

Habitat Value of Ecoroofs – Phase 2

Desirae Wood, Dobro Design



Environmental Benefits of Ecoroofs



Design Parameters of Habitat Ecoroofs



Study Background



Habitat Definition



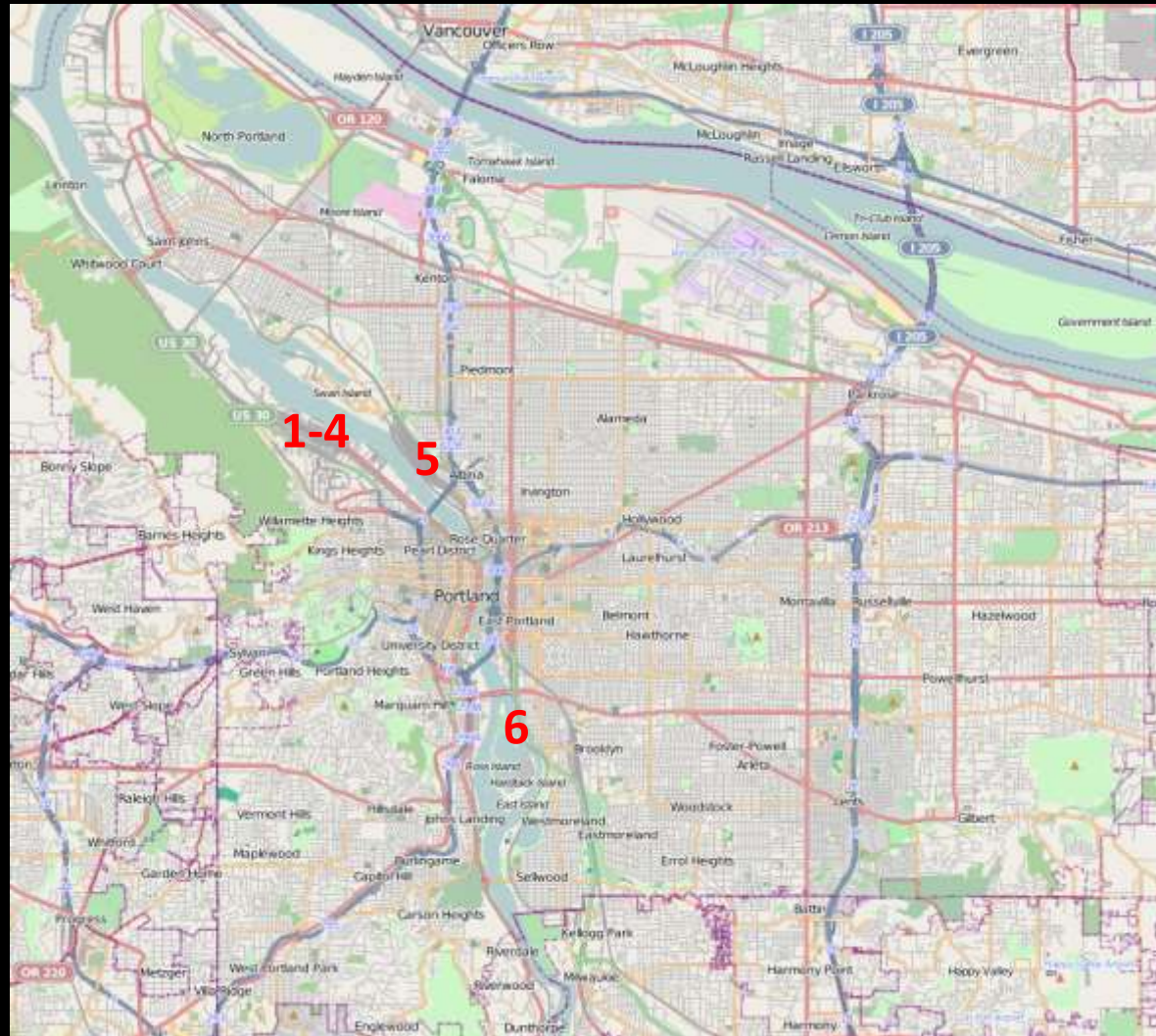
Habitat Parameters



Habitat Functions Matrix Approach

- New Hampshire Department of Environmental Services
- Northwest Habitat Institute (NHI)
 - ‘Combined Habitat Assessment Protocol’
 - Biodiversity accounting and appraisal system
 - Based on standardized field inventory

Portland, OR - Site Locations



Gunderson #3 Ecoroof



Gunderson #2 Ecoroof



Gunderson Engineered Soil



Gunderson Native Soil



North Portland Ground Site



East Portland Ground Site



Phase 1

HABITAT VALUE COMPARISON

Habitat Parameters Matrix:

	G_Eng	G_Native	N_PDX	East_PDX
HABITAT PARAMETERS				
Plant Type Richness	1.227	1.182	0.864	0.727
% Green Plant Cover Average (median)	0.455	0.457	0.444	0.451
Bloom Type Richness	1.143	1.486	0.914	0.457
Bloom Abundance	0.353	1.391	1.658	0.597
% Year Blooms Present	0.375	0.292	0.304	0.375
Soil Temperature Average (F)	1.001	1.019	1.006	0.974
Soil Moisture % Average	0.473	0.908	1.322	1.297
Insect Morphospecies Richness	1.134	1.091	0.877	0.898
Insect Abundance	0.920	1.166	0.573	1.342
Sum of Habitat Parameters	7.081	8.991	7.962	7.119
(divide by # habitat parameters)				
HABITAT VALUES	0.787	0.999	0.885	0.791

Phase 2

HABITAT VALUE COMPARISON

Habitat Parameters Matrix:

	G_Ecoroof3	G_Ecoroof2	G_Eng	G_Native	N_PDX	East_PDX
HABITAT PARAMETERS						
Plant Type Richness	0.9855	1.3913	1.0145	1.0435	0.6957	0.8696
% Green Plant Cover Average (median)	0.5207	0.4196	0.4618	0.4551	0.4349	0.4560
Bloom Type Richness	0.9002	1.9505	0.9752	0.9752	0.6002	0.6002
Bloom Abundance (weighted for site SF)	1.0054	1.4805	2.5977	0.0304	0.5435	0.3425
% Visits Blooms Present	0.8700	1.0000	0.8700	0.6100	0.5700	0.8700
Soil Temperature Average (F)	1.0386	0.9791	0.9938	0.9932	1.0451	0.9503
Soil Moisture % Average	0.4455	0.8168	0.1287	1.5965	1.2079	1.8020
Insect Morphospecies Richness	0.8573	1.3716	0.6429	0.6858	1.0716	1.3716
Insect Abundance	0.8301	0.9720	1.7425	0.9460	0.4616	1.0479
Sum of Habitat Parameters	7.4533	10.3814	9.4272	7.3358	6.6304	8.3100
(divide by # habitat parameters)						
HABITAT VALUES	0.828	1.153	1.047	0.815	0.737	0.923

Gunderson Habitat Correlation

A photograph showing several bright blue flowers with white centers growing from a gravelly surface. A large, dark, textured log lies across the middle of the frame. The background is a blurred green field under a bright sky.

- Ecoroofs designed for habitat offer a greater value of habitat than comparable ground sites.

Further Research is Needed





Thank You

