

# Clark County NE 99th Street Green Infrastructure Project

July 2012

**Location:** NE 99th Street between NE 117th Avenue and NE 138th Court

**Project Type:** Stormwater runoff control from a roadway via infiltration trench, rain garden and pervious walks

**Budget:** \$4.6 million for complete Green Street construction, including stormwater features

**Funding:** Clark County Road Fund and American Recovery and Reinvestment Act 2009

## Why did Clark County complete this project?

The NE 99th Street Rain Garden project is strategically located at the headwaters of three main urban watersheds in Clark County: Salmon Creek (Curtin Creek), Burnt Bridge Creek (Upper BBC) and Lacamas Creek (China Ditch). All three watersheds have fair to poor water quality that affects the health of their watersheds, including fish habitat. Projects have been identified throughout these watersheds to decrease high water volumes to the tributaries, pollution loads and water temperatures as well as to increase opportunities to infiltrate water back into soils. One of the opportunities for Clark County to improve water quality includes improvements to stormwater runoff from public roads. When roads are scheduled for upgrades, projects such as NE 99th Street are candidates to improve their local watersheds with innovative stormwater management and low impact design techniques.

## What is the scope of the project?

The stormwater improvement project built a series of rain gardens along the north and south sides of NE 99th Street, along with an infiltration trench that is built into

*(continued on reverse side)*

**Rain Garden** \ˈrān • ˈgär-dən\ - A shallow, constructed depression that is planted with deep-rooted native plants and grasses. A rain garden receives runoff from hard surfaces such as roofs, sidewalks and roadways. Rain gardens slow down the rush of water from these hard surfaces, hold the water for a short period of time and allow it to naturally infiltrate into the ground. The plants and special soil mix traps pollutants prior to water soaking into the ground



the road bed. The native soils in this part of Clark County naturally have a good infiltration rate, meaning that water soaks into the ground well. For this reason, rain gardens can collect and treat polluted storm runoff, allowing it to soak into the ground during small storms. Larger storms may fill the gardens and then overflow to the infiltration trench, which will also allow the water to soak into the ground.

Adjacent to the gardens is a new sidewalk made of pervious concrete that allows water to run through the pavement and soak into the soil. These methods reduce the need for the water to be carried in a pipe to nearby creeks. Too much water flowing rapidly into streams and creeks causes erosion and degrades habitat for fish and wildlife.



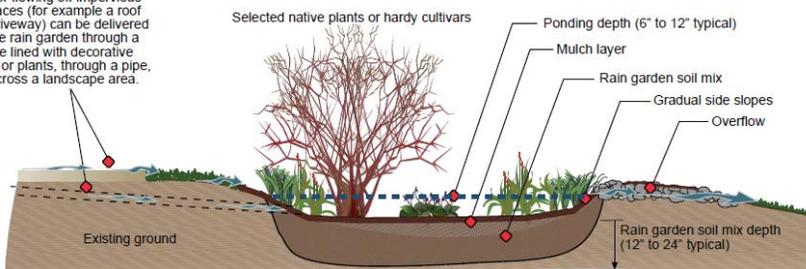
## Project facts:

The project was originally designed to have a traditional pipe and off-site detention system, but incorporating rain gardens into the project saved construction costs by treating stormwater near its source. Here are some key facts about the project:

- More than 2,800 lineal feet of rain gardens in 26 separate areas
- Rain gardens treat over four acres (4.4) of impervious surface
- Rain gardens use less than one acre of right of way (0.7)
- Eliminates need for a one (1.0) acre off-site stormwater facility
- Includes 3,400 feet of infiltration trench
- Rain gardens are nine (9') wide
- Rain gardens vary in length from 60' to 200'
- Pervious concrete sidewalk set back for safer pedestrian use



Water flowing off impervious surfaces (for example a roof or driveway) can be delivered to the rain garden through a swale lined with decorative rock or plants, through a pipe, or across a landscape area.



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