Appendix II State of Stormwater Management in Peel Region

Glossary

Bioretention - Bioretention practices are engineered landscapes designed to infiltrate and filter urban rainwater runoff. This common practice typically consists of a shallow depression or basin that features layers of rock, engineered soils, and resilient vegetation that can tolerate extreme rain and drought events. During a rainfall event, rainwater is directed into the practice, where water pools temporarily before soaking into the soil layer. Harmful pollutants are either broken down or captured in the soils and plant roots. Once cleaned, water is taken up by plants and released as water vapour, infiltrated into the ground, or carried away by a drainage pipe into our aquatic ecosystems. *[Source: City of Vancouver Rain City Strategy, 2019]*

Green Infrastructure - Green Infrastructure can be natural or human-made, can include parks, trees, shrubs, urban forests, green roofs and walls, gardens, bioswales, natural channels and watercourses, and constructed wetlands. *[Source: <u>Region of Peel Climate Change Master Plan</u>, 2019]*

Infiltration – Infiltration is penetration of water through the ground surface [Source: <u>Ontario Ministry of</u> <u>the Environment</u>, 2018]

Localized flooding - Localized flooding often happens as a result of overloaded, blocked or inadequate stormwater drainage systems that cause flow into streets and low-lying areas, ponding in yards, sewer backups and basement or first-floor flooding [Source: <u>State of Indiana</u>, 2021]

Low Impact Development - Low Impact Development (LID) is a stormwater management strategy that seeks to mitigate the impacts of increased runoff and stormwater pollution, and promotes the use of natural systems for infiltration, evapotranspiration, and reuse of stormwater. These practices can effectively remove nutrients, pathogens, and metals from stormwater and they reduce the volume and intensity of stormwater flows. [Source: Region of Peel Public Works Stormwater Design Criteria and Procedural Manual, 2019]

Peak flow – : the volume of rainwater flowing off a site per second during the most intense part of a rain event. [Source: <u>City of Vancouver Rain City Strategy</u>, 2019]

Plant uptake – Plant uptake is the mechanism driving water uptake and transport through plants. *[Source: <u>Nature</u>, 2013]*

Soakaway Pit - Soakaway pits are stone-filled (golf ball size) excavations where stormwater runoff collects and then infiltrates into the ground. [Source: <u>Ontario Ministry of the Environment</u>, 2018]

Stormwater Management Pond – Stormwater Management Ponds are typically referred to as 'dry' or 'wet' ponds. A wet pond is a detention basin designed to temporarily store collected stormwater runoff and release it at a controlled rate. It is different from a dry pond in that it maintains a permanent pool of water between storm events. Wet ponds are the most common end-of-pipe stormwater facility used in Ontario. A single wet pond can provide water quality, erosion, and flooding control. *[Source: Ontario Ministry of the Environment, 2018]*

Stormwater Tree Trench – Stormwater Tree Trenches are a form of green infrastructure where space taken up by street trees is used for stormwater management. [Source: <u>City of Vancouver Rain City</u> <u>Strategy</u>, 2019]