**Stormwater 101**

**February 18, 2014**

 **6-9pm**

**Minnehaha Creek Watershed District offices**

**Session Title: Stormwater 101**

**Before this course begins:**

* Prior to the class, students are expected to investigate one news articles (print or digital) covering one of the following topics:
	+ Flooding event: where did it happen and what was the damage?
	+ Impacted water quality (ground water, lakes, streams, wetlands,…)
	+ Rain

**Brief Course Description**: The focus of this module will be on gaining a solid understanding of stormwater fundamentals. We will re-visit clean water as a natural resource and talk about the main challenges that are facing clean water. We will discuss how stormwater relates to clean water, why we have problems with stormwater and clean water, and how we can mediate these problems—We make the stormwater and we can manage it.

**Learning Goals and Assessments:**

1. **The big picture**: what are the issues facing our finite fresh water resources.

**Assignment #1:** *Essay*. In this assignment, the learners will write their own answers (Interpret in their own words) the question of: what are the issues facing our finite fresh water resources? The answer should incorporate some of their research articles and consider how they would summarize and prioritize these issues. (30-50 words and completed in 10 minutes)

1. **The problem**: How stormwater relates to clean water: volume (quantity), rate, and quality (pollutions). Mimicking natural hydrology, green hydrology, through low Impact development.

**Assignment #2:** This will be in a series of multiple choice questions utilizing [*Electronic ResponseCards*](http://www.turningtechnologies.com/response-solutions). The purpose of the exercise is to help students identify the three main problems caused by stormwater and the approaches needed to develop solutions-and know the main functions of each type of BMP, understand how to classify BMPs, and be able to explain and describe BMPs (10 minutes.)

1. **Solutions**: What is in our Stormwater Toolbox to help home owners minimize runoff associated problems.

**Assignment #3:** Short answers. Students will identify the main types of Stormwater tools, their functions, and how set of functions can resolve specific problem caused by stormwater runoff. The assignment would help the students understand on how to select BMPs, what BMPs would they recommend for a given problem, and evaluate and rate the BMPs.

1. **There are no silver bullets.** Always solutions, rarely just a solution: the concept of Stormwater Treatment Train, using a series of tools rather than just using one tool.
2. **Our home site**: a system within the system (watershed). Stormwater runoff is a watershed scale problem that can be managed at a small scale where the rain falls such as our home sites. (The learner at this stage will initiate the class keystone project.

**Assignment #4:** Draw a diagram illustrating the flow pattern of your home site, and show sources of runoff and propose:

• Identify potential issues, and

* + - How would you improve the site’s stormwater or drainage

 (10 minutes).

**Course requirements:**

* Attendance and Participation (Required, unless previously cleared with Program Manager)
* Expectations for Preparation:
	+ Prior to the class, students are expected to investigate three different news articles (print or digital) covering the following topics:
		- Flooding event: where did it happen and what was the damage?
		- Impacted water quality (ground water, lakes, streams, wetlands,…)
		- Rain
* Assignments & Assessments:
	+ **Four Assignments**

**To prepare for the next course-**

To prepare for the course on Water Policy and governance-

* Expectations for Preparation: Bring in a news article related to water policy and identify the policy issue in that article (current is best, but ok from the past 3 months)