



Ngaaruawaahia Structure Plan

High Level Stormwater Mitigation Options

Water Quality

Stormwater treatment devices are specialized systems designed to manage and improve the quality of stormwater runoff in urban and industrial areas. They play a pivotal role in preventing pollutants, contaminants, and sediments from entering natural waterways, thus reducing the negative environmental impacts associated with stormwater discharge. These devices come in various forms and sizes, each tailored to address specific water quality concerns and local conditions.



Storage

Flood storage basins will be adopted as part of the structure plans as a crucial water management strategy designed to mitigate the impact of floods on communities and the environment. Flood storage basins provide temporary storage areas to contain excess rainwater and are typically located as part of parks or sport fields.



Waterway Enhancement

Waterway enhancement, in the context of water quality and stormwater mitigation, refers to a set of strategies and practices aimed at restoring or improving the natural features and functions of water bodies such as streams and wetlands. These enhancements are carried out to improve water quality, mitigate the impact of stormwater runoff, and promote healthier aquatic ecosystems. Waterway enhancement can involve ecosystem restoration, vegetation management, and engineered solutions designed to mimic or enhance natural hydrological processes.



Stormwater Conveyance

Stormwater conveyance of the structure plan is currently proposed as a large open channel or swale which may or may not include an underground pipe network. A swale is a sustainable and environmentally friendly landscaping feature designed to manage stormwater runoff and enhance water quality. Swales are shallow, vegetated channels or depressions constructed within urban or suburban areas to capture, filter, and transport rainwater or runoff from impervious surfaces, such as roads, parking lots, and rooftops. These natural drainage systems mimic the functions of streams and rivers, promoting water infiltration, pollutant removal, and controlled conveyance to prevent flooding













