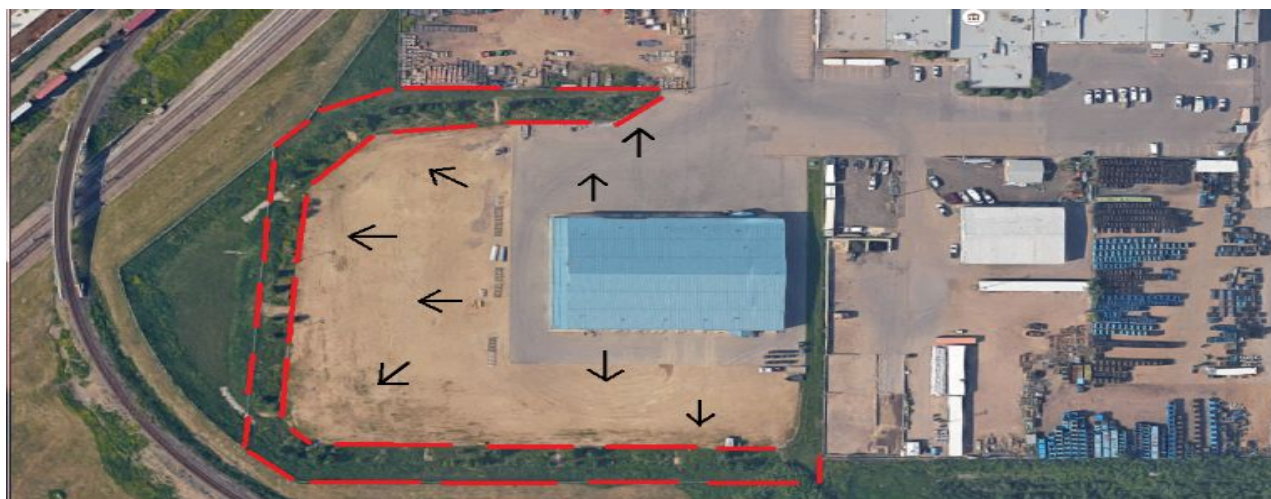


CASE STUDY: KENNEDALE YARD BIOSWALES

Location: 12810 58 Street

Construction Completed: 2010



Project Description

The bioswales, which are on City property, were installed as part of the construction of the adjacent office building and its gravel and asphalt parking lots. Staff used this opportunity to monitor how low impact development practices could manage stormwater runoff.

The bioswales were expected to reduce the volume of stormwater runoff, reduce stormwater runoff rate, and treat stormwater quality.

Facility Design

The bioswales contain a gravel layer with pipes that discharges water to an on-site dry pond. The swales contain coarse-grade biosolids and Edmonton's clay rich topsoil. The bioswales' soil mix was designed to support full-depth, healthy rooting by trees and shrubs selected for high evapotranspiration capability (water transferred from land to atmosphere by evaporation from the soil and by transpiration from plants).

Monitoring

City staff monitored the bioswales over several years and found that they drained water quickly and provided an excellent environment for plants.

As part of the City's commitment to maintaining and improving stormwater quality in the North Saskatchewan River basin, water quality testing was conducted. The results help staff understand any potential impact of using compost as part of the soil in the bioswales, since nutrients from the compost could end up in the stormwater runoff and enter the stormwater system, which flows to the river. Staff are planning to conduct further monitoring and analysis of the results to understand any long-term effects.



Photo showing contributing catchment area.