



2021 Habitat Sites Report

Living Shoreline and Cuttle Creek

Report prepared for: City of Marysville
Projects: Living Shoreline and Cuttle Creek
Report prepared by: Friends of the St. Clair River
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Purpose: The Friends of the St. Clair River visits St. Clair River Area of Concern habitat restoration sites annually to measure success and to identify areas of improvement. The City of Marysville's sites include the Living Shoreline and Cuttle Creek. Each site is scored (**Good**, **Fair**, **Poor**) on five criteria: Vegetation, Habitat, Human Impact, Erosion, and Maintenance. This report includes our observations and recommendations from our site visit in October 2021.



Marysville – Living Shoreline project photo from 2016, courtesy M. Foose, EGLE



Marysville – Cuttle Creek restoration project photo from 2016, courtesy M. Foose, EGLE

LIVING SHORELINE

Project completion year: 2012

GLRI investment: \$1,500,000

Owner: City of Marysville

Overall score: **FAIR**

The shoreline just south of Chrysler Park Beach was enhanced by removing over 1,800 feet of failing steel seawall and replacing it with rock in addition to many species of native trees and wildflowers. These improvements provide habitat for a variety of fish and wildlife species. This project addresses the Loss of Fish and Wildlife Habitat beneficial use impairment to the St. Clair River.

Recommendations: The site would benefit from invasive species control. Mowed edges can be replaced by a low growing native ground cover, or mower deck could be raised or be mowed less frequently. Eroded areas should be backfilled and possibly armored with more rock.

Observations

VEGETATION – Score: **FAIR**

On the south end of the site native vegetation dominates. Native species present include asters, goldenrod, coneflower, Culver's Root, bee balm, sumac, penstemon, coreopsis, bluestem, jewelweed, boneset and milkweed. The native trees and shrubs along the walkway appear to be thriving and include cottonwood, dogwood, ash and willow. Up to approximately 25% of the area is covered with invasive Phragmites. Invasive species include *Phragmites*, Black Locust (*Robinia pseudoacacia*), teasel (*Dipsacus* sp.) and Purple Loosestrife (*Lythrum salicaria*).



Marysville Living Shoreline facing north



Marysville Living Shoreline facing south

HABITAT FEATURES AND WILDLIFE – Score: **GOOD**

Offshore shallow water habitat is visible now that water levels are down. Some bird activity was observed. Brown-lipped Snails were present on some vegetation. A diversity of migrating waterfowl are known to be present in large numbers here in the winter, and volunteer butterfly monitors find many species during their summer counts.

HUMAN USE IMPACTS – Score: GOOD

No visible use impacts other than a little debris.

EROSION/WATER LEVEL IMPACTS – Score: FAIR

The shoreline has been stabilized with additional rock to protect against high water and erosion. There is some erosion behind the seawall and rock face despite the additional rock that was added.

MAINTENANCE ISSUES – Score: POOR

The vegetation bordering the walkway has been mowed. Woody debris is caught in the rocks. It does not appear that invasive Phragmites or other invasive plant species are being controlled.

CUTTLE CREEK

Project completion year: 2016

GLRI investment: \$2,600,000

Owner: City of Marysville

Overall score: FAIR

Cuttle Creek, a tributary to the St. Clair River, was restored using the techniques of Natural Channel Design. The project goals that were accomplished include reconnecting the creek to the floodplain and surrounding wetland, restoring benthic habitat for aquatic insects with cobble and woody structure and restoring fish passage throughout the entire 3,000 linear foot project area. This project addresses both Loss of Fish and Wildlife Habitat and Degradation of Benthos beneficial use impairments.

Cuttle Creek is evaluated at each bridge that crosses the creek. There are 5 bridges, the first is at the eastern end and the fifth is at the western end.



Cuttle Creek bridge locations

Recommendations – Management of invasive *Phragmites* is needed, especially in the areas where it is starting to encroach into the stream. While cutting back shrubbery around the bridges some invasive species, like multiflora rose, could be removed at the same time.

Observations



Cuttle Creek @ bridge 1, east view

VEGETATION – Score: **FAIR**

At the first bridge the bank edging the creek is steep in this area. Invasive *Phragmites* is encroaching to the edge of the creek. Native species Staghorn Sumac (*Rhus typhina*) and grapevine are proliferating near the bridge. Trees dominate this area including cottonwood, elm, boxelder and pear with invasive Black Locust (*Robinia pseudoacacia*). Native Virginia Creeper (*Parthenocissus quinquefolia*) is present on most trees as well as wild grape vine (*Vitis* sp.). At the second bridge on the south side

native plants dominate including coneflower, asters, thistle, goldenrod, bluestem, Indian Grass (*Sorghastrum nutans*). Invasive plants in this area include invasive *Phragmites*, Canada Thistle (*Cirsium arvense*), and teasel (*Dipsacus* sp.). On the north side invasive *Phragmites* has encroached to the creek's edge with some native plants present.

At the third bridge species present include button bush and swamp white oak, elderberry and other mature trees and shrubs. Invasive species present include multiflora rose and burning bush with phragmites growing under the bridge. At the fourth bridge to the east invasive *Phragmites* has encroached to the edge of the creek and overarching the creek in some areas. Pond weed was observed in the creek. On the west side near the bridge were cattails, grapevines and dogwood. Further west phragmites have encroached to the edge of the creek. Invasive narrow leaf cattail was also present. At the fifth bridge to the east phragmites dominates almost to the fourth bridge. Native plants include dogwood, willows with some aster, cattails and button bush. Invasive species include multiflora rose and purple loosestrife with phragmites dominating further west.

HABITAT FEATURES AND WILDLIFE – Score: **FAIR**

At the first bridge there is a steady flow of clear water with some riffle. This part of the creek is shaded by mature trees. At the second bridge the water is clear and flowing with an active riffle area west of the bridge and a less active flow to the east. To the west of the bridge a high-water mark on the adjacent vegetation shows that the water level has dropped since summer. The creek bottom is stone with little sedimentation. At the third bridge there are large boulders in the creek, a rocky bottom with a riffle area. There is some woody debris across the creek. A red tail hawk was seen perched in a tree. At the fourth bridge the stream is narrow with vegetation encroaching on the east side and a small riffle area. On the west side the flow is slower with more sediment and



Cuttle Creek @ bridge 2, west view

leaf litter on the bottom. At the fifth bridge the water flow is slower with woody debris and leaf litter on the bottom. Sedimentation is occurring in the area to the west. To the east there are large rocks and predominately rocky bottom. A survey of aquatic invertebrates was conducted by Friends of the St. Clair River in September. As a result of the survey a Water Quality Rating was calculated to be 7.31 (fairly poor) on a scale of 1 (excellent) to 10 (very poor). The “fairly poor” rating was due to lack of abundance, only 50 invertebrates found, and half of them were worms and leeches which are indicative of poor water quality.

The other half of the invertebrates found included caddisfly, mayfly, beetles, water striders and water boatman (Hemiptera). A volunteer butterfly monitor has found at least eight species of butterflies during summer counts.

HUMAN USE IMPACTS – Score: FAIR

There is some debris present around the bridges and there are several golf balls in the stream.

EROSION/HIGH WATER IMPACTS – Score: GOOD

Water levels appear to be lower at several of the sites with a muddy high-water mark on the adjacent vegetation. Site has no signs of bank erosion.

MAINTENANCE ISSUES – Score: FAIR

There does not appear to be any management of invasive species. Interpretive signs at the second and fifth bridges are in good condition but should be cleaned. At the third and fourth bridges some shrubbery has been cut on the adjacent hillside and a lot of woody debris remains.



Cuttle Creek @ bridge 3, east view



Cuttle Creek @ bridge 4, east view