



Takshanuk Watershed Council

HC 60 Box 2008
Haines, Alaska 99827
(907) 766-3542
takshanuk@gmail.com
www.takshanuk.org

SLOWING IT DOWN – WETLAND CREATION FOR SAWMILL CREEK



Final Report

Prepared for:

Alaska Department of Environmental Conservation

Alaska Clean Water Actions Program

Grant: ACWA-17-03

"This project has been funded wholly or in part by the United States EPA under assistance agreement number (BG-00J84602) to the Department of Environmental Conservation through the Alaska Clean Water Actions (ACWA) program. The contents of this document do not necessarily reflect the views and policies of the EPA, nor does the EPA endorse trade names or recommend the use of commercial product mentioned in this document."

Executive Summary

The Takshanuk Watershed Council and Alaska Department of Environmental Conservation partnered for the implementation of a stormwater retention wetland and community education on green infrastructure in FY17. The stormwater retention wetland was installed at the corner of 6th and Dalton St. in Haines. The goal of the constructed wetland is to treat the sediment-laden water that is collected and conveyed in ditches draining Dalton St. Prior to these actions the sediment-laden water would flow relatively fast and directly into a tributary of Sawmill Creek. Through the construction of the sediment retention wetland this water will now be allowed to slow down and for sediment and other pollutants to settle out. In addition to the construction objectives of this project, the TWC also developed an interpretive sign and hosted a community rain garden and bioswale tour that highlighted 5 green infrastructure projects within the Haines townsite.

Introduction

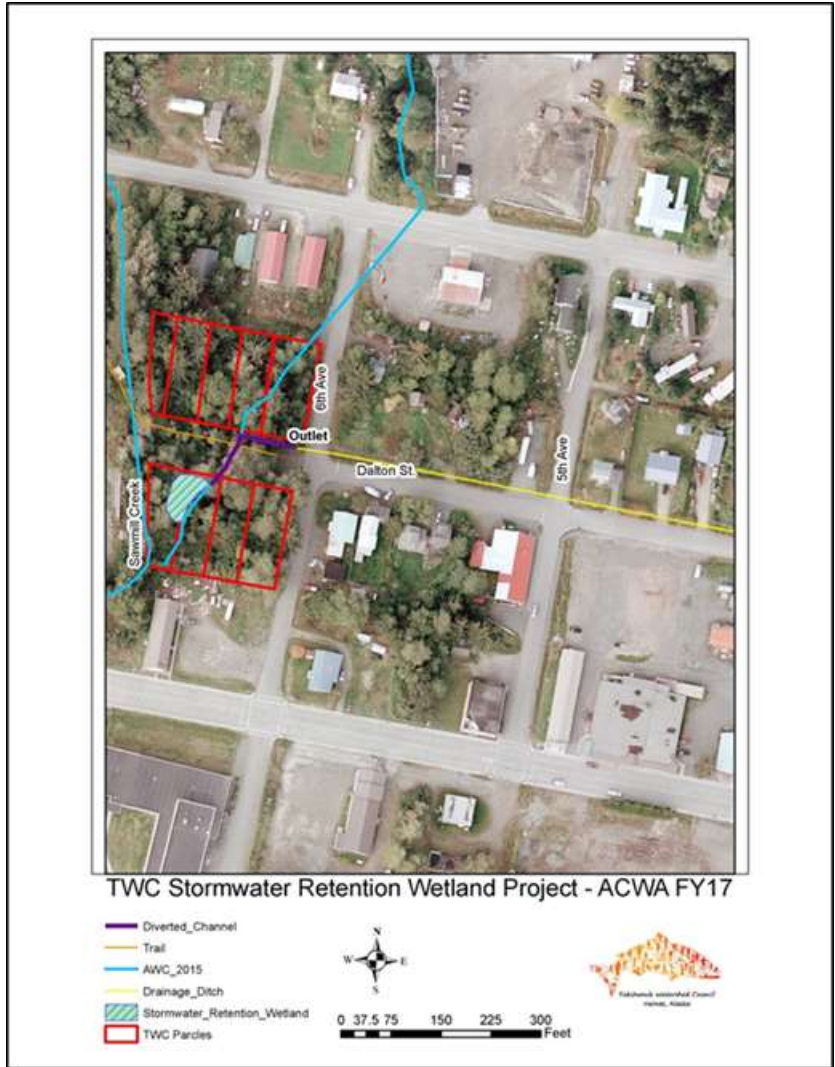
During FY17 the Takshanuk Watershed Council (TWC) and the Alaska Department of Environmental Conservation (ADEC) partnered to implement stormwater best management practices to protect the water quality of Sawmill Creek and to educate the public on the advantages of low impact development. This was accomplished through the instillation of a stormwater retention wetland at the TWC's property at the corner of 6th and Dalton St. that will collect sediment-laden runoff from the ditches running along Dalton St. Additionally, to educate the public on the benefits of low impact development the TWC designed and installed an interpretive sign, engage community and student volunteers in assisting in planting the site and host a community rain garden and bioswale tour.

As an urban anadromous stream, Sawmill Creek in Haines, AK, has long been impacted by surrounding development and urbanization. The environmental benefit of the implementation of these objectives will be the reduction of sediment and other pollutant inputs to Sawmill Creek, which were concerns noted in the 2007 Sawmill Creek Water Quality Monitoring Strategy report prepared by TWC through a grant from ACWA.

Implementation

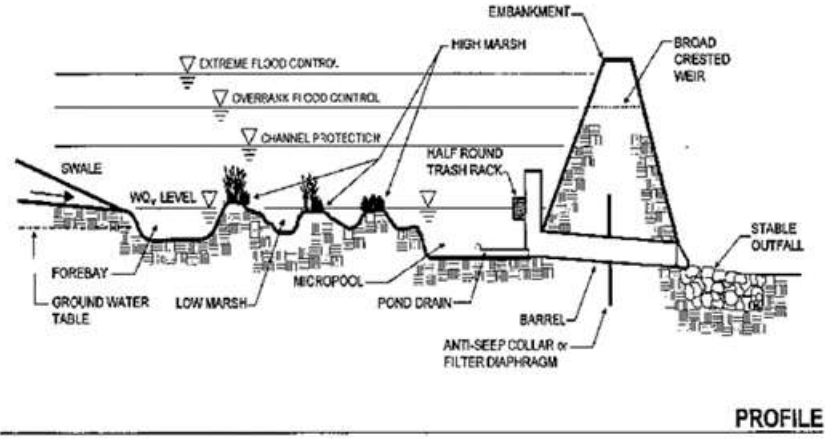
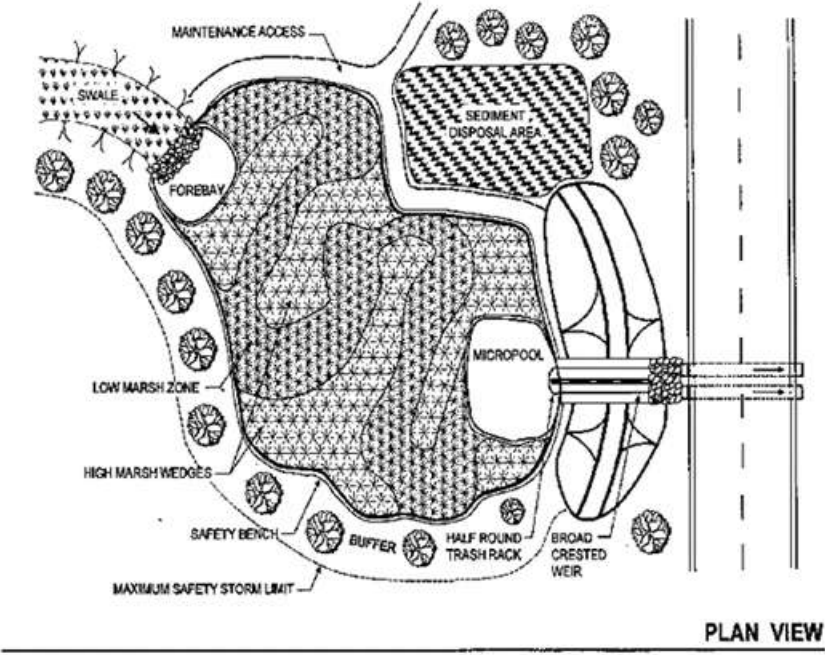
Wetland Creation:

The stormwater retention wetland was created in the spring of 2017. Alaska Department of Fish & Game and the Haines Borough Public Facilities staff provided insight on the wetland design elements and location. Although alternatives were proposed the final placement and scope of work was consistent with the design in the Wetland Creation Plan (See Map below). The final construction activities consisted of clearing debris and litter from the fore bay/outlet of the ditch culvert, placing material along the berm to separate the ditch flow from the actual Sawmill Creek tributary, clearing debris from the inlet & outlet of the culvert under the trail, constructing the sediment retention wetland, and final grading and planting of the site.



Project Map.

The plan shown below was used to direct construction crews. The final constructed wetland includes the elements shown in the plan (forebay, micro pool, mixed elevation retention), however on a much simpler scale given the approximate 200ft² size of the created wetland. Vegetation was transplanted from nearby wetland areas. The area surrounding the created wetland is dense with dogwood, ferns, willow, alder, and cottonwood and will provide great shading over the constructed wetland as well as a seed bank for revegetation.



Wetland Creation Design Concept



TWC Staff clearing debris from the drainage ditch flowing into the constructed wetland. Photo: TWC Staff



The Drainage ditch outlet after debris was removed. Photo: TWC Staff



Created wetland with fern plantings. Photo: TWC Staff

Community Education:

The TWC contracted Haines a local company, Kicking Horse Design Studios for design of the interpretive sign. The sign will be placed at the Parade Ground bioswale sites (Bioswales funded through ACWA grant 17-04). Sign design in Appendix A.

Following the completion of the stormwater retention wetland, community members were invited to a Rain Garden and Bioswale tour on June 20th (flyer in Appendix B). Tour stops included the CIA rain garden, Delta Western bioswale, 6th & Dalton bioswale and stormwater retention wetland, and the Parade Grounds bioswales. TWC aims to host more community tours of the green infrastructure projects around the Haines area in the future.



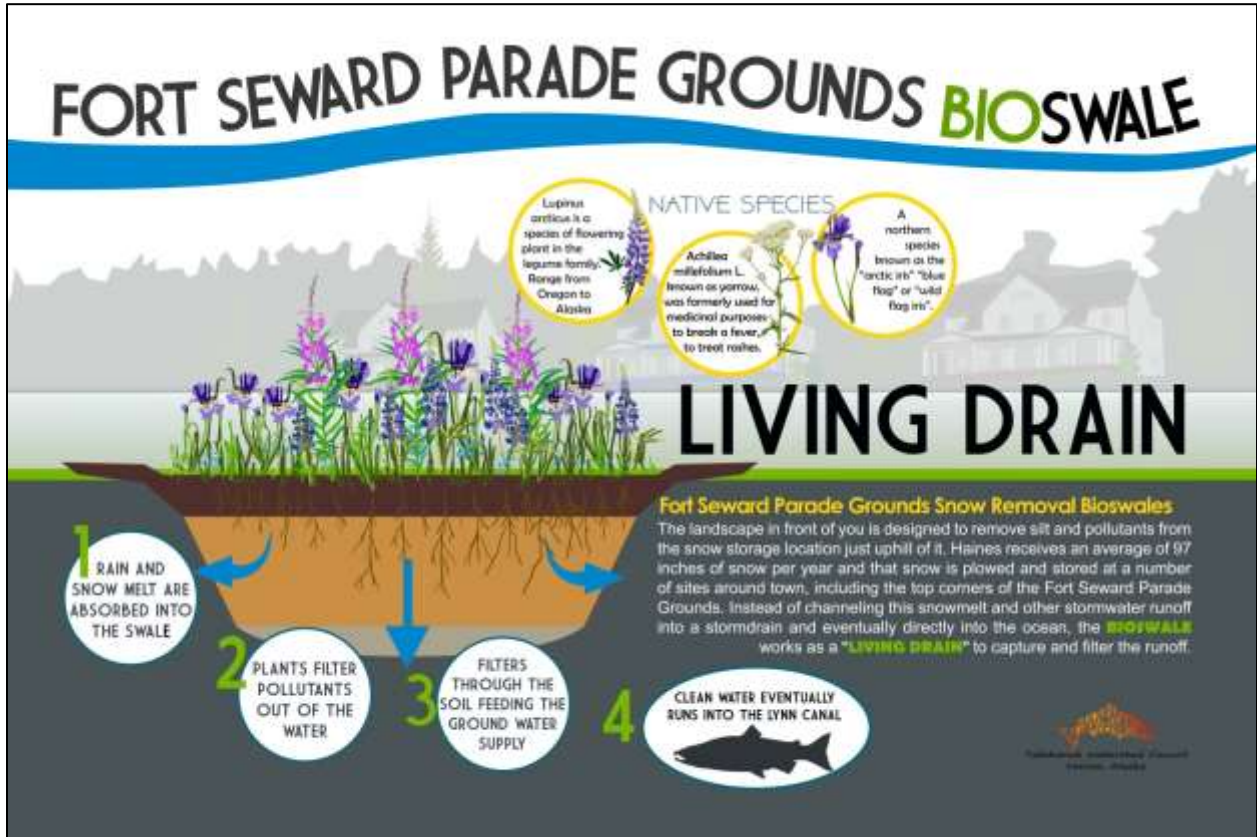
Rain Garden & Bioswale tour participants learning about the Delta Western bioswale. Photo: TWC staff



Iris in bloom at the Delta Western bioswale. Photo: TWC staff

Conclusion

The construction of the stormwater retention wetland and the implementation of the education objectives demonstrate the value of green infrastructure to treat contaminated stormwater runoff from a variety of sources. Through the continuation of these and other green infrastructure projects and community outreach the TWC aims to increase community understanding of green infrastructure and low impact development and ensure that these techniques are continually implemented across our community to improve our water quality.



HAINES RAIN GARDEN & BIOSWALE TOUR

June 20, 2017
Meet @ CIA office at 5pm

Tour Stops:

- CIA Rain Garden
- 6th & Dalton
stormwater
retention wetland
- Delta Western
Bioswale
- Fort Seward
Bioswales



Takshanuk Watershed Council
www.takshanuk.org