Attachment 2: Prioritization Framework

As part of the Toronto Ravine Strategy, the City has developed a framework to identify priority areas to guide future planning and budget exercises aimed at ensuring the protection of these natural spaces, while offering safe and sustainable opportunities for people to connect with, contribute to, and celebrate the ravines. Recognizing areas of demand and vulnerabilities in our ravine system can help direct management efforts.

Actions 8 & 9 of the Ravine Strategy direct staff undertake studies and develop plans, as needed, to implement improvements in these areas, including the development of 'hubs' within or 'gateways' or 'portals' into our ravine system based on planned investments and the Priority Investments Areas Study.

To develop this framework, the Ravine and Natural Feature Protection Bylaw boundary was used to delineate the City's ravine system. This includes creeks, valley slopes to top of valley slope and contributing natural heritage features. The ravine system was then subdivided into individual parcels utilizing the TRCA's valley segment classification system which: a) partitions the watercourses into valley segments, and b) classifies the segments into distinct morphological units. The delineation of the valley segments was achieved by dividing the valley system by distinct physical elements including hydrography (catchment size), stream slope and surficial geology. Distinct geological units, stream order and major confluences further refine the partitioning. Catchment size, slope and soil structure were then used to characterize each segment. This segmental breakdown of the ravine system, was then overlaid with Provincially Significant Wetlands, Areas of Natural and Scientific Interest and Environmentally Significant Areas to ensure that these protected areas are wholly within any given parcel. Small sections of ravines fragmented from the main contiguous system were grouped into the nearest associated unit being considered and evaluated as part of that parcel.

This methodological framework will identify priority areas based on the Ravine Strategy's vision and principles. This tool will allow staff to prioritize segments for investment both now, and into the future. The matrix that has been developed for this analysis weighs criteria in the following categories:

Ecology & Landform criteria are the foundation of the analysis, and will identify areas requiring a higher level of protection and management to protect and enhance their environmentally significant qualities, including:

- areas of high ecological significance designated in Toronto's Official Plan or by the province, including Environmentally Significant Areas, Provincially Significant Wetlands, and Areas of Natural and Scientific Interest
- known locations of sensitive species with ecologically-appropriate buffers
- areas where restoration has recently taken place or has been identified for future work
- canopy cover
- presence of interior forest habitat

Infrastructure, such as trunk sewer lines, erosion control structures and multi-use trails located in the ravines need to be maintained. Criteria for this category in the framework included:

- the presence of this infrastructure
- planned maintenance and capital works
- areas where there are existing high maintenance needs

Intensification & Growth criteria include proximity to expected growth areas undergoing major planning studies as well as approved developments near ravines where additional density can be anticipated. These criteria inform where we can expect to see additional people using the ravines and additional pressures in near future.

Parks & Green Space criteria help to identify areas where there is currently a lot of human activity that may need investment to improve safety and sustainability of the use, including:

- existing recreational facilities and parking lots
- intensity of existing use of 'ad hoc' trails from crowd-sourced data

Experience and Quality criteria look at the quality of the experience for park users, opportunities to animate these spaces, and importance of these spaces to the surrounding neighbourhood. Data to be considered include:

- lack of culture and recreation facilities nearby
- social equity, such as adjacency to low income neighbourhoods
- heat vulnerability of adjacent neighbourhoods where ravines can serve as cooler, shaded areas for recreation and commuting

Interface criteria look at how the ravines connect to the city, including the number of access points and how people can get into them.

Each category of criteria within the matrix is weighted to reflect their importance in the framework and our ravine system, with ecology most important therefore the highest weighted, with interface least critical to the function of the ravines, therefore weighted the lowest. Figure 1 shows the matrix and criteria.

Toronto Ravine Strategy Priority Management Areas
Primary Criteria Priority Ranking Matrix

Category	Criteria	Rationale
Parks and Open Space	Parks in Ravines	High Priority - More Than Two Parks Adjoin Ravine
		Medium Priority - No More Than Two Parks Adjoin Ravine
		Low Priority - One or Less Parks Adjoin Ravine
	Park Animation	High Priority for Management - Park Animation
		Low Priority for Management - No Park Animation
	Parking Lots	High Priority - Low Capacity Parking
		Medium Priority - Medium Capacity Parking
		Low Priority - High Capacity Parking
	Outdoor Recreation	High Priority - High No. of Recreational Amenities
		Medium Priority - Moderate No. of Recreational Amenities
		Low Priority - Low or No Recreational Activities
	"Strava" Ad Hoc Trails	High Priority - High Density of Ad hoc Trails
		Low Priority - Low Density of Ad hoc Trails
Interface	Walkability	High Priority for Access Improvement - Low Walkability
		High Priority for Access Improvement - Medium Walkability
		High Priority for Access Improvement - High Walkability
	Access Points	High Priority for Improvement - Low No. of Access Points
		Medium Priority for Improvement - Medium No. of Access Points
		Low Priority for Improvement - High No. of Access Points
	Public Transit	High Priority for Improvement - Low Access to Transit
		Medium Priority for Improvement - Medium Access to Transit

		Low Priority for Improvement - High Access to Transit
	Intensification + Growth Areas	High Priority - High Density Development Adjacent to Ravine
		Medium Priority - Low Density Development Adjacent Ravine
		Low Priority - No Development Adjacent Ravine
Experience and Quality	Low Income	High Priority - Surrounding Low Income Neighbourhoods
		Medium Priority - Surrounding Average Income Neighbourhoods
		Low Priority - Surrounding Above Average Income Neighbourhoods
	Heat Vulnerable	High Priority - Areas Adjacent to High Heat Island Effect Neighbourhoods
		Medium Priority - Areas Adjacent to Medium Heat Island Effect Neighbourhoods
		Low Priority - Areas Adjacent to Low Heat Island Effect Neighbourhoods
	Culture and Recreation	High Priority - Little to No Facilities Within 500m of Ravine
		Medium Priority - Low Number of Facilities within 500m of Ravine
		Low Priority - High Number Facilities within 500m of Ravines
	Neighbourhood Improvement	High Priority - >20% Youth <30 Years Old & Low Income
		Medium Priority - 20%-30% Youth & Low Income or >50 years Old & Low Income
		Low Priority - <20% Youth & Not Low Income
	Landform Features	High Priority - Contains Significant Landform Feature
		Low Priority - Does not Contain Significant Landform Feature
Infrastructure	Restoration Areas	High Priority - Contains Many City + TRCA Sites
		Medium Priority - Contains Limited City + TRCA Sites
		Low Priority - No Restoration Sites
	Sanctioned Trails	High Priority - Low Density of Trails or Gaps in Trail Continuity

		Medium Priority - Moderate Density of Trails
		Low Priority - High Density of Trails
	Fulcrum Data	High Priority - High Density of Management Sites
		Medium Priority - Moderate Density of Management Sites
		Low Priority - Low Density of Management Sites
Ecology	Restoration Opportunity + Canopy	High Priority - Several Types and Locations of Opportunities
		Medium Priority - Few Locations and Types of Opportunities
		Low Priority - No Opportunities
	Interior Forest	High Priority - Interior Forest Present
		Low Priority - No Interior Forest Present
	Habitat Quality (High Ranked Species Present)	High Priority - Areas of High Species Abundance
		Medium Priority - Areas of Moderate Species Abundance
		Low Priority - Areas of Low Species Abundance

Figure 1 - Prioritization Framework criteria

Scores are assigned to each parcel by GIS analysis of the data based on high/medium/low or yes/no ranking representing the criteria in the framework. A long list of sites will be identified and will then be run through a secondary criteria matrix that still follows a weighted framework with ecology as the most important category. Criteria on habitat quality, potential for flood impacts, upcoming capital work on infrastructure, ownership, level of nearby expected intensification, social equity and opportunities to improve access allow a finer scale analysis to identify the final list of Priority Investment Areas.

Priority Investment Areas will be selected based on this framework and criteria matrices. These sites comprise the priorities for new implementation projects of the five principles set out in the Ravine Strategy – Protect, Invest, Connect, Partner and Celebrate. The Priority Investment Areas will:

- prioritize additional studies and data collection to ensure any actions proposed work to first and foremost protect and/or enhance the ecology of these sites
- focus coordination of capital work between City divisions and external partners, such as the TRCA
- identify opportunities to improve facilities within parks and access points into the ravines in a manner that limits impacts to the natural environment
- allow the City and ravine leaders to work together on opportunities to celebrate and animate our ravines in a manner that respects the ecological integrity of these spaces

These Priority Investment Areas will not all be homogenous. Different drivers will emerge as to why an area is a priority and, as such, management efforts will not be identical for each area. Actions in some areas may focus more on protection while other areas may present greater opportunities to animate and celebrate the ravines while diverting human impacts away from more sensitive natural areas. The process for identifying Ravine Priority Investment Areas is not a static one. Just as ravines are dynamic systems, so must be our focus and efforts to protect and improve these spaces. Not only will new priorities need to be identified once current improvements to an area are complete, but also unpredictable storm events, infestations of invasive species and other significant events may require a shift in priorities. The framework will allow for this, but can also be updated as new data becomes available, such as findings from climate change assessments.

The application of the Ravine Strategy Prioritization Framework across the system will define opportunities to establish holistic improvements in specific ravine segments which address priorities created around the five principles to guide decision making in the ravines - **Protect, Invest, Connect, Partner**, and **Celebrate**. Projects identified in the Priority Investment Areas will catalyze public engagement new investments in the ravine system.