Alcona Flood Relief Project Backgrounder

On behalf of the Town of Innisfil and the Lake Simcoe Region Conservation Authority (LSRCA), Greenland International Consulting Ltd. completed a Conservation Authority Class Environmental Assessment (EA) to address the persistent flooding occurring in the South Alcona Region. Residents have expressed concerns about public safety as well as the rising economic burden to repair annual damages.

The objective of the Conservation Authority Class EA is to identify and evaluate engineering design options to address the chronic flooding issues which have persisted in the Belle Aire and Cedar Creek watersheds of South Alcona. Design options included green infrastructure to assist with water quality and infiltration. The preferred stormwater management solution would minimize impacts to both the natural and social environments and would be technically feasible and economically sensible.

The preferred stormwater management solution for the South Alcona area includes channel improvements in the residential section of the Belle Aire Creek as well as redirecting flows above the 2-year storm away from the Belle Aire Creek to the local Little Cedar Creek wetland. This diversion would be done with an engineer designed flow splitter. The diverted water would travel from the flow splitter to the wetland through a conveyance channel designed to increase sedimentation. A 1.2 metre berm would be built around the Little Cedar Creek wetland so that it would be able to handle the increase stormwater volume. The primary outlet for the wetland would remain the Little Cedar Creek. A weir control structure would be built at the outlet to maintain pre-development flows in the Little Cedar Creek. An emergency outlet would also be built approximately one kilometre southwest of the primary outlet to outlet any storm volume above the 100-year storm.

The implementation phase of the project (the phase we are now in) includes producing integrated engineering and landscape architecture plans with post-construction performance monitoring and operational / maintenance strategies. Technical support will also include providing a unique web-based flood reduction and design analytical tool with machine learning capabilities which has been used by Greenland on other projects across Ontario.

More details can be found online:

https://www.lsrca.on.ca/Pages/Alcona-Flood-Relief-Project.aspx or

https://www.alconandmp.com/