



News

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The diligence of the City of Maitland to beautify and upgrade it's infrastructure has helped to establish the city as a remarkable place to live. The cozy neighborhood of custom homes and magnificent trees surrounding the Chippewa Trail outfall is typical of the outstanding life style found throughout Maitland.

City of Maitland Modernizes Chippewa Trail Outfall

The Nutrient Separating Baffle Box Treats the Entire Chippewa Flow

Prior to the installation of the Nutrient Separating Baffle Box the Chippewa outfall discharged untreated stormwater runoff directly into the conveyance between Lake of the Woods and Lake Minnehaha. Rather than just provide treatment for the outfall, the city decided to armor the conveyance in the area of the outfall to prevent erosion and stabilize the adjacent homes.



Nutrient Separating Baffle Box

Along with input and participation from the adjacent home owners, a plan was developed that utilizes a gabion system to armor the outfall area.

Before



After



The gabion system is a gravity stabilized wall consisting of rectangular PVC coated galvanized steel wire baskets filled with recycled crushed concrete stones. A geo-fabric barrier prevents sediment from washing through the stones.



The installation of the gabion system, Nutrient Separating Baffle Box, and all site work was performed by *A C Scott Construction & Paving Inc*, based out of Winter Park, FL.

After the water way was completely stabilized the Nutrient Separating Baffle Box was installed.



The inflow to the Nutrient Separating Baffle box is at street level through a throated and grated inlet. The potential flow rate through the inlet is approximately 20 cubic feet per second.

As the flow enters the treatment structure it drops into a large screen system which separates the leaves and litter from the water flow. Sedimentation drops through the screen and is captured in the lower settling chambers. The screen system and turbulence deflectors work together to create calm within the structure which allows for significant capture of fine sediment down to 18 microns without re-suspension.



Between rain events the captured foliage and litter is stored in a dry state to ensure the nutrient load is retained.

Captured debris in screen system

