

Restoration Design

Lab/Studio Design Assignment 5

Assigned 16 & 17 May 2007

Due 23 & 24 May 2007

Overview

The Union Bay Natural Area (UBNA) is a former landfill which, depending on what areas are included, encompasses about 50 or 60 acres. If you include the shoreline from where the University Slough comes under 45th Ave NE, all the way to the ship canal, the area increases to almost 100 acres. Most of this area is on fill of one kind or another. Some of it is atop a sanitary landfill that was closed and leveled in 1968. The site was formerly known as the Montlake Dump, or more primly as the Montlake Landfill. Generations of families from the neighborhood used the area to dump trash and walk their dogs. Those who promoted the filling of this bay of Lake Washington in order to create "usable" land were always disappointed, because the soil under the site is a mixture of compressible clays and peat. Buildings placed upon it settle unevenly. Things placed on pilings to firmer material below the clay and peat experience the sinking away of the upper layers. Both a baseball clubhouse and part of a golf driving range had to be abandoned after being built in the area and experiencing cracked foundations.

The Union Bay Natural Area has evolved from an initial idea that was introduced by a University Committee in 1987. The Committee was appointed by the then President of the University because clearing work for a proposed woody plant arboretum on the site had been done during bird nesting season and, as a result, the Audubon Society descended upon the workers and the President. At that time, the Natural Area was very simply an abandoned landfill. There were a couple of physics outbuildings on the site that housed electronic equipment; blackberries were beginning to spread; and the "dime lot", now parking lot E5, contained light standards sticking up on concrete pilings that showed as much as four feet of subsidence. A graduate student had done a PhD project on the effect of methane gas on plant communities around the two large gas vents at either side of the parking lot. The Athletic Department wanted to use the area as a site for playfields (soccer, baseball) and the University was considering using the site for disposal of excavated materials from the construction of the Health Sciences Complex. Unfortunately, when the landfill operation had been closed in 1968, the site was sown with pasture grass seeds, all non-native, mostly grasses, and very competitive. This fact would make restoration to a native ecosystem eternally difficult.

Your Assignment:

We have provided you with the initial letter from the Hunn Committee. Eugene Hunn is still a professor in Anthropology and at the Burke Museum, so you can ask him about it if you can find him. We have also provided some other resources, such as a link to the "Pink Report", which is officially known as the "Management Plan for the Union Bay Shoreline and Natural Areas owned by the University of Washington". Sequential historical aerial photos are available. You will also have access to the Draft and Final EIS's for the Center for Urban Horticulture.

For this assignment, assume that it is now 1990. You have just arrived in Seattle and have been given the job of restoring the Union Bay Natural Area (back then it was called the Ecological Research Natural Area: ERNA). The Center for Urban Horticulture is just a few years old and its Director is busy raising funds and does not want to be bothered with the details of the project. You are given the Hunn Report and told to "figure something out."

You should first carefully read the Hunn Report. Interpret what is said and **identify every functional requirement** that the committee is directing you to supply. This does not include things like "remove the invasives"; that is an action that would be part of a Design Element. If the Committee says that they want an environment in which no more than 20% of the woody species are non-native (an FR); you will eventually have to figure out what to design in order to meet this FR (i.e., specify a DP).

From the Hunn Report and from the other resources that you have, **identify all of the constraints** that would have an impact on your proposed restoration.

Create a list of specific tasks for your first year of restoration work.

Place the elements on your list in a flow chart or network diagram, showing when each would begin, which task would precede which others, and how long each would take (**put this information in a table as well**).

Determine the critical path for completion of the project.

Make two changes in your proposed restoration that would shorten the critical path. Clearly state what the changes would be, how long they would shorten the project, and try to accurately estimate what they would cost (in time, money, deliverables, etc.)

Your deliverable is a short "ready for review" draft report that addresses the issues raised and requests made above.