



**Clean Michigan Initiative  
Nonpoint Source Grant**  
1999-0026



City of Novi  
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## City of Novi Outfall And Stream Bank Stabilization

July 15<sup>th</sup> 2002 - June 30<sup>th</sup> 2004

The Novi CMI Outfall & Stream Bank Stabilization Project used traditional BMPs and modern, innovative storm water management and stream bank stabilization techniques to control erosion at 4 storm sewer outfalls, one stream bank erosion site, and a road-slope erosion site. Bioengineering practices were incorporated into most of the designs to establish permanent native vegetation that provides long-term soil stability and reduced maintenance requirements. A sediment chamber was used at the road site to collect and treat storm water, thereby reducing road slope erosion and pollutant loads to Bishop Creek, which is a tributary of the Middle Rouge River.



**Grant Amount: \$ 50,000**  
**Match Funds: \$ 89,378**

**Total Amount: \$ 139,378**

### Best Management Practices:

- 75 linear feet stream bank stabilization
- 4 stabilized outlets
- 1 sediment chamber



### Annual Load Reductions:

- 6 tons of sediment annually
- 6 lbs of phosphorous annually
- 11 lbs of nitrogen annually



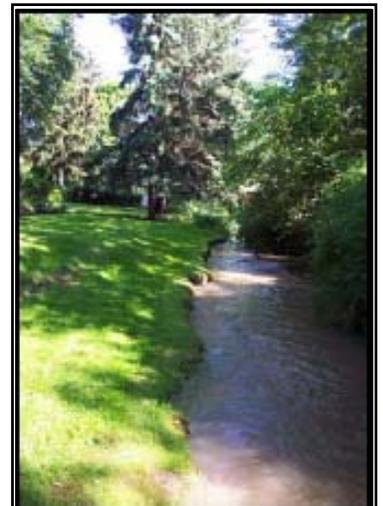
### I&E Activities:

• Public education and involvement activities were not part of the CMI grant contract. However, the City plans to use the project in its Phase II public education programming.



### Partners involved:

- The City conducted this project independently, providing all of the matching the local funds. Cooperation and coordination with local riparian landowners and homeowners associations was required.





**Site SS1 Before: Looking downstream from Upstream of Site (7-03).**



**Site SS1 After: Looking upstream from Downstream end of Site (5/04).**



**Site OS4 Before: View of outfall showing Undercutting and Erosion (7/03).**



**Site OS4 After: Similar view showing installed Riprap apron and slope revegetation (5/04).**



**Site OS2 Before: Looking south toward Road-side ditch and asphalt spillway (8/03).**



**Site OS2 After: Looking south, showing new curb, and sediment chamber that traps sediment.**