

Ecological Restoration Project Planning in the Union Bay Natural Area;

A synthesis of restoration techniques for varying site goals

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Background

Ecological restoration is a young and rapidly growing field that has evolved from its inception of project goals solely focused on returning areas to historic conditions, to include projects with an array of intended outcomes focusing on ecosystem functions, species protection and ecosystem resilience. The Union Bay Natural Area is a 73.5 acre parcel of land that formerly served as the city's largest landfill. Active ecological restoration over the last few decades has resulted in a mix of habitat types, but there are still many areas of degradation dominated by invasive species and impaired in structure and function compared to native habitats.

Objective

The objective of my project was to develop restoration project plans for 1.6 acres of degraded habitat within the Union Bay Natural Area that differ in their methods according to their specific goal.

Goals include:

- Bioremediation of contaminated soils
- Enhancing & expanding wetland habitat
- Creating year-round pollinator habitat

Approach & Deliverables

1. Assess project site:
 - Species inventory
 - Soil testing
 - Topography/Hydrology
 - Surrounding landscape
2. Determine objectives, actions, planting palettes, site design, and project timeline under each goal
3. Outline best management practices for invasive removal, plant installation, maintenance and monitoring
4. Compare project plan benefits and drawbacks

Deliverables include three separate restoration project plans and templates for site assessments and future project planning.


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