

# Clearwater Lake Community Runoff Mini-Grant, 2018

## Table 2: Goals

**Goal 1: Complete 10 storm water capture / restoration projects.**

**Goal was partially met. 7 of the original storm water capture / restoration projects were completed. One new project was initiated by a group of landowners and 3 lakeshore residents requested evaluation.**

The original proposed 10 projects dropped to 7 after the grant funds were awarded. Three projects dropped off the original application due to various personal reasons. The projects publicity and education seminars were very successful and an 8<sup>th</sup> project was implemented at Park Estates Townhouses (referred to as Park Estates throughout the report).

The projects were the following:

### **Original Projects Completed**

- Clearwater Forest Camp
- Johnson
- Guth / Seliski
- Green
- Peterson
- Swanson
- Vandenberghe

### **Dropped Projects**

- Jones
- Thompson
- Jarnagin

### **New Project Completed**

- Park Estates Townhouses – landowners completed 200+ linear feet of willow wattle stabilization and planted 0 plants after attending an education seminar.

The final project cost was \$41,911.00. This included 636.75 in-kind labor hours and out of pocket cash contributions of \$9,175.00. The participant contribution was 52% of the project cost.

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Goal 2: Implement practices that will capture / filter / infiltrate runoff from projected sites, road surfaces and adjacent properties in the Clearwater Lake watershed. Practices will include upland buffers, slope checks / vegetated swales, rain gardens, soft armor / bio-engineering / willow wattle stabilization, wet meadow / emergent shoreline buffer plantings, addition of woody vegetation- shrubs / trees.

**Goal was met. All targeted practices to capture / filter /infiltrate runoff were implemented. The estimated area upslope of practices is 220,872 square feet.**

<b>Project Goal</b>	<b>Implemented</b>
Upland Buffer Planting	Approximately 2,615 upper meadow plants were installed
Slope Checks	3
Vegetated Swales	1
Rain Gardens	3 Rain Gardens were installed, and 1 was repaired, with Approximately 192 rain garden plants installed
Soft armor Willow Wattle Stabilization	768 feet of willow wattle was installed 12 feet of Coir Log installed
Bio engineering Soil Wraps and Bank Repair	2 - 30 foot sections and 1 - 20 foot of damaged lake bank were stabilized using soil wraps and erosion fabric.  1800 square feet of damaged bank was bio – engineered- riprap pushed down to toe of the bank, reshaped and stabilized with erosion blanket before planting.  684 square feet of damage bank had excessive rock. Six (6) 3-yard dump trucks of rock were removed and banks were bio-engineered and stabilized with erosion blanket before planting.
Wet meadow / emergent shoreline buffer plantings	Approximately 3,708 wetland/ emergent plants were installed
Addition of woody vegetation – shrubs and trees	180 shrubs and trees were planted; 175 Red Osier Dogwood and 5 Highbush Cranberry

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### **Goal 3: Educate shoreline landowners and camp attendees about practices that will reduce and treat runoff and protect Clearwater Lake water quality**

**Goal was exceeded. 2 Education seminars were held instead of the one planned, the Clearwater Forest Camp install was incorporated into the camp's ECO Week program, the boy scouts took an active role in one the Clearwater Forest areas and interest was initiated in outside parties.**

The original project included one education seminar targeting the general public as well as Clearwater Lake land owners. This education session:

- Initiated interest in land owners not involved with the project. Three (3) lakeshore owners requested evaluations of their sites to determine condition of the lake shore and possible stabilization and revegetation options.
- Resulted in the Park Estate Townhouse Association to implement a stabilization and planting project.

The Clearwater Forest Camp Project exceeded our training goals in several ways. The Camp added the project to it's ECO Week program. The focus of this program was ecology and water, so it was a perfect fit.

- One afternoon was dedicated to a 2<sup>nd</sup> education seminar targeting 41 elementary and middle school age children.
- The children also had hands on participation in the installation of willow wattle stabilization and plantings.
- An Eagle Scout candidate took responsibly for the Chickadee Day Camp portion of the Clearwater Forest Camp project. The install involved members of his high school troop.
- All age groups of children, along with staff, grandparents and board members were educated at ECO week on stabilization methods.

### **Goal 4: Restore and Enhance native plant communities, increase diversity and habitat.**

**Goal was met.**

A total of 6,695 plants were added to the Clearwater Lake plant community. This included a variety of emergent, wet meadow, upper meadow, rain garden plants, and shrubs.