

# Protecting the Future of Pacific Salmon: Wetland and Forest Restoration in A Popular Puget Lowland Park

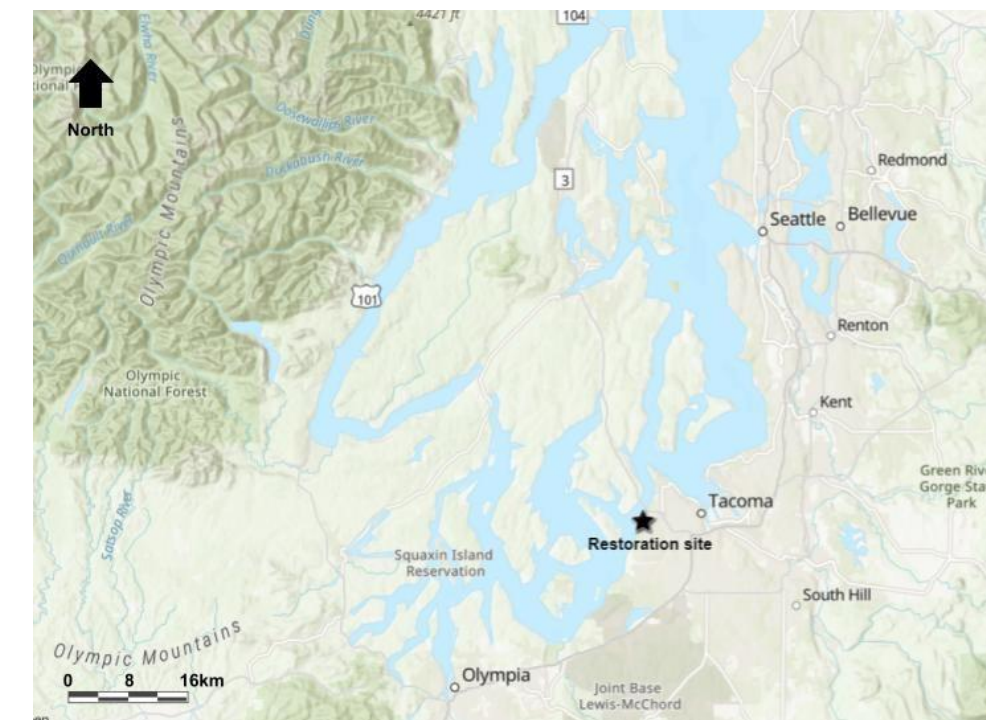


Emellia Treece<sup>1</sup>, Victoria Chavez<sup>1</sup>, Gabrielle Kretschmer<sup>2</sup>, Chloe Nelson<sup>1</sup>, Amber Smith<sup>1</sup>, Nathaniel Torres-Figueroa<sup>1</sup>, Tia Tumaliuan<sup>2</sup>, Cynthia Updegrave<sup>1,2</sup>  
<sup>1</sup>University of Washington Tacoma, <sup>2</sup>University of Washington Seattle

## Introduction

To support salmon-rearing habitat restoration efforts by Metro Parks Tacoma, seven students from the UW Restoration Ecology Network restored wetland, riparian, and forest ecosystems in Titlow Park in Tacoma, WA. Students focused on functional requirements to support the Titlow Park Lagoon, including:

- Enhance and manage plant species
- Enhance and care for the lagoon and stream
- Enhance community involvement



Left: Map of Titlow Park in Tacoma, WA (Metro Parks Tacoma, 2010)  
Right: Titlow Park within the Puget Sound lowlands (Esri, c2022)

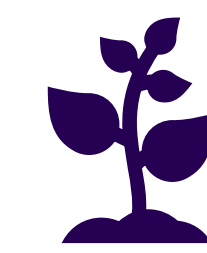
## Project Schedule and Design

- **Autumn 2021**
  - Assessed site and met with community partners from Metro Parks Tacoma
- **Winter 2022**
  - Developed planting and work plans
  - Removed invasive species
  - Installed straw wattle
  - Installed mulch
  - Hosted volunteer work parties
- **Spring 2022**
  - Installed native plants
  - Hosted volunteer work parties
  - Developed stewardship plan

## Restoration Accomplishments

This year, 0.18 acres of Titlow Park were restored and improved in multiple ways:

- The removal of invasive Bittersweet Nightshade and Himalayan Blackberry reconnected a wetland and stream
- The installation of straw wattle reduced erosion and pollution of critical waterways
- Native wetland and forest plant communities were installed
- Mulch was installed to discourage future invasive species growth
- Community members were educated about local ecosystems and species



**25m<sup>2</sup> of invasive plants removed**



**50 meters of straw wattle installed**



**34m<sup>3</sup> of mulch installed**



**280 native plants installed**

Before



After



Before and after: Himalayan Blackberry removal and mulch and native plant installation in a prominent forested and riparian zone at Titlow Park.



Before and after: Bittersweet Nightshade removal and straw wattle and native plant installation in a stream and wetland at Titlow Park.

## Conclusion

- This restoration will have direct implications for ecosystems within Titlow Park and the Puget Sound Lowlands.
- Further restoration will be required to successfully restore salmon habitat in the Titlow Park Lagoon.
- Restoration can secure the future of Pacific Salmon in the Puget Sound Lowlands.



A trail leading park visitors through the completed 2022 restoration site at Titlow Park. The lagoon is located to the left and critical wetland is to the right.

## Acknowledgments

We would like to offer our sincerest thanks to:

- Cynthia Updegrave, Jim Fridley, and Yohan Min at the UW-Restoration Ecology Network
- Amy Boucher, Aubin Duncan, and Rashell Wilcox at the Metro Parks Tacoma CHIP-in! program
- Ally Kruper at the UW SER Nursery
- Community volunteers



## References

Esri. c2022. Topographic [base map]. World Topographic Map. [Accessed 2022 Jan 30]. <https://www.arcgis.com/home/item.html?id=d5e02a0c1f2b4ec399823fdd3c2fdebd>

Metro Parks Tacoma, SiteWorkshop. 2010. Master Plan for Titlow Park. Tacoma (WA): Metro Parks Tacoma. [https://www.metroparkstacoma.org/wp-content/uploads/2019/05/MasterPlan\\_TitlowPark\\_2010.pdf](https://www.metroparkstacoma.org/wp-content/uploads/2019/05/MasterPlan_TitlowPark_2010.pdf)