plans submitted on time relative to total plans is indeed positive.

Full Interactive Chart: ECO Plans (Number of Plans Submitted on Time)

Environmental Construction Operations Plans (Number of Plans Submitted on Time)

Left Y-axis: Number of Plans (0 to 60)
Right Y-axis: Per Cent Submitted on Time (0% to 100.00%)
X-axis: 2020, 2021, 2022, 2023, 2024

Legend: ● Total ECO Plans ● Plans Submitted on Time (number) ─●─ Plans Submitted on Time (per cent)

Environmental Construction Operations Plans (Number of Inspections)

DESCRIPTION

This measure counts the number of on-site inspections the City conducts each year to verify that contractors are following the Environmental Construction Operations (ECO) Plans approved for their projects. Regular inspections confirm that erosion controls, spill-prevention measures, and wildlife-protection steps described in the plans are implemented in the field, thereby reducing environmental risk during construction.

STRATEGIC DIRECTION ALIGNMENT

Watershed   Governance

Charts

ANALYSIS

City inspectors completed 43 ECO Plan inspections in 2024, a modest increase from 42 in 2023 but still well below the 70–80 inspections carried out during the post-COVID capital program peak of 2021–2022. The lower total inspection rate reflects a lighter construction schedule. Twenty-nine projects required ECO Plans in 2024, compared with 44 in 2023 and 50 in 2022. Because inspection resources are allocated in proportion to project volume, the year-over-year trend is expected. As the 2025 capital portfolio expands, the inspections count should rise in parallel.

Full Interactive Chart: ECO Plans (Number of Inspections)

Environmental Construction Operations Plans (Number of Inspections)

● Number of Inspections
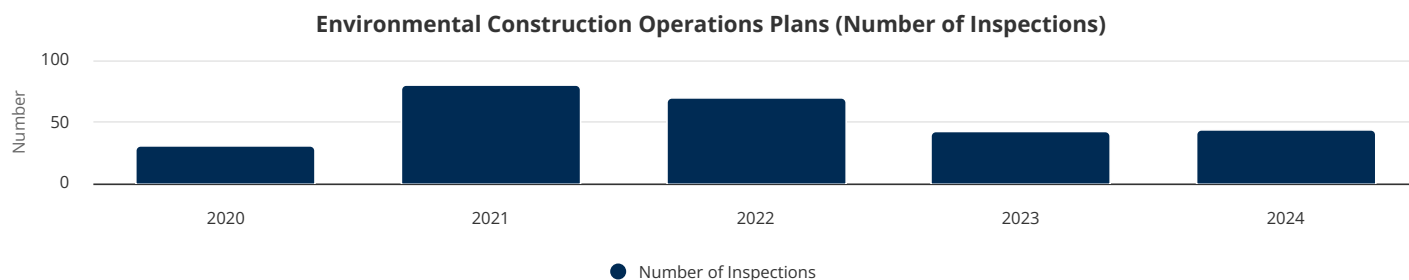
EMS Audit (Number of Non-Compliance)

DESCRIPTION

An Environmental Management System (EMS) audit checks each participating City department against legal and City policy requirements on two fronts. The first one is day-to-day compliance (whether staff follow required environmental practices and meet all legal and policy obligations) and system upkeep (confirming that EMS documents, training records, and corrective-action logs are current and that past findings have been addressed). Every finding of non-compliance (major or minor) marks a gap that must be corrected. Counting these findings after each audit shows how well participating departments are maintaining their programs and highlights where new or expanded EMS coverage still needs work.

STRATEGIC DIRECTION ALIGNMENT

Governance

ANALYSIS

The City conducts a corporate EMS audit roughly every three years. Therefore, the only recent results are 16 non-compliances in 2019 and nine in 2022. The 44 per cent drop suggests that corrective actions taken after the first audit and greater staff familiarity with EMS procedures, have strengthened compliance in the departments that were already included. A third-cycle audit is planned for 2026. Because several additional departments will be assessed for the first time, the raw count of non-compliances could rise even if existing participants continue to perform well. The target remains zero findings in mature departments, while any issues discovered in new areas will be treated as opportunities for improvement rather than setbacks.

Full Interactive Chart: EMS Audits (Number of Non-Compliance)

Charts

EMS Audits (Number of Non-Compliance)
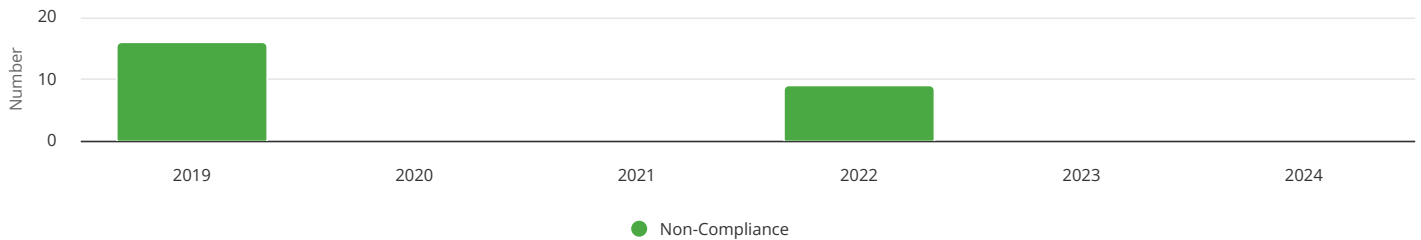
EMS Audit (Number of Non-Conformance)

DESCRIPTION

This measure records instances of non-conformance, including a mix of minor and major gaps identified during the City's annual internal Environmental Management System (EMS) audits. Fewer findings signal that participating departments are following EMS procedures and meeting regulatory expectations. When a new branch joins the EMS, an uptick in non-conformance rates is normal and viewed as an opportunity to correct practices early.

STRATEGIC DIRECTION ALIGNMENT

Governance

ANALYSIS

The 2024 audit identified one non-conformance, continuing a steady decline from five findings in 2020 to three in 2023. The drop indicates that corrective actions taken after each audit are working and that long-time EMS departments now have mature, well-documented processes. Looking ahead, results may level off between zero and three findings per year. A temporary rise is possible if additional departments are added or if a new auditor brings a fresh perspective and uncovers previously overlooked issues. Even in that case, the EMS framework treats new findings as a chance to strengthen environmental performance rather than a step backward.

Full Interactive Chart: EMS Audits (Number of Non-Conformance)

EMS Audits (Number of Non-Conformance)
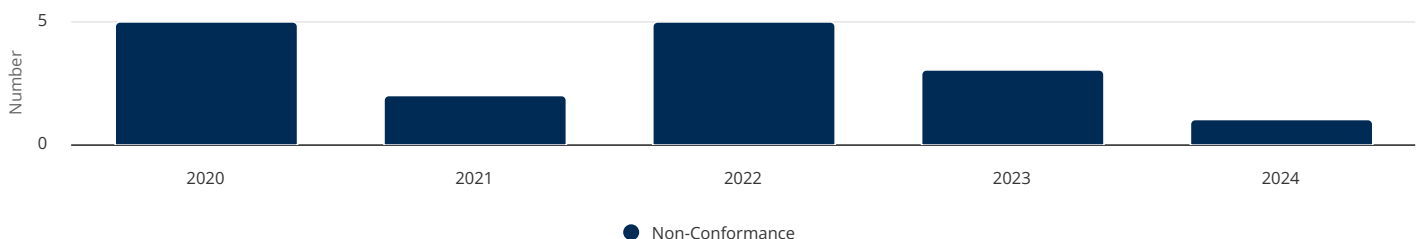
Environmental Incidents (Number of Spill Responses Initiated)

DESCRIPTION

This measure counts every environmental release (internal or external) that triggers a City spill-response. Each response shows that crews acted to contain and clean up a potential environmental release. Tracking the annual total helps the City gauge how often spills occur, how well they are reported, and where additional prevention or training may be needed.

**STRATEGIC DIRECTION ALIGNMENT**

Watershed   Governance

Charts

ANALYSIS

The City initiated spill-response on 34 incidents in 2024, up from 28 in 2023 but still below the 2022 peak of 36. The low figures in 2020 (12) and 2021 (8) reflected pandemic-related reductions in operations and site activity. Therefore, the apparent rise since 2022 is due to a return to normal workloads and improved reporting after staff refresher training. A higher count does not necessarily mean environmental performance is worsening. More thorough reporting and quicker call-ins can increase totals even as actual spill volumes fall. The 2024 data will be reviewed alongside root-cause investigations to identify whether specific departments or contractors need additional prevention measures or if the rise simply reflects improved detection and reporting of minor incidents.

Full Chart: Environmental Incidents (Number of Spill Responses Initiated)

Environmental Incidents (Number of Spill Responses Initiated)

Legend: ● Environmental Incidents (Audits)
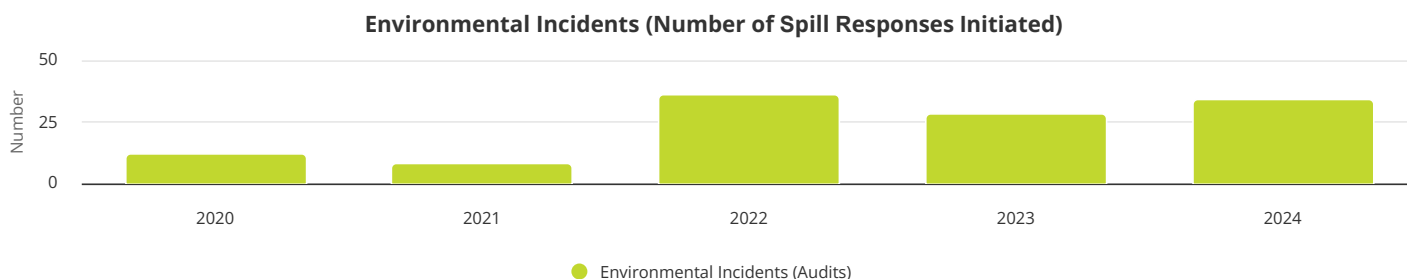
Invasive Species (Number of Species)

DESCRIPTION

This measure counts the unique invasive species recorded in St. Albert. Data is entered through the City's Weed & Pest App, which focuses on provincially listed prohibited noxious and noxious plant species. Because not every weed is mapped, the total invasive species count represents a conservative indicator of invasive species pressure rather than an exhaustive inventory. Tracking the yearly total helps the City evaluate whether existing prevention, containment and eradication programmes are limiting new introductions and spread.

STRATEGIC DIRECTION ALIGNMENT


Biodiversity   Stewardship

ANALYSIS

The 2024 survey identified 18 unique invasive species within the city. This is the first year the metric has been formally reported, establishing a baseline for future comparison. Maintaining or ideally reducing this number in subsequent years will signal that control measures (e.g., targeted herbicide treatments, public education and rapid response to new detections) are working. Some new species may arrive despite prevention and eradication efforts, but progress in eliminating or suppressing existing ones should keep the overall count from rising.

Full Interactive Chart: Invasive Species (Number of Species)

Charts

Invasive Species (Number of Species)

Number

20

0

2024
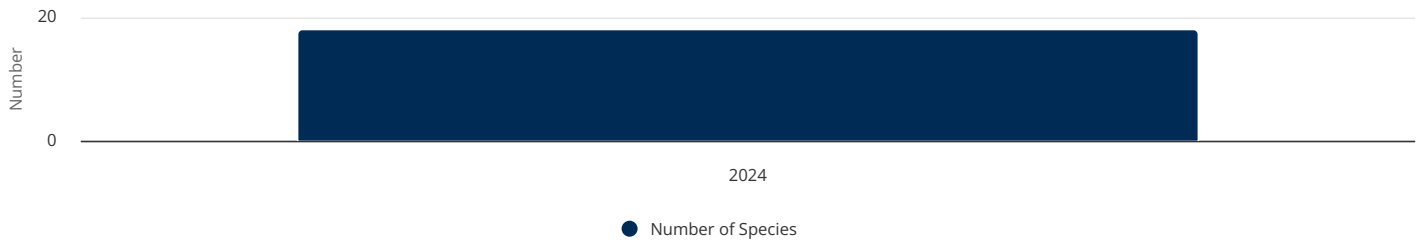
● Number of Species

Invasive Species (Number of Locations)

DESCRIPTION

This measure tracks the total number of unique locations within St. Albert affected by invasive species. It reflects the spatial extent of infestation and helps evaluate how effective the City's prevention, containment and eradication programs are over time. Data is recorded in the Weed & Pest App, which tracks provincially designated prohibited noxious and noxious weeds. Animal pests are only recorded in designated problem areas.

STRATEGIC DIRECTION ALIGNMENT

Biodiversity   Stewardship

ANALYSIS

In 2024, 413 locations were recorded as affected by invasive species. This is the first year this spatial metric has been tracked comprehensively, and it serves as the baseline for future comparison. Over time, the goal is to see a reduction in the number of locations, which would indicate successful early detection, targeted treatment and effective long-term control strategies.

Full Interactive Chart: Invasive Species (Number of Locations)

Invasive Species (Number of Locations)

Number

500

0

2024

● Number of Locations
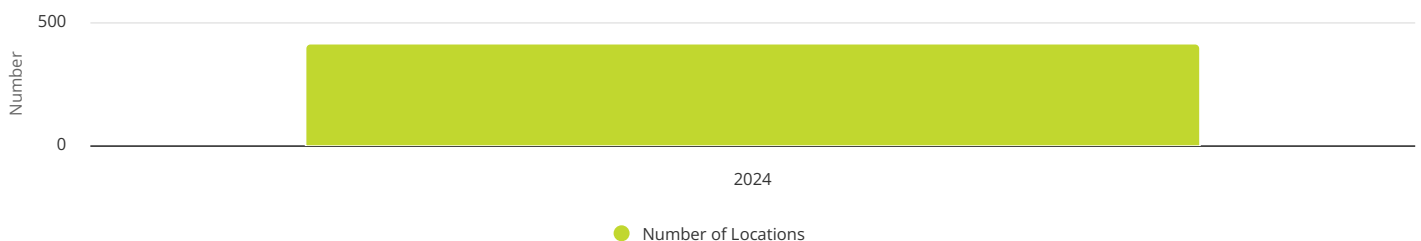
Planted Public Trees (Number of Trees)

DESCRIPTION

The planted-public-tree inventory counts every living tree planted by City staff, contractors, or developers in parks, boulevards, medians and utility corridors. It does not capture trees in naturalized areas and generally excludes school-yard plantings unless those yards fall within City-managed parkland. This measure tracks progress toward the City's goal of increasing the planted-tree inventory each year, confirming that annual plantings consistently exceed removals due to disease, safety concerns or redevelopment. By monitoring this total, the City can verify that its urban forest is not only being preserved but steadily expanded to support canopy cover, biodiversity and community well-being.

STRATEGIC DIRECTION ALIGNMENT


Biodiversity   Stewardship

Charts

ANALYSIS

At the end of 2024, the inventory shows 65,219 City-owned trees which is about 160 fewer than the 2023 count. Several hundred trees in new neighbourhoods remain under developer responsibility and have not yet been added to the City's inventory. Once those trees are transferred to City ownership, which is expected by the end of 2025, the total should rise well above the 2024 and 2023 figures. Over the past nine years, the City has increased maintenance frequency, moving from a seven-year to a five-year pruning cycle and boosted both staff and contract support. These changes keep trees healthier, which means fewer need to be removed.

Full Interactive Chart: Planted Public Trees (Number of Trees)

Planted Public Trees (Number of Trees)
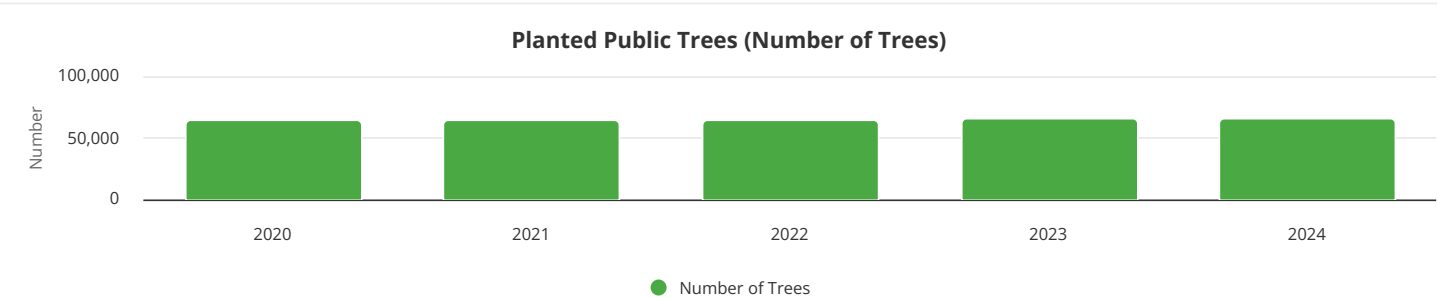
Planted Public Trees (Per cent Species Diversity)

DESCRIPTION

This measure shows the relative share of each tree species in the City's planted-public-tree inventory, expressed as a percentage. A well-balanced mix reduces the risk that any single pest or disease can devastate canopy cover, so tracking annual changes in species diversity helps the City gauge whether planting policies are gradually creating a more resilient urban forest. The inventory includes only City-owned park, boulevard, median and utility-corridor trees. Naturalized areas and most school yards are excluded.

Only the ten most common species (those that dominate the canopy) are labelled in the figure. Together they account for roughly 85 per cent of all planted trees. In total, the inventory contains about 30 different species.

STRATEGIC DIRECTION ALIGNMENT

Biodiversity   Stewardship   Governance

ANALYSIS

The 2024 tree inventory shows that most of St. Albert's street and park trees are still the same species that were planted years ago. Ash is the largest group (40.3 per cent of all planted public trees), spruce is next (15.8 per cent), and elm comes third (10.9 per cent). No other tree type makes up more than nine per cent of the total, so the mix has changed very little since 2020.
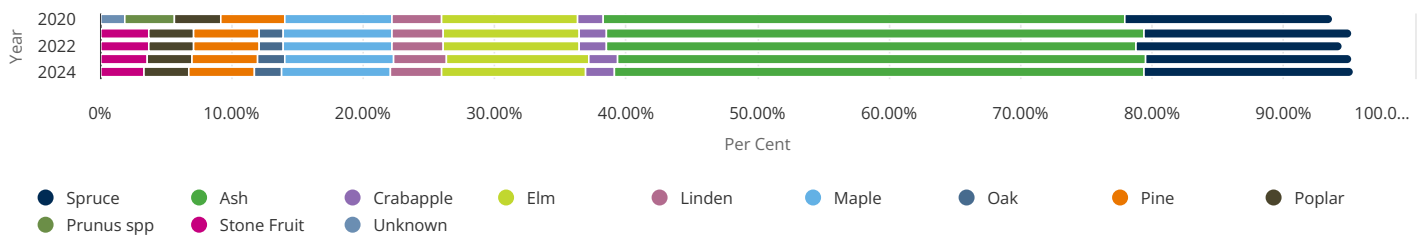
The heavy dependence on ash and elm is risky. If the emerald ash borer spreads into Alberta it could kill nearly half our boulevard and park trees. Dutch elm disease, already detected on five trees in Edmonton in 2024, poses a similar threat to elms.

To prevent future losses, the City now asks developers to avoid ash, limit elms and follow a 2021 standards revision that limits planting more than three of the same tree in a row. Staff also work with local nurseries to bring in a wider range of species that can handle our changing climate, though it can take 10–20 years for new varieties to reach the market. Over time these steps should reduce the reliance on only one or two main species and give each neighbourhood a more resilient tree canopy.

Full Interactive Chart: Planted Public Trees (Per cent Species Diversity)

Charts

Planted Public Trees (Per cent Species Diversity)

Legend: Spruce, Ash, Crabapple, Elm, Linden, Maple, Oak, Pine, Poplar, Prunus spp, Stone Fruit, Unknown

X-axis: Per Cent (0%, 10.00%, 20.00%, 30.00%, 40.00%, 50.00%, 60.00%, 70.00%, 80.00%, 90.00%, 100.0...)
Y-axis: Year (2020, 2022, 2024)

Environmental Program

DESCRIPTION

This indicator tracks the total number of residents and total number of groups who take part in City-led environmental programs including Arbor Day, Naturalization plantings, Clean & Green RiverFest, Weed Warriors' weed-pulls, neighbourhood or schoolyard clean-ups, Partners in Parks, and (for students) the Garbage-Can Design contest. Participation is a useful indicator of community stewardship. When turnout is high and remains steady, it generally means people are strongly committed to protecting and improving St. Albert's natural spaces.

STRATEGIC DIRECTION ALIGNMENT
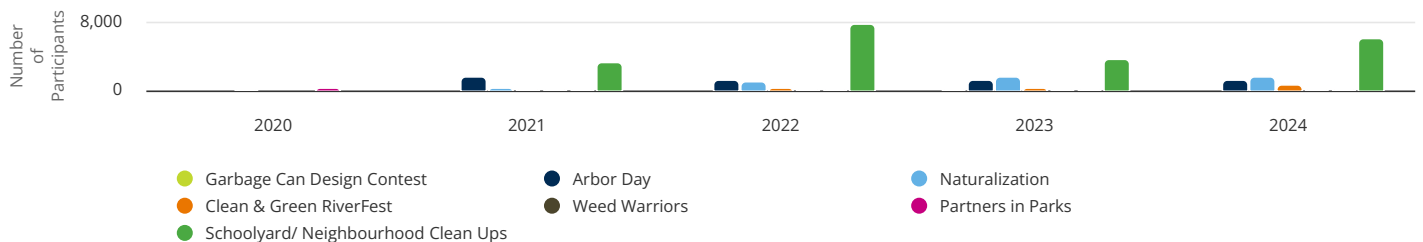
Stewardship   Governance

ANALYSIS

After the steep pandemic-related dip of 2020–2021, community engagement has returned to roughly pre-COVID levels for a third consecutive year. Arbor Day again filled its in-person capacity of about one thousand students and teachers, with minor year-to-year changes reflecting how many additional classes opted into the online version. Naturalization events involved 1,625 volunteers, marking the ceiling that a single coordinator can manage in spring and fall planting seasons. Clean & Green RiverFest saw a significant spike (735) in interest due to a few community members coordinating participation from their respective sports organizations. Neighbourhood clean-ups remained steady at 43 groups, but participant numbers (6,131) shifted with the size of each team. Partners in Parks, which dropped sharply in 2021 when new occupational-health and safety training requirements were introduced, continued a slow rebuild to 103 participants. Overall, the 2024 figures show that public enthusiasm for hands-on environmental work is strong. They also highlight opportunities, especially in Naturalization and Partners in Parks, to expand participation further through renewed outreach.

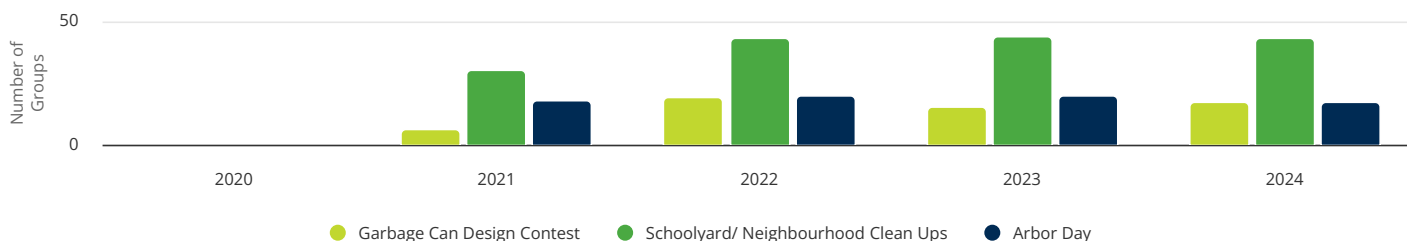Full Charts: Environmental Program (Number of Participants)

Environmental Program (Number of Groups)

Environmental Program (Number of Participants)

Y-axis: Number of Participants (0, 8,000)
X-axis: 2020, 2021, 2022, 2023, 2024

Legend: Garbage Can Design Contest, Arbor Day, Naturalization, Clean & Green RiverFest, Weed Warriors, Partners in Parks, Schoolyard/ Neighbourhood Clean Ups

Charts

Environmental Program (Number of Groups)

Legend: ● Garbage Can Design Contest ● Schoolyard/ Neighbourhood Clean Ups ● Arbor Day

Naturalization Events (Hectares Planted)

DESCRIPTION

This measure records the number of hectares planted with trees and shrubs through City-led Naturalization Projects. It covers community volunteer plantings, Arbor Day school plantings, and any contractor work such as the Grey Nuns White Spruce Park restoration. Tracking the total area planted each year shows how much naturalized vegetation the City creates.

**STRATEGIC DIRECTION ALIGNMENT**

Biodiversity Stewardship

ANALYSIS

Planting area has shifted from year to year. COVID restrictions held totals below 0.4 ha in 2020 and 2021. Community interest surged in 2022, lifting the figure to 1.46 ha, but declined to 0.58 ha in 2023 as project sites and staff capacity were limited. In 2024 the City planted 1.06 ha through community events and added another 1.50 ha via contractor work at Grey Nuns White Spruce Park, for a record 2.56 ha overall.

Note: Plantings occurred under Grey Nuns White Spruce Park in 2021 and 2022, but no hectares were recorded because the work took place in forest understory, where the planted area could not be accurately mapped.

Full Interactive Chart: Naturalization Events (Hectares Planted)

Naturalization Events (Hectares Planted)

Legend: ● All Community Naturalization Projects ● Grey Nuns White Spruce Park - Contractor Plantings
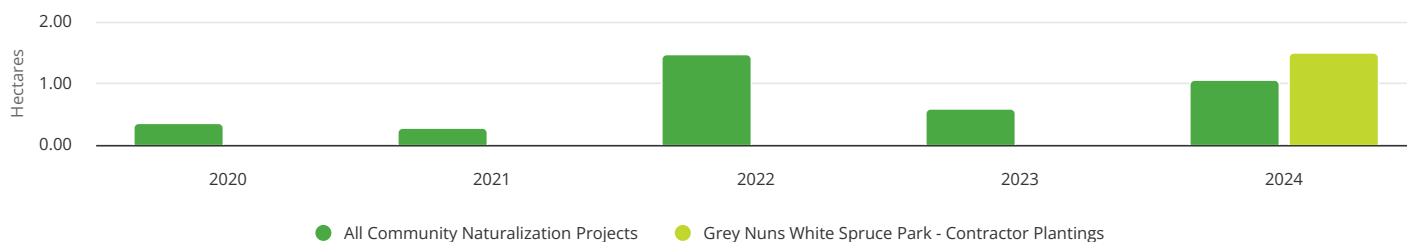
Naturalization Events (Number of Native Trees and Shrubs Planted)

DESCRIPTION

This measure counts how many native trees and shrubs the City plants each year through Naturalization Projects. It includes three streams: community volunteer events, Arbor Day school plantings and any contractor work such as the Grey Nuns White Spruce Park restoration. The total shows the scale of habitat creation.

Charts

STRATEGIC DIRECTION ALIGNMENT

Biodiversity   Stewardship

ANALYSIS

Planting numbers dropped during 2020-2021 but have risen strongly since 2022. Community projects alone placed 4,675 plants in 2024, nearly double the total from 2021. A contractor project at Grey Nuns White Spruce Park supplied another 2,340 plants, pushing the overall 2024 total to a record level.

Full Interactive Chart: Naturalization Events (Number of native trees and shrubs planted)

Naturalization Events (Number of Native Trees and Shrubs Planted)

Legend: ● All Community Naturalization Projects   ● Grey Nuns White Spruce Park - Contractor Plantings
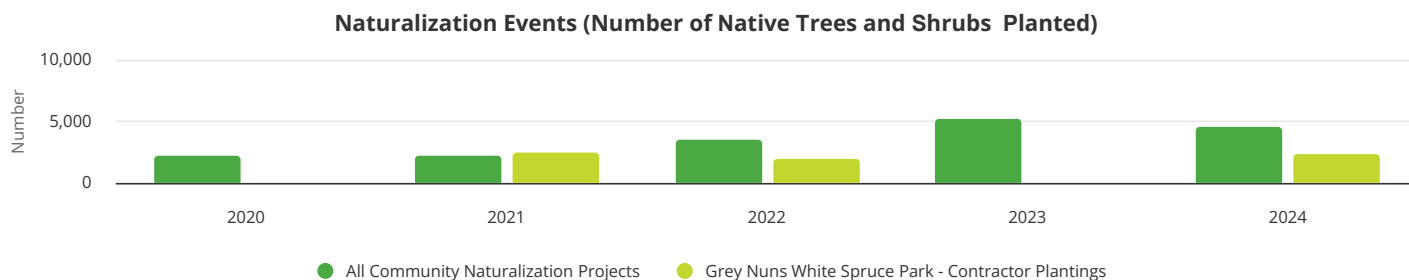
Wildlife Interactions (Number of Sightings)

DESCRIPTION

This measure tracks the number of wildlife sightings reported within specific areas of the city. A higher number of sightings may indicate healthy biodiversity and functional natural areas that attract and support a range of wildlife species. Ideally, sightings occur in natural areas, suggesting effective habitat preservation and connectivity.

STRATEGIC DIRECTION ALIGNMENT

Biodiversity   Stewardship

ANALYSIS

In 2024, there were 40 recorded wildlife sightings, a decrease from 51 sightings in 2023, but still above the lower levels seen in 2020–2022. While the peak was observed in 2019 with 96 sightings, the overall trend in recent years shows moderate recovery after the 2020 low. The data suggests fluctuating interaction levels, which may be influenced by changes in habitat availability, how often people report sightings and public engagement. Continued monitoring is essential to determine whether sightings align with protected natural areas or reflect increased encounters in urban environments due to reduced access to natural habitats.

Full Chart: Wildlife Interactions (Number of Sightings)

Charts

Wildlife Interactions (Number of Sightings)

Number

100

0

2018 2019 2020 2021 2022 2023 2024

● Number of sightings (Number of reports)
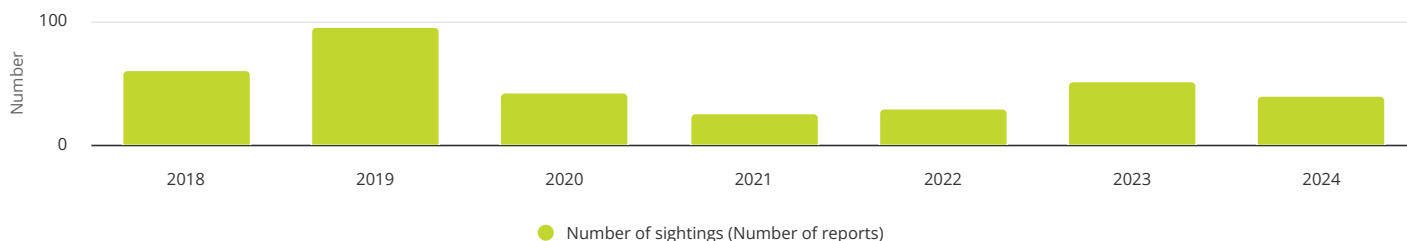
River Water Quality Index

DESCRIPTION

This measure tracks changes in the river water quality index based on five parameters: total nitrogen, total phosphorus, total suspended solids, chloride and *E. coli*. It helps evaluate how effectively the City is protecting river water quality over time. The index uses annual median values from all five river sampling locations. Some medians are compared directly to existing guidelines, while others are compared to long term medians when guidelines do not exist. The index is reported as follows:

1. Nutrient & sediment index (total nitrogen, total phosphorus, and total suspended solids): Each parameter is scored on a four-point scale (4 = Excellent, 3 = Good, 2 = Fair, 1 = Poor).
2. Pass / fail index (chloride and *E. coli*): These parameters are compared directly with provincial guidelines (1 = Pass, 0 = Fail).

STRATEGIC DIRECTION ALIGNMENT

ANALYSIS

In 2024, the graded river water quality index showed a decline compared to previous years. Total nitrogen, total phosphorus and total suspended solids all dropped from Good (3) in 2023 to Fair (2) in 2024 which are the lowest levels observed since 2017. The pass / fail index remained steady. Chloride and *E. coli* were still within guideline limits, so both indicators scored a Pass (1).
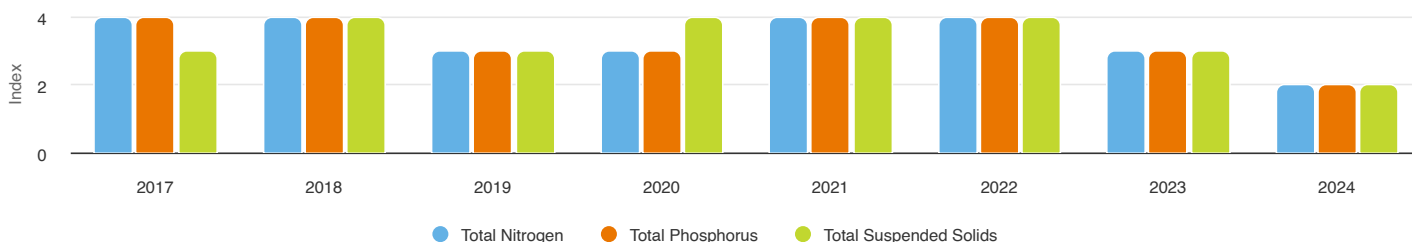
These results reflect an overall decrease in water quality, likely influenced by ongoing drought conditions and reduced river flow. Seasonal fluctuations in precipitation and runoff, as well as increasing urbanization, continue to affect water chemistry. While values are still within acceptable health and environmental ranges, the downward trend underscores the need for proactive water quality management, especially under shifting climate conditions.

Future updates to the index will replace *E. coli* with Enterococcus, a more accurate indicator of recreational water safety as per provincial monitoring guidelines.
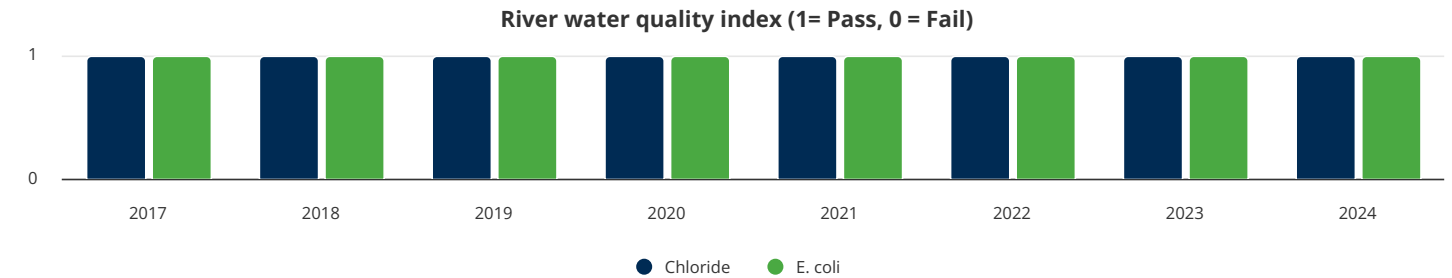
Full Charts: 1. River Water Quality Index (4 = Excellent, 3 = good, 2 = Fair, 1= Poor)

2. River water quality index (1= Pass, 0 = Fail)

River Water Quality Index (4 = Excellent, 3 = good, 2 = Fair, 1= Poor)

Index

4

2

0

2017 2018 2019 2020 2021 2022 2023 2024

● Total Nitrogen   ● Total Phosphorus   ● Total Suspended Solids

Charts

River water quality index (1= Pass, 0 = Fail)

Legend: ● Chloride ● E. coli

(Years shown: 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024 — all showing value 1)

Number of Maintained Wildlife-Use Stepping Stones Lost

DESCRIPTION

This measure tracks the number of wildlife-use stepping stone areas that have been lost or significantly altered. These stepping stones are small but critical natural areas that support habitat connectivity. The ideal target is zero loss, reflecting full protection of key ecological corridors.

STRATEGIC DIRECTION ALIGNMENT

Biodiversity

ANALYSIS

In 2024, Geographic Information Systems (GIS) analysis identified that three wildlife-use stepping stone areas were lost in the north end of the city due to urban development. These losses represent a subset of the broader natural area losses and directly impact habitat connectivity. Additional stepping stone areas are anticipated to be lost or heavily impacted due to development in the future.

The observed loss shows that animal habitats are being broken up. To address this, future land-use plans should incorporate dedicated wildlife corridors and prioritize the preservation of adjacent green spaces to maintain ecological connectivity.

Full Interactive Chart: Number of Maintained Wildlife-Use Stepping Stones Lost

Number of Maintained Wildlife-Use Stepping Stones Lost

Legend: ● Lost

(2024 value: 3)
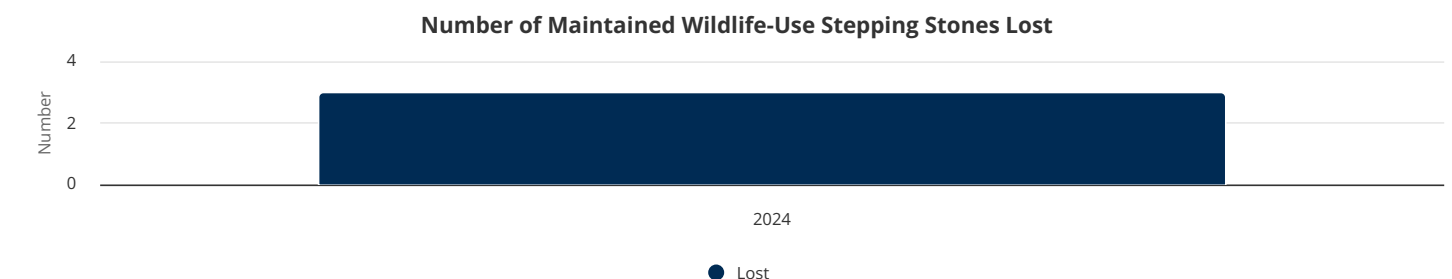
Per Cent Net Change in Natural Areas

DESCRIPTION

This measure shows the percentage change in the City's mapped natural areas since the 2015 baseline. By indicating how much land has been lost or gained, it helps assess how well the City is protecting its natural landscapes as development and other land-use changes occur.

STRATEGIC DIRECTION ALIGNMENT

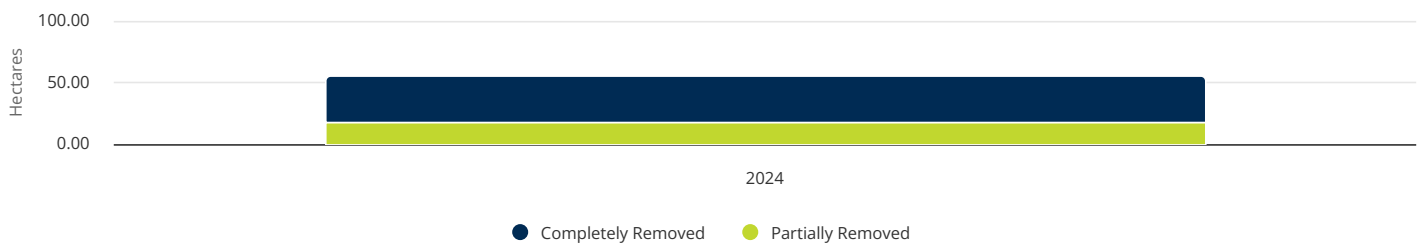Biodiversity

Charts

ANALYSIS

In 2015 the city had 711.7 hectares of mapped natural area, which included 220.5 hectares gained through annexation. This 2015 inventory serves as the baseline for comparison. The latest mapping, based on 2024 aerial imagery, shows 647.2 hectares of those original natural areas remaining. This reflects a net loss of 64.5 hectares or about a nine per cent from the baseline. Of this loss, 37.1 hectares were completely removed and 17.7 hectares were partly removed, for a visible total of 54.8 hectares. The remaining 9.7 hectares dropped from the inventory for technical reasons: boundary adjustments after annexation and sharper 2024 imagery revealed thin edge strips that are now mown or overtaken by weeds.

The decline in natural areas is primarily attributed to urban development on privately owned lands. Continued tracking will help the City evaluate progress on environmental protection and land-use decision-making over time.

Full Interactive Charts: Visible Loss in Natural Areas

Change in Natural Areas

Visible Loss in Natural Areas

- Completely Removed
- Partially Removed

Change in Natural Areas

- Total Natural Area
- Annexation