Forested Wetlands Restoration Project in Tacoma, WA

Victoria Chavez, Gabrielle Kretschmer, Chloe Nelson, Amber Smith, Nathaniel Torres-Figueroa, Emellia Treece, Tia Tumaliuan. Cynthia Updegrave

Introduction

University of Washington students from the Tacoma and Seattle campus, worked together on the restoration of over 700sq. ft. (0.18 acres) of land at Titlow Park located in Tacoma, WA. The site was divided into seven polygons, with each having their own requirements which were delineated based upon differences in vegetation structure, surface hydrology, soil texture and type, and their natural flow within the heavily trafficked walking trail. This work will help increase native species abundance and biodiversity, prevent future erosion, limit invasive species, as well as enhancing community involvement.

Titlow Park Map provided by Tacoma Metro Parks

Project Design

- The Site Assessment was the first step to evaluate the work that would need to be done and how it would be achieved. This was done by looking at the hydrology, soil, vegetation, habitat and wildlife, and disturbances on site.
- A planting plan determined which plants would be used on site that could meet their specific needs of water availability, lighting, and soil needs, to ensure their longevity. while still using native species to Washington. A total of 280 plants were installed on site.
- Site work with the help of park employees, and volunteers contributed work hours to invasive removal, mulching, and planting of native species.
- Creating a Stewardship plan for future management of the site.

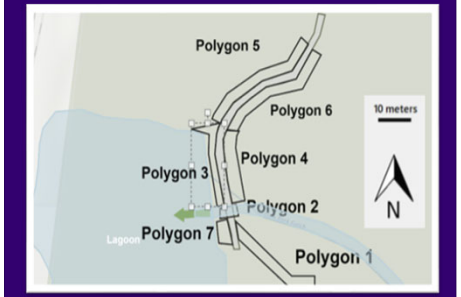
After conducting a site assessment 4 functional requirements were decided upon.

Functional Requirement 1: Enhancement and Management of Plant Species

Functional Requirement 2: Enhance Aesthetic of the Trail

Functional Requirement 3: Enhancement and Care of Lagoon and Stream

Functional Requirement 4: Enhance Community Involvement



Topographical Map of the Restoration Site

PROJECT: Titlow Beach
University of Washington-Restoration Ecology Network
Display Week:
*Note that ever square filled in with a color represents roughly 5 hours of work time

TASK	Task Name	January	February	March	April	May	June
Phase 1	January						
Task 1	Discussing and Planning Volunteer days						
Task 2	Develop Planting Plan						
Task 3	Site Preperations						
Task 4	Discussing/Making Plant orders						
Task 5	Develop detailed draft work Plan						
Phase 2	February						
Task 1	Community Building/Awareness						
Task 2	Approval of Final work plan						
Task 3	Material ordering / Gathering						
Task 4	Begin Plant instillation/removal						
Phase 3	March						
Task 1	Stewardship Plan Development						
Task 2	As-Built Report Development						
Task 3	Continuing plant instillation and removal						
Task 4	Site Activities/Community involvement						
Phase 4	April						
Task 1	Site Activities/Community involvement						
Task 2	Community Partner Document updates						
Task 5	Educational Outreach						
Phase 5	May						
Task 1	Completion of Site work						
Task 2	Stewardship Plan finalized						
Task 3	As-Built Report finalized						
Task 4	Begine Poster						
Phase 6	June						
Task 1	Poster Finalized						

Gantt chart of Project schedule.

Pictures of before and after restoration

Accomplishments

- 30 yd^3 invasive species removal
- 45 yd^3 mulch applied
- 50m straw wattle applied
- 280+ native species planted
- 50+ community volunteers
- 1,300+ hours on site

Short-term Outcomes:

- Elimination or reduction of Himalayan Blackberry and Bittersweet nightshade, will be significantly decreased or eliminated from their polygons.
- The site restored with native species.
- The critical salmon habitat within Polygon 4 will also have some ecological function repair, hopefully providing an appropriate habitat to support salmon.
- Continued maintenance from the Community Partner and salmon conservationists.

Long-term outcomes:

- The species planted will have created an established intermediate community within the riparian area.
- The ecological community will support more wildlife and prevent invasive species from re-establishing.
- In 100-200 years, the site may begin transitioning to become a climax community. This may include more trees, such as Red Alder and Douglas Fir that are already growing throughout the site.

Conclusion

Ecological restoration is essential in various areas as it helps with the recovery of an ecosystem that has been degraded, damaged, or destroyed due to human activities. With a complete restoration one would hope to see an expedited recovery in biodiversity, wildlife, and the overall ecosystem. Though it may take any years to see progress from restoration, regular management and documentation will help further the success of sites such as Titlow Park.

Acknowledgments

Cynthia Updegrave
Yohan Min
Jim Fridley
Metro Parks Tacoma
Rashell Wilcox
Aubin Duncun
Amy Boucher
Volunteers

UW Restoration Ecology Network