Fairview Creek Headwaters/SW Community Park, Gresham

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Final Report:

The goals of this project were to determine which plants survive best in restoration plantings of wetlands and which direction water flows from SW Community Park, thought to be the headwaters of Fairview Creek. A number of water quality indicators were monitored at the same time.

Students from centennial High School counted plants and measured water quality at various times from October 1996 to June 2000.

Results indicate that most water quality parameters generally remain normal all year with some fluctuations. These include: pH, nitrate, phosphate, DO, iron, zinc, TDS and turbidity. The only measurement that is of concern now is the occasional presence of E. coli. More thorough testing would be a valuable action in the future. The water is often stagnant but flows southwest toward Johnson Creek at times of high runoff and north toward Fairview Creek at most other times.

Results of the tree population study appear less reliable I suspect because without leaves during the winter, trees may appear dead or are a challenge for high school students to identify. That being said, it is clear that there are differences in survivability among various species. Oregon ash, spirea and Douglas fir show the best survival rates. Red-twig dogwood and red alder show moderate survival while cottonwood and willow survived poorly. Much evidence of beaver chewing was visible near the standing water. Young plants with little root development died in areas farther from the water.

Our recommendation to groups doing restoration projects in wetland areas is to use ash and D-fir closer to the water because they seem to be less attractive to beavers. Dogwood and alder need to have a good water source and should therefore be wrapped with barriers to beavers if planted near their territory. Cottonwood and willow are less desirable choices.

	Oct '96	May '97	Sept '99	June '00	
dogwood	81	81		17	
ash	28		40	37	elevation 260 low 265.6 hi
alder	152	107	43	106	B' Δ, direction w sw at high low in late spring
cottonwood	33	33	1		
r. cedar			2	1	
D-fir			18	13	
spirea			11	lots	
willow	11				
~~dogwood~~				⊗	

ater pH	8.3 high 6.6 low, ok	soil pH	6.6 high, 6.0 low, ok
E. coli	not constant but present	moisture	moist in fall
NO_3	.1 - 10.3, mostly good (10-3 is boarderng high)		
PO_4	3.1 - .4, 3.1 is too much in Oct		
DO/temp	varies but ok to low		
Fe	1.62 high, .08 low	not a problem	
Zn	.03 great		
TDS	45 great		
turbidity	good		

Courtwright
EE

Addendum

These items may further develop the readers understanding of the proposed project. They include a waiver required by the City of Gresham, original diagrams of the location for plants and several photograph of the wetland part of SW Community Park. Thank you.