

CARNELIAN-MARINE- ST. CROIX WATERSHED DISTRICT

COST – SHARE PROGRAM
2011 ANNUAL REPORT
PREPARED BY:
WASHINGTON CONSERVATION DISTRICT



The Carnelian-Marine-St. Croix Watershed District continued to promote and implement its Cost-Share Program in 2011. The following report summarizes cost-share program activities completed in 2011.

2011 SUMMARY

In 2011, Administrator Jim Shaver and Natural Resource Specialist Amy Carolan completed 46 on-site visits with property owners living within the boundary of the Carnelian-Marine-St. Croix Watershed District. On-site visits were conducted when requested by a landowner. On-site visits typically consisted of walking the property with the landowner and evaluating the property for water quality related issues. If a water quality issue was identified, the landowner was presented with information on the District's Cost-Share Program and provided with a Cost-Share Application. If the landowner choose to complete the application, the Washington Conservation District prepared a cost-estimate and concept plan to be reviewed by the Cost-Share Subcommittee for funding consideration.

The Districts Cost-Share Subcommittee met four times during 2011 (May 2nd, June 6th, July 11th, and September 12th) to review completed Cost-Share Applications. The subcommittee reviewed seventeen Cost-Share Applications. Sixteen of the seventeen applications were recommended for funding. The subcommittee's recommendations were presented at the May, June, July and September board meetings. All sixteen of the projects recommended by the subcommittee received funding in 2011; a total of \$24,030.19 was allocated in 2011 for approved cost-share projects. **Figure 1** shows the locations of the cost-share projects approved in 2011.

One special project was also reviewed during 2011 – the Goose Lake Ravine Stabilization Project. The location of that project is also indicated in Figure 1.

By the end of December, 2011 four of the sixteen approved projects were complete, six were in-progress and six had not started and had decided to wait until 2012 to begin. Cost-share funding agreements extend for two years and the District plans to continue working with the remaining landowners in 2011 to assist with project completion.

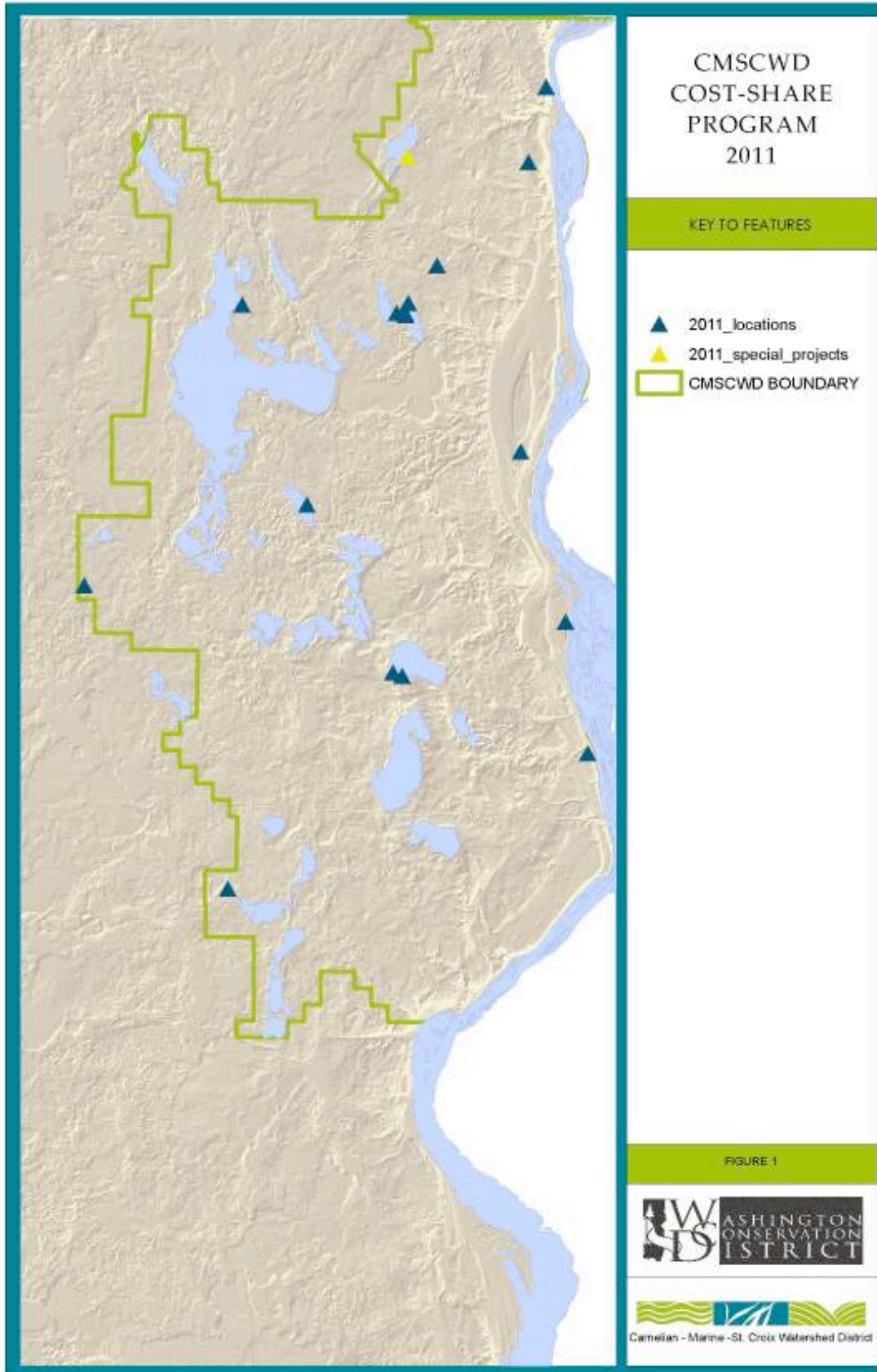
The Goose Lake Ravine project was in the design phase at the end of 2011. Construction of the ravine stabilization project is expected in 2012.

FUNDING APPROACH

In 2011 \$30,000.00 was allocated to the District's Cost-Share Program to be put towards residential cost-share projects, community cost-share projects and technical assistance for residents living within the District.

2011 focused on residential/individual cost-share projects. Typically, the cost-share subcommittee recommended that the board provide 50% cost-share for qualifying water quality improvement projects.

No applications for community cost-share projects were received in 2011.



BMP SUBCOMMITTEE

In 2010, the Carnelian Marine St. Croix Watershed District appointed three managers to serve on the Cost-Share Subcommittee for two years. Managers on the 2011 cost-share subcommittee included Mr. Tom Polasik, Mr. John Lennes, and Mr. Jason Husveth. District Administrator Jim Shaver and Amy Carolan of the Washington Conservation District provided technical support to the subcommittee. The cost-share subcommittee was responsible for reviewing and ranking project applications and providing the full board with project funding recommendations. The cost-share subcommittee met four times during 2011 to review and rank seventeen potential cost-share projects.

2011 PROJECT INFORMATION

The CMSCWD Board of Managers approved funding for sixteen projects in 2010. The following is a list of approved projects with a brief description of the project and its location.

2011 Approved Cost-Share Projects

- Mr. Dean Tharp – 14089 Oakland Road North, Stillwater, MN – This project includes the installation of a native buffer planting on Square Lake. The purpose of the buffer is to capture and filter runoff from the home and turf grass area before it enters Square Lake and to stabilize the lake shore. This project is complete and reimbursement has been dispersed.
- Ms. Mary Tilly – 14851 Riverside Ave North, Marine on St. Croix, MN – This project includes the installation of four raingardens and one grass pave area adjacent to the St. Croix River. The purpose of this project is to capture runoff from the home and driveway to provide treatment before it enters the St. Croix River. The grass pave area is meant to capture runoff from the river side of the home and prevent runoff from going over the edge of the bluff resulting in an erosion issue. This project is complete, but reimbursement request has not yet been submitted to the District.
- Ms. Mary Trost – 19700 Maxwill Avenue North, Marine on St. Croix, MN – This project includes the installation of a native buffer on Big Marine Lake. The cabin is owned by multiple related families, and all are working together to complete the project. The project was started in 2011 with the completion of stabilization work including hard armoring for tree protection and bio-log installation for shore protection. Final planting will be completed in the spring of 2012.
- Arcola Mills – 12909 Arcola Trail N, Stillwater, MN – This project includes stream stabilization along Arcola Creek, approximately 360 linear feet of streambank. Design and cost estimate is complete, but project is delayed until additional funding can be secured by Arcola Mills to meet match requirements.
- Mr. Carol Revoir – 10855 Manning Trail, Stillwater, MN – This project includes the

installation of 50' x 6' grassed waterway and rock outlet check to slow runoff and improve and prevent erosion issues currently observed on the site. Design of this project is complete; construction will begin in spring of 2012.

- Mr. Mike Clark – 14685 197th St., Marine on St. Croix, MN – This project includes the installation of a native buffer planting on Sand Lake. Mr. Clark has received his planting plan and is ready to start installation work in the spring of 2012.
- Ms. Florence Musenbrock – 16670 Norell Avenue North, Marine on St. Croix, MN – this project includes the installation of a 2,340 square foot buffer on Long Lake in May Township. The Washington Conservation District and the CMSCWD have applied for MCC time to plant the native buffer for Ms. Musenbrock in the spring of 2012. The application was approved and the project will be installed in 2012.
- Ms. Cindy Kramer – 19601 Orwell Avenue, Marine on St. Croix, MN – This project includes the installation of a 3,250 square foot buffer on Sand Lake. A concept and cost estimate have been provided to Ms. Kramer, however she has not responded to inquiries on project status.
- Ms. Kim Larson – 9830 152nd St., Hugo, MN – Installation of two manure stacking areas for a horse boarding facility in Hugo. Plans and cost estimate have been completed and provided to the homeowner. This project will begin in 2012.
- Ms. Gail Nygren – 19570 Orwell Ave, Marine on St. Croix, MN – This project includes the installation of a native shrub buffer planting on Hay Lake. Ms. Nygren has decided to hold off on starting this project until spring of 2012.
- Mr. Kevin Schleicher – 28289 Oxboro Ave. North, Marine on St. Croix, MN – This project includes the installation of a raingarden to capture roof runoff from his home. This project is complete, but reimbursement has not yet been requested by the landowner.
- Mr. Erchal Springer – 19543 Orwell Avenue North, Marine on St. Croix, MN – This project includes the installation of a 2,157 square foot native buffer on Sand Lake. Final plans and cost estimates have been delivered to the landowner, but the project will not begin until 2012.
- Ms. Diane Storti – 14111 Ozark Avenue North, Stillwater, MN – This project included the installation of a native swale to direct runoff from Ozark Trail to Square Lake. The project also included a native planting to capture runoff from the driveway on the property. This project is complete but reimbursement has not been requested.
- Marine Elementary – 550 Pine Street, Marine on St. Croix, MN – This project includes the installation of a two large raingardens and a native planting. The School District has asked that this project be put on hold until the school addresses some drainage

issues on the northeast side of the property. The School District hopes raingardens can be incorporated into their design in the near future.

- Ms. Susan Miles – 23319 St. Croix Trail North, Scandia, MN – This project includes the installation of three raingardens to capture runoff before it reaches the bluff and the St. Croix River. This project also includes the installation of native plants and trees in addition to the raingardens. The project is underway.
- Mr. John Dotolo – 16418 240th St. North, Scandia, MN - This project includes the installation of a grassed waterway in an area that drains to the St. Croix River. The waterway was constructed to correct an active erosion issue. This project is complete and reimbursement has been requested.

Table 1 outlines the total cost of each project; the total cost-share allocated to the project by the District and shows the water quality benefit achieved by completing each project.

TABLE 1

| Project Name | Total Estimated Cost | Approved Cost Share | Load Reduction: Phosphorous Lbs/year | Load Reduction: TSS Lbs/year | Load Reduction: Nitrogen Lbs/year |
|-------------------------|----------------------|---------------------|--|------------------------------------|---|
| 1. Tharp, Dean | 3,750.00 | 1,875.00 | 0.19 | 11.63 | 0.35 |
| 2. Tilly, Mary | 5,060.12 | 1,500.00 | 0.75 | 46.74 | 1.43 |
| 3. Trost, Mary | 2,433.28 | 1,050.00 | 0.06 | 3.82 | 0.12 |
| 4. Arcola Mills | 5,180.00 | 2,590.00 | 0.85 | 1,980.0 | n/a |
| 5. Revoir, Carol | 2,000.00 | 1,000.00 | 1.91 | 3,800.0 | n/a |
| 6. Clark, Mike | 5,128.00 | 1,500.00 | 0.3 | 12.98 | 0.4 |
| 7. Musenbrock, Florence | 2,258.00 | 1,000.00 | 0.29 | 12.53 | 0.38 |
| 8. Kramer, Cindy | 3,915.00 | 1,800.00 | 0.62 | 34.42 | 0.73 |
| 9. Larson, Kim | 1,213.00 | 600.00 | 2 | n/a | n/a |

| | | | | | |
|-----------------------|--------------------|--------------------|---------------------|------------------------|---------------------|
| 10. Schleicher, Kevin | 1,208.20 | 604.10 | 0.39 | 24.51 | 0.75 |
| 11. Nygren, Gail | 922.50 | 461.25 | 1.89 | 85.45 | 2.6 |
| 12. Springer, Erchal | 1,698.00 | 849.00 | .87 | 17.92 | 1.73 |
| 13. Storti, Diane | 1,7548.50 | 2,500.00 | 0.06 | 74.92 | 1.18 |
| 14. Marine Elementary | 6,801.68 | 3,000.84 | .76 | 80.15 | 1.26 |
| 15. Miles, Susan | 1,5471.28 | 2,500.00 | .74 | 24.16 | 0.39 |
| 16. Dotolo, John | 6,000.00 | 1,200.00 | 4.0 | n/a | n/a |
| TOTALS | \$82,591.32 | \$24,030.19 | 15.68 lbs/yr | 6,209.23 lbs/yr | 11.36 lbs/yr |

The photographs below are from 2011 project sites.



Mary Tilly Project – photograph shows the grass pave area adjacent to the river bluff.



Mary Tilly Project – 2 of the 4 raingardens excavated on Mary Till Property. Perforated pipe from home downspouts directs runoff to raingardens and away from the St. Croix River.



Mary Trost Property – Tara Kline takes a field measurement at the Mary Trost shoreline site in preparation for creating the group a final design. The shoreline planting will be installed in the spring of 2012. Erosion control features were installed in the fall of 2011.



Dotolo Waterway Project – Pete Young measures and inspects the recently installed Dotolo grassed waterway in Scandia. The project was completed in December of 2011.



Dotolo Waterway Project – Pete Young checks on the biologs put in place for temporary erosion control.

Dean Tharp Project – a wide buffer is planted adjacent to Square Lake.



SPECIAL PROJECTS – 2011

GOOSE LAKE RAVINE

In 2011 the CMSCWD was approached by a property owner on Goose Lake who had a large ravine dissecting his property, which drains to Goose Lake. The property owner expressed concern for the amount of sediment being transported from the top of the ravine to Goose Lake. The Washington Conservation District completed a preliminary investigation of the site and determined that the ravine drained approximately 18 acres of pastureland, roadway, and residential lots. In addition it was observed that a roadway culvert was outletting at the top of the ravine, causing further issues related to erosion. The WCD came up with a concept plan for the site that included options for piping runoff from the top of the ravine to base of the ravine where water would then flow through a vegetated swale for treatment. Another option included the installation of rock checks in the center of the ravine and revegetating the area to improve erosion and runoff issues.

The cost-share subcommittee and the full CMSCWD board decided to put the project design out for RFP. An RFP was issued on September 16th, 2011 to qualified firms interested in completing a ravine stabilization design. Five proposals were received from area firms. The CMSCWD moved to approve Emmons and Olivier Resources' proposal at their November 7th, 2011 board meeting. The CMSCWD is planning to begin construction during the 2012 growing season.

Photographs of the ravine site are shown below. The first photograph looks at spring runoff moving through the ravine.





Goose Lake Ravine - A concept plan put together by the Washington Conservation District for the Goose Lake Ravine Project. Ravine stabilization area is approximately 510 linear feet and includes 50 feet of drop from the top of the ravine to the bottom of the ravine.

2011 Blue Thumb Workshop

On April 12th, 2011, the CMSCWD hosted a Blue Thumb Clean Water Workshop (in partnership with the East Metro Water Resources Education Program EMWREP). The workshop educated area residents on native plants, lakeshore plantings and raingardens. Residents representing 20 properties in the district attended the workshop. All 20 property owners requested a free site visit by Amy Carolan and Jim Shaver. Over the growing season Amy and Jim visited with the property owners. The program generated a great deal of interest in the Districts' Cost Share Program. Six of 2011's sixteen approved projects were directly generated from this workshop.

2012 COST-SHARE PROGRAM

The District will continue to move forward with its cost-share program in 2012. The District has allocated \$70,000.00 to put towards project cost-share and technical assistance.

The cost-share subcommittee will meet in February of 2012 to strategize and set goals for the 2012 cost-share program.