

Throughout construction and the lifespan of the Highway 427 Expansion project, stormwater management is an important consideration for LINK427. Construction can have potentially adverse impacts on local waterways due to sediment in stormwater originating from erosion of exposed soils. Upon the completion of the project, stormwater needs to be managed to ensure effective drainage from the roadway, prevent flooding, and avoid overwhelming local watercourses like Rainbow and West Robinson Creeks.

LINK427 manages stormwater in the project area by designing drainage to convey water off the freeway and into a series of stormwater management facilities. LINK427 has culverts and ditches throughout the project area, as well as two wet ponds and nine dry ponds.

Storm Water Conveyance

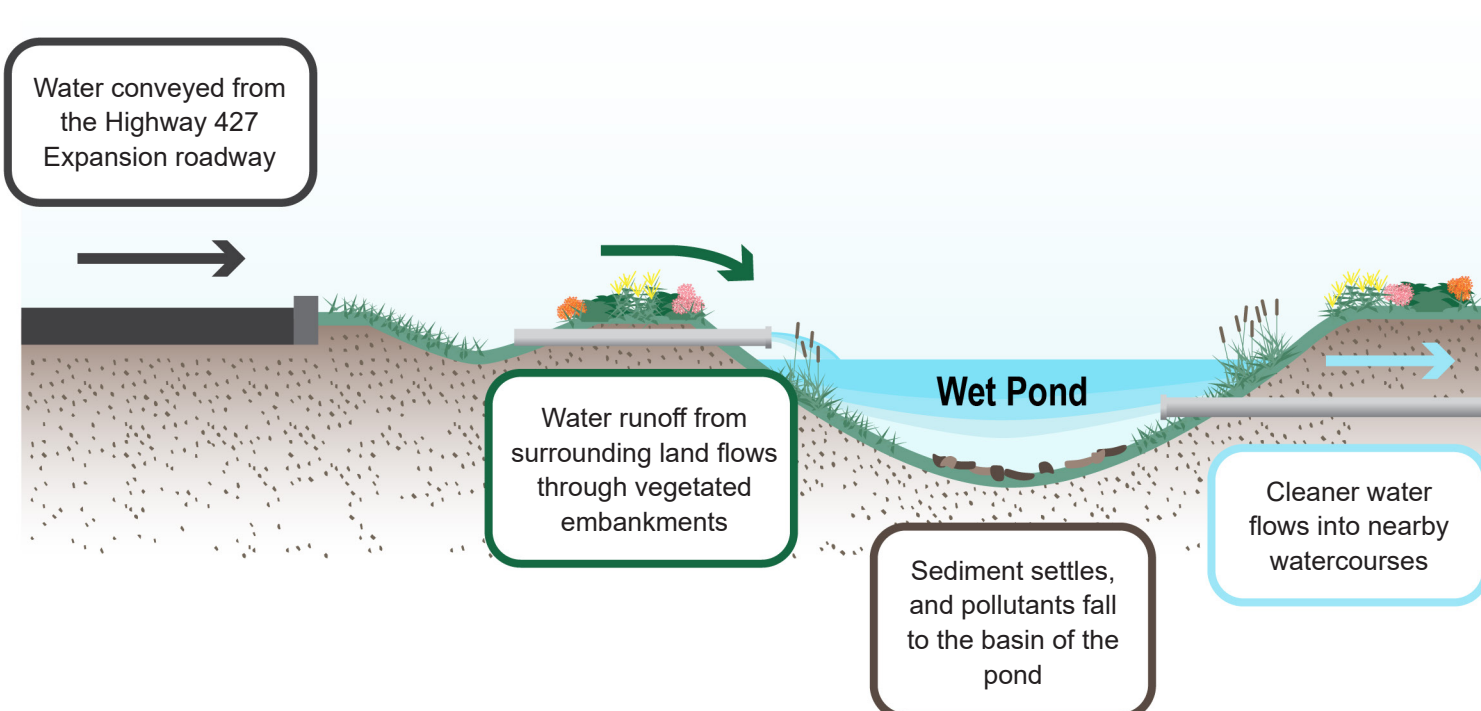
Upon completion of the Highway 427 Expansion project, when rain or precipitation hits the pavement of the highway it will be directed off the roadway and into catch basins or vegetated embankments throughout the project area. The water will run through the highway drainage system currently being installed along the expansion and into one of the dry or wet ponds LINK427 is constructing in the project area.



Vegetated embankment and ditch being finalized between Zenway Boulevard and Langstaff Road.

Wet Ponds

How a Wet Pond Works

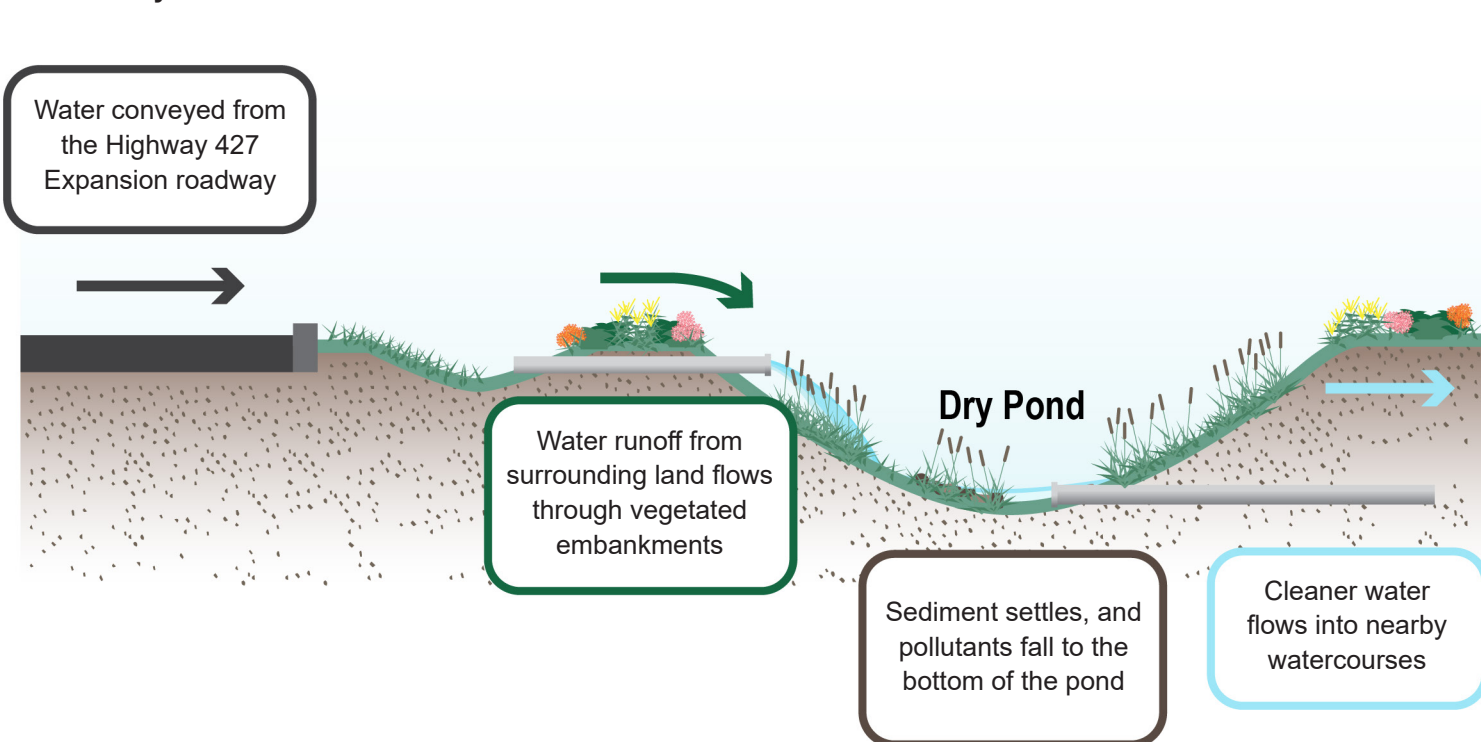


A wet pond being constructed and lined near the Highway 407 ETR interchange.

Wet pond construction on the project is planned near the Highway 407 ETR interchange. A wet pond is designed to temporarily hold stormwater in the retention pond, allowing the settling out of sediment. This mitigates any pollutants from entering the watercourse. The basin of the pond has a permanent pool of water at the bottom. It allows water to be retained in the pond, which in turn allows sediment from stormwater to settle on the bottom of the pond. Cleaner stormwater is then slowly released back into the surrounding environment. Wet ponds are periodically maintained to ensure that sediment does not build up in the basin of the pond.

Dry Ponds

How a Dry Pond Works



Dry ponds are designed to store stormwater runoff temporarily, releasing it into the surrounding environment at a quicker rate than wet ponds. Water quality and quantity control is provided with a treatment train approach as follows: Water runs through vegetated filter strips, grassed swales and linear ponds that control peak stormwater flows. The ponds are lined with vegetation on the bottom and hold water temporarily after rain events to allow pollutants to settle out of the water before its release. Dry ponds do not have a permanent pool of water in the basin of the pond. By not having standing water in the basin of the dry pond, the thermal impacts of stormwater runoff to the surrounding watercourses is reduced by preventing the heating of the water by the sun. It is instead held for a shorter time before passing through the facility into the local watercourses. This method has benefits for aquatic habitats located within the project area.



A dry pond being constructed along the Highway 427 Expansion south of Rutherford Road.

Once constructed, dry ponds are seeded with meadow and shallow marsh plants which form a portion of the treatment to assist with water quality, before it flows through the pond outlet and into the surrounding watercourses. These marsh plants will include species like Swamp Milkweed, Fox Sedge, and Spotted Joe Pyeweed.

Environmental Considerations

All of LINK427's stormwater management facilities are located outside of environmentally sensitive areas. As water flows from the roadway, past the embankment and into one of LINK427's stormwater management ponds, grass and vegetation is planted to filter out sediment along the way. While the intention of the stormwater management system is not to provide habitat, both the wet ponds and the dry ponds will be surrounded with pollinator plants to attract pollinators—such as bees and butterflies—to the area. Pollinator species to be planted include Common Milkweed, Early Goldenrod and Butterfly Weed.



Rainbow Creek at Langstaff Road.

What is the Highway 427 Expansion Project?

The Highway 427 Expansion project will extend the highway 6.6 km, from Highway 7 to Major Mackenzie Drive and widen the existing highway to 8 lanes between Link Finch Avenue and Highway 7.

Who is LINK427?

LINK427 is the consortium selected by the Ministry of Transportation (MTO) and Infrastructure Ontario (IO) to design, build, finance, and maintain the Highway 427 widening and extension.

Des renseignements sont disponibles en français en composant 1-888-595-3152.