



**Self-Guided Interpretive Trail on the Biddles Preserve Section
Of
Columbia Springs Environmental Education Center
(Formerly Evergreen Fisheries Park)**

Self-Guided Interpretive Trail
At
Columbia Springs Environmental Education Center
(Formerly Evergreen Fisheries Park)

I. Project Description:

Original Scope of Project when application was made for Metro Greenspaces Grant:

The grant was proposed as a self-guided interpretive trail on a portion of the Columbia Springs Environmental Education Center (CSEEC), known as the Biddles Preserve. CSEEC consists of roughly 85 acres around the old Vancouver Trout Hatchery. The center is a community partnership between the Washington Department of Fish and Wildlife, Clark Public Utilities, Vancouver-Clark Parks and Recreation, the Evergreen School District, and Clark Community College.

The particular piece of property that the trail was built on was donated to the county parks (since merged into City/County Parks) in the memory of Henry J. Biddles one of the first naturalists and conservationists in the area. The Wood family made the donation, the descendants of Mr. Biddles. It was their wish that the area be used for trails and left as a natural area and not a developed park.

The mission of CSEEC is to engage the public in environmental education within an urban setting. The trail was the first step in opening the habitats found on the property to the public. The trail also served as the introduction to the local habitat for over 4,000 K-12 students in the 1998-99 school year.

II. Goals of the Project:

The primary goal of the projects was two-fold:

- 1) To gain access to the Biddles Preserve area of the center to take advantage of this area for environmental education activities. We were creating the first environmentally sensitive footprint on the center, with the sole purpose of environmental education.
- 2) To give students a chance to manage a project from the design phase to the implementation phase. This was our first attempt at generating ownership of the center by our high school students. This project also gave high school students a chance to mentor our elementary and middle school students in environmental education.

III. Tasks, Timelines and Implementation:

This project was completed over a period of two academic years, 1998-99 and 1999-2000. Much of the timeline was altered as the board of directors shifted overall direction of the center's activities. The interpretive trail reflected in some ways this change in priorities. The result was work being spread out over a much longer period of time, however the scope of the project remained much the same.

The original grant called for portions of the trail to be "adopted" by elementary and middle school classrooms. These students would work with high school students from my field ecology classes to inventory habitat and make improvements in each of their respective areas.

High school students went out into classroom to introduce the project and principles of proper habitat and restoration. They worked with these elementary and middle school students when they came to the center.

High school students, an Eagle Scout and several community volunteers constructed the trail. The high school students determined the location for the viewing blinds, placed trail posts at points of interest, constructed two kiosks, and put out a self-guided brochure for people to use.

The high school students in my classes, which meet at the center daily, do much of the week to week maintenance of the trail. AmeriCorps workers both at the center and in conjunction with Clark Public Utilities have been a great help to mentor my students, share the maintenance of the trail and work with younger students.

We have divided the trail into classes at various points. Some classes have been more involved than others have. We have two classes in combined the "adopt a trail viewing idea" with nature mapping and are doing both on site this spring.

The self-guided brochure is simple, and for the first finished draft useful. We are looking at revising it during summer school session this year. The kiosks work great and the students have added benches.

The neighborhood has really taken to the trail as a place to exercise and experience nature. The trail is approximately one-third of a mile in a loop form. This trail represents the first real improvement on the property as we move from strictly a fish hatchery to an environmental education center. There are two more loop trails planned as well as a boardwalk and bridge to access the trail in the future.

The viewing blinds have been constructed by the Carpenter's Apprenticeship in Portland. This training facility features some former students. They were built in modules and are to be placed on designated sites. Students are doing the prep work for these on site. The blinds will have some seating and will greatly facilitate group instruction on the trail in the immediate future.

Instead of doing some restoration in these adopted areas on the trail we did a lot of non-native vegetation removal. Because we want this to sit a year we then linked the restoration into a site right behind the hatchery. This is a site right on one of our two feeder spring creeks. Everyone who comes to the park and takes a tour sees this degraded area with poor riparian structure. In conjunction with AmeriCorps members our students organized and took part in a restorative planting on Earth Day this past year. The center was one of three sites to have Earth Day activities in Clark County.

Project Timeline

December 1998	Acceptance of Grant
January 1999	No Activity
February 1999	Removal of non-native vegetation
March 1999	Sites for adoption by classes picked out by high school students. Approved by botanist. Final routing of trail approved by Parks maintenance supervisor.
April 1999	Finished trail construction and routing. Decision made as to signage and preliminary interpretive Structures. Small foot bridge constructed.
May 1999	First Kiosk constructed at trailhead. Viewing blind locations proposed, Parks and Fish and Wildlife to review. Adoption of sites by Classrooms. Interpretive Posts placed on trail. First Environmental Activity using trail published by AmeriCorps workers
June 1999	First in-class instruction to elementary students by high school field ecology students. First habitat analysis surveys done by classes First draft of self-guided interpretive brochure.
July 1999	Removal of non native vegetation.
August 1999	No Activity
September 2000	3 more classes adopt sites after orientation on trail.
October 2000	Viewing blind plans reviewed by Partnership
November 2000	No Activity
December 2000	No Activity
January 2000	No Activity

Timeline (cont).

February 2000

Second draft of interpretive brochure printed.
Second draft of educational activity by high school field ecology class.
Viewing Blinds presented to Willamette Carpenters Training Center Advisory Board to recommendation as a community service project.

March 2000

Site meeting with WCTC instructors, plans to be modified from Park blueprints. Bids out to local suppliers for viewing blinds.
Eagle Scout project for bird houses, squirrel feeders and bird feeders.

April 2000

Drawings for viewing blind modifications done and submitted to City of Vancouver.
High School Classes due spring clean-up of trail and map Out 4 more adoption areas.

May 2000

Materials for viewing blinds purchased.
Site prep work done by students.
Blinds built by WCTC in modules, set on site for construction.
Eagle Scout puts bird houses in place.

IV. Project Budget

Item	Original Budget	ESD Match	Metro	Actual Total
1. Educational Material	\$1500.00		\$1,500.00	\$ 467.42
2. Restoration Plantings	\$1,000.00	<u>\$1,000.00</u>		\$2,326.37
3. Equipment Rental	\$0			\$64.62
4. Construction Materials	\$8,000.00	\$2,500.00	\$5,500.00	\$5,063.38
5. Volunteer Labor	\$4,125.00			\$5,241.50
6. Signage	\$1,000.00		\$1,000.00	\$ 805.91
7. Personnel: Project Manager	\$8,000.00	\$8,000.00		\$8,000.00
Totals	\$23,625.00	\$11,500.00	\$8,000.00	\$21,969.20

A detailed list of expenditures can be found in financial statement at end of report.

Volunteer Labor Breakdown:

Date	Activity Description	# of Volunteers	Hours Worked	Total Hrs.	Cost (@\$5.50/hr.)
Feb. 1999	Removal of non-native vegetation	15	5	75	\$412.50
Mar. 1999	Site Selections	5 students	2.5	12.5	\$ 68.75
April 1999	Trail construction	10	4	40	\$220.00
	Foot Bridge	3	6	18	\$ 99.00
May 1999	Kiosk	5	8	40	\$220.00
	Interpretive Posts	3	4	12	\$ 66.00
	First Educational Lesson	2	6	12	\$ 66.00
June 1999	Self-Guided Brochure	3	10	30	\$30.00
July 1999	Removal of Non-natives	20	6	120	\$660.00
Aug. 1999	Holes for Viewing Blinds	4	2	8	\$ 44.00
Feb. 2000	Second Brochure	3	5	15	\$ 82.50
	Second Activity Lesson	4	5	20	\$110.00
April 1999	Drawings	1	10	10	\$ 55.00
	Trail Clean-up	8	2	16	\$ 88.00
	Bench Construction	2	20	40	\$220.00
	Habitat Projects (Bird Houses, Squirrel Feeders)	22	5.5	121	\$665.00
	Earth Day (Restoration Planting)	70	2	140	\$770.00
May 1999	Site Prep Work	8	8	64	\$352.00
	Blind Construction	2	80	160	\$880.00
	Project Totals	185	191	953.5	\$5,241.50

VI. Time Expended by Manager:

Month	Time Expended Hours
Dec. 98	3
Jan. 99	7
Feb. 99	8
Mar. 99	15
Apr. 99	25
May. 99	34
Jun. 99	24
Jul. 99	6
Aug. 99	7
Sept. 99	12
Oct. 99	18
Nov. 99	8
Dec. 99	8
Jan. 00	8
Feb. 00	18
Mar. 00	15
Apr. 00	32
May 00	24
Total	272

VII. Project Staff /Workers/Volunteers

Staff involved with this project at the Columbia Springs Environmental Education Center were, John Akers Instructor-Education Coordinator, and AmeriCorps members Phil Valko, Allison Pfeiffer, Jennifer Knowles, and Steve West. Students included high school students from Evergreen High School, Heritage High School and Elementary and secondary students from around the Evergreen School District.

Community volunteers included an Eagle Scout candidate, with troop members and adult volunteers. Wildlife stewards and Audubon members. Steve Manlow and Jeff Lewis, biologists from Washington State Department of Fish and Wildlife, Vancouver-Clark Parks and Recreation Maintenance Supervisor Tim Haldemann, and Botanist Jim Camrada from Clark County's Mabry Nursery.

The AmeriCorps envirocorps out of Clark Public Utilities was instrumental in spearheading the effort to remove non-native vegetation and helping in the final trail construction.

VIII. How Project Relates to the Greenspaces Program

This project is consistent with the objectives of the Greenspace program by: Restoring habitat in the urban area that will provide wildlife habitat and serve as a potential site for education and interpretation; Increasing the public's awareness of the importance of urban wildlife preserves and the alternative forms of recreation these sites provide. The project provides an accessible site for wildlife viewing, uses native plantings and utilizes community volunteers, all components of the greenspaces vision in project development.

IX. What Worked/What Didn't/Helpful Hints:

The manager will have a better idea what pace students are able to work at if he decides to apply for another grant!

Some of the strategies that worked well incorporated pooled expertise and services that the agencies involved with CSEEC were able to provide. Vancouver/Clark Parks were able to provide base drawings of viewing blinds to help us get some preliminary estimates of size and building specifications.

Clark Public Utilities and Mabry nursery were a great team resource to use in the supply of native plants for the Earth Day celebration. Evergreen School District was able to defer a majority of the cost for the printing of the brochure and educational materials for the classroom instruction by high school students.

The use of community volunteers, Eagle Scouts candidates, and students work well. The project truly reflected a "community" effort in this regard.

By far the most important resource was the Willamette Carpenters Training Center. Their expertise was essential for the viewing blinds, both for construction and permitting purposes. They were able to work well with students on the ground and prep work, and the best part is that some of our former district students are enrolled in the training center.

Most of the problem with the project revolved around two basic areas: The permitting of the blinds and the coordination of the project with the priorities of the CSEEC during the lifetime of the grant

The permit process was confusing in that we tried to get several people to construct the blinds and get all facets of the permitting done. The method that was finally agreed to was one of a cooperative effort between the manger and the carpenters training center.

The second problem area had to do with the use of the west side of CSEEC during this past year. The partnership and a majority of the educational program was built around using the east end of the park to see what we needed in an area that is going to receive a large remodel this next year. This moved prompted the placing of the Biddles Preserve and the educational component that complimented that on a lower priority basis. In addition for safety reasons that preserve was not used as much. This centers around the access to the spot and the busy traffic on Evergreen Highway.

With all of the education on the east side of the center we re-evaluated our restoration goals and decide that the main feeder creeks to the hatchery were our #1 priority. We felt that everyone coming to the center saw these areas, and we wanted to model a quality watershed and riparian area. In addition to this the AmeriCorps crew likes to have areas of non-native vegetation extraction sit for a year. This modification in plan would allow for this to happen.

The access is being improved, as part of the remodel upcoming is a boardwalk across the bordering wetland. This will make for direct access to the preserve from the main entrance to the center.

While the project took another year longer than what was planned it will now fit nicely with the surrounding construction and restoration of the center.

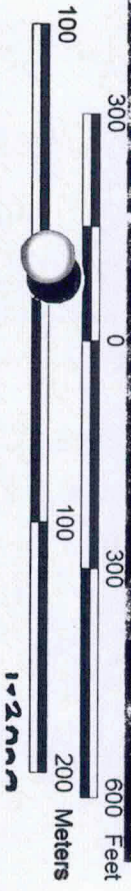
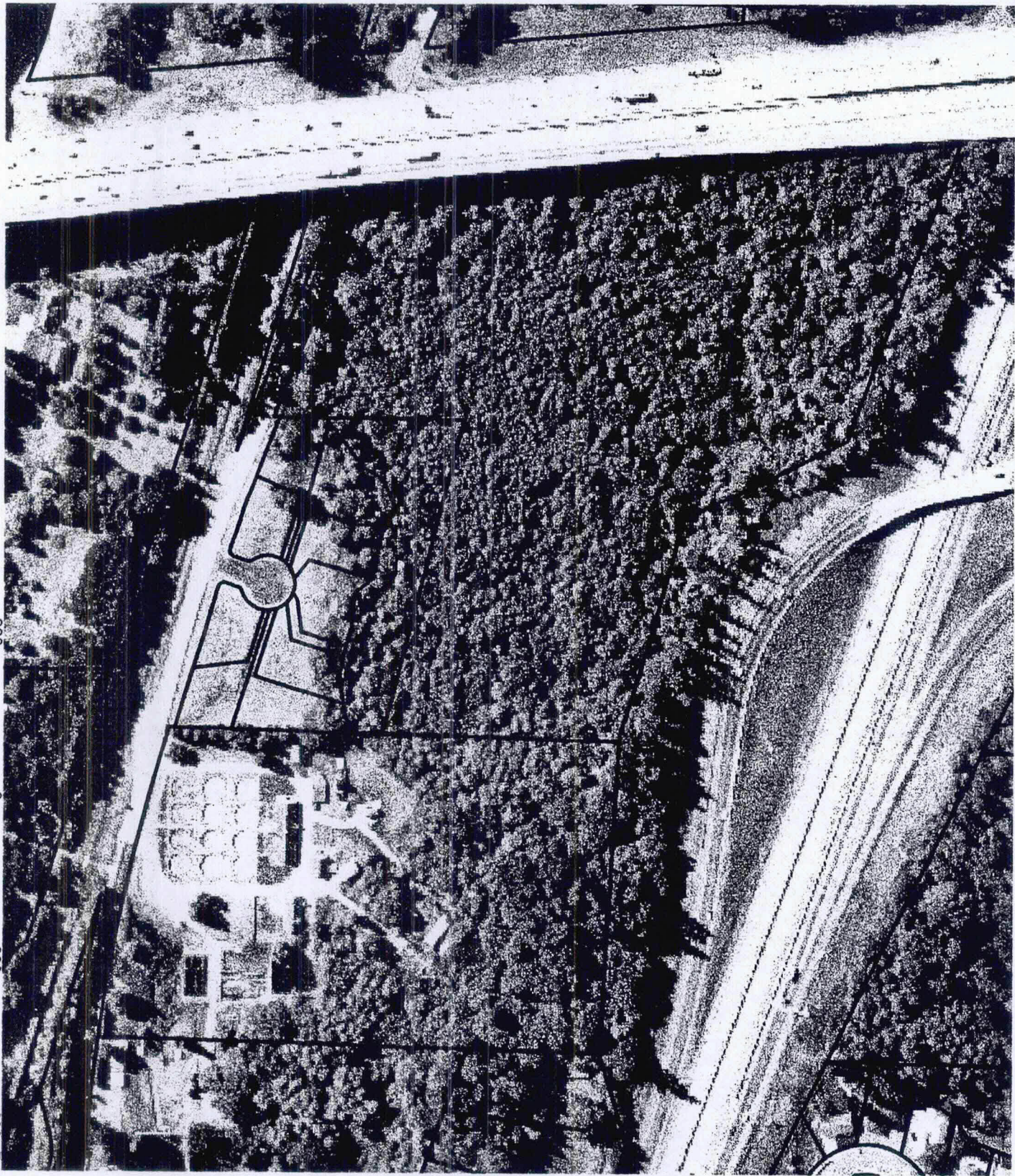
X. Advice for Other Project Managers:

Three main areas of advice:

- 1) When dealing with students double your initial estimates for task implementation.
- 2) With regard to permits the key we discovered in constant communication with the project manager acting as a "hub in a wheel". This may be true of only our case.
- 3) Form a committee or one or two really reliable students to take photographs and catalog all media activities and public relations documents that pertain to the project. Another alternative would be for the manager to assume this responsibility in place of time spent in other areas of the project.

XI. Monitoring and Maintenance Plan:

In large measure this is already happening. Students maintain the trail proper; high school students who have the on-site field ecology class do this. Elementary and middle school classes are maintaining the habitats in their assigned areas. The trail will be an integral piece of the center and maintained in accordance with the overall maintenance plan.



1:25000

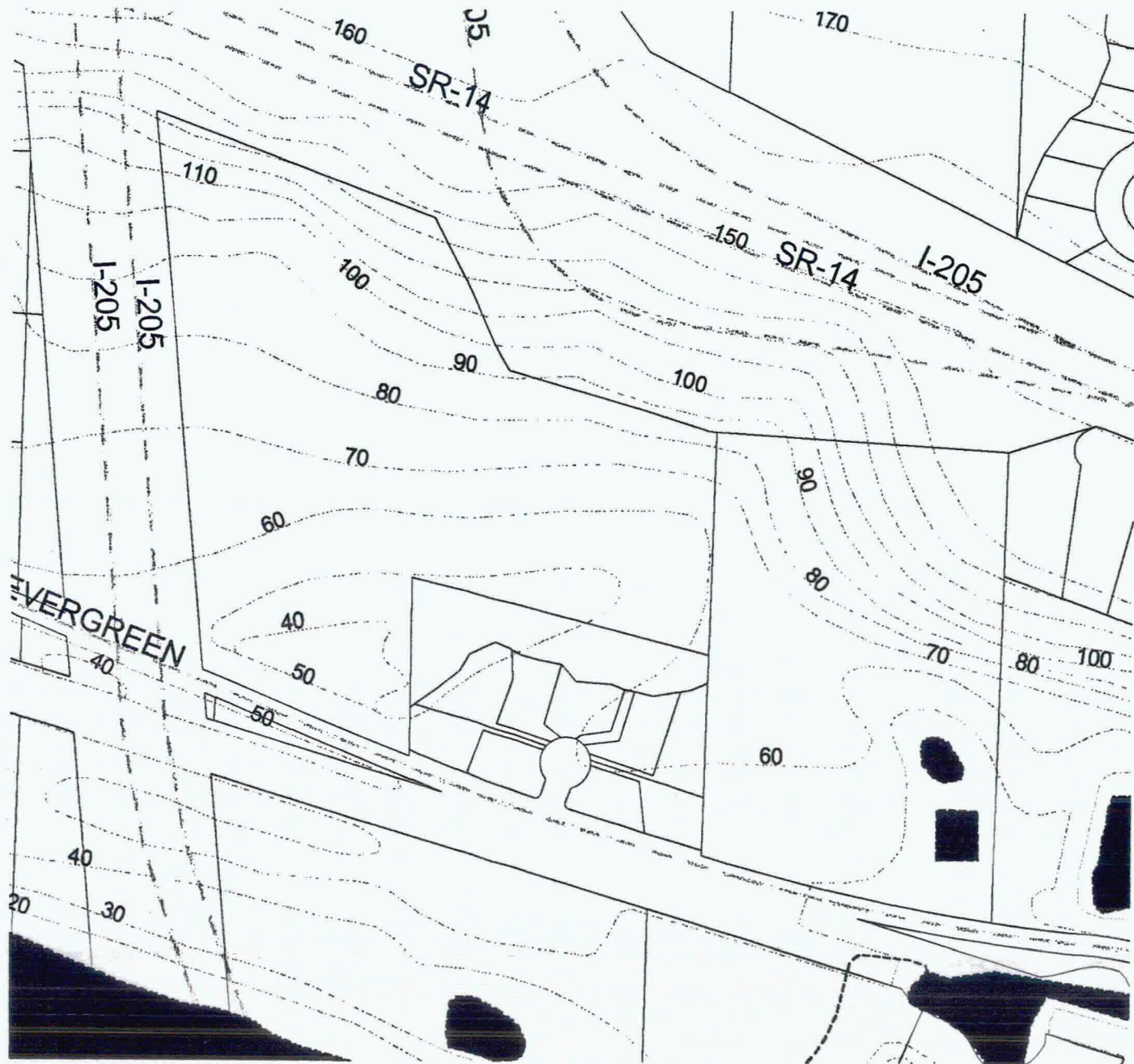







RAL 3-27-98

Biddle Nature Preserve Area Map

Biddle Nature Preserv
Area Map

DRAFT

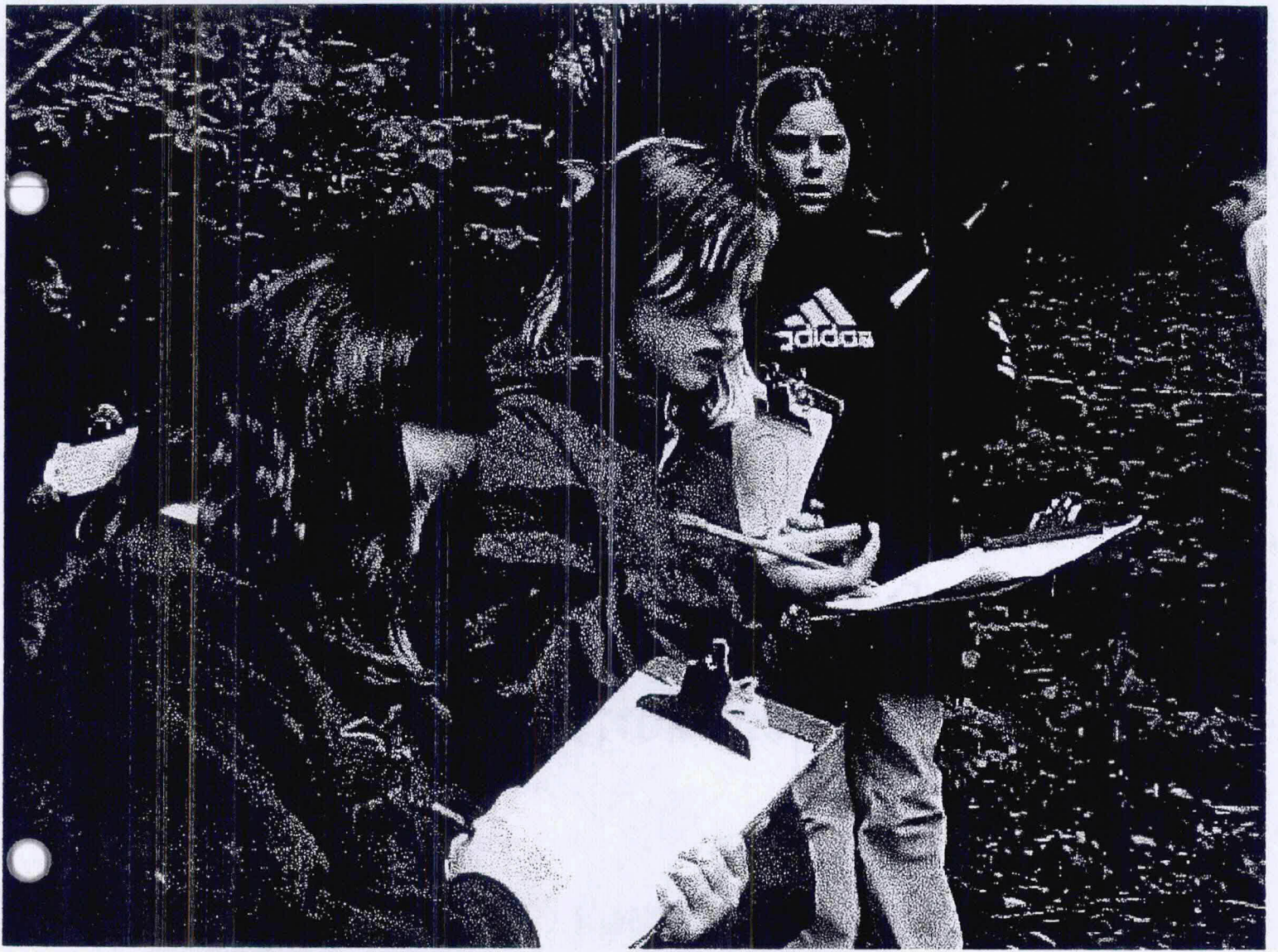


-  Dnr-poly.shp
-  Dnr-line.shp
-  Parcels.shp
-  Contour.shp
-  Arterial.shp

300 0 300 600 Feet

1" = 300'

RAL 3-27-98



Students Doing Habitat Analysis on Sites Adopted by Their Class



Students Doing Habitat Analysis on Sites Adopted by Their Class

Personal



Family planting tree at Earth





Jeremy and Dan Removing Invasive Non-Native Vegetation

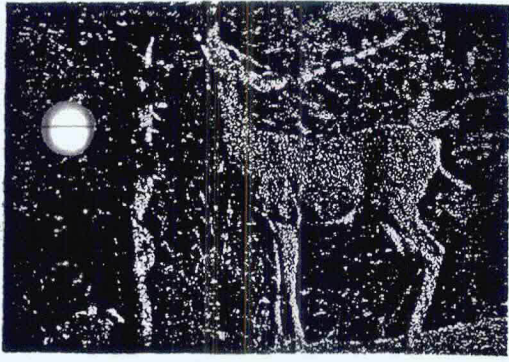
Installing weed mats around plantings



Permalife

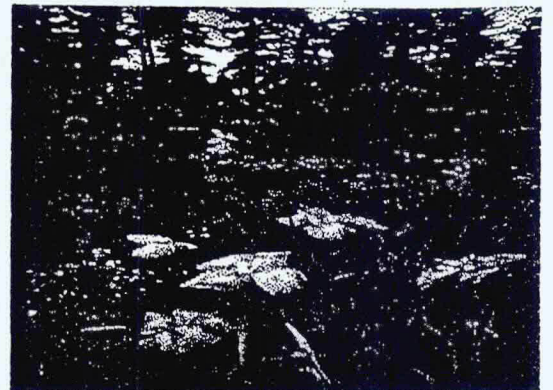
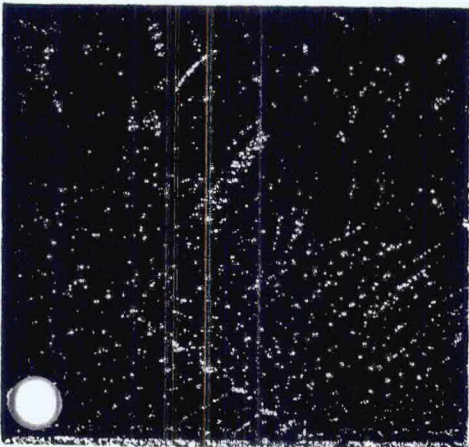
Making benches for trail viewing spots

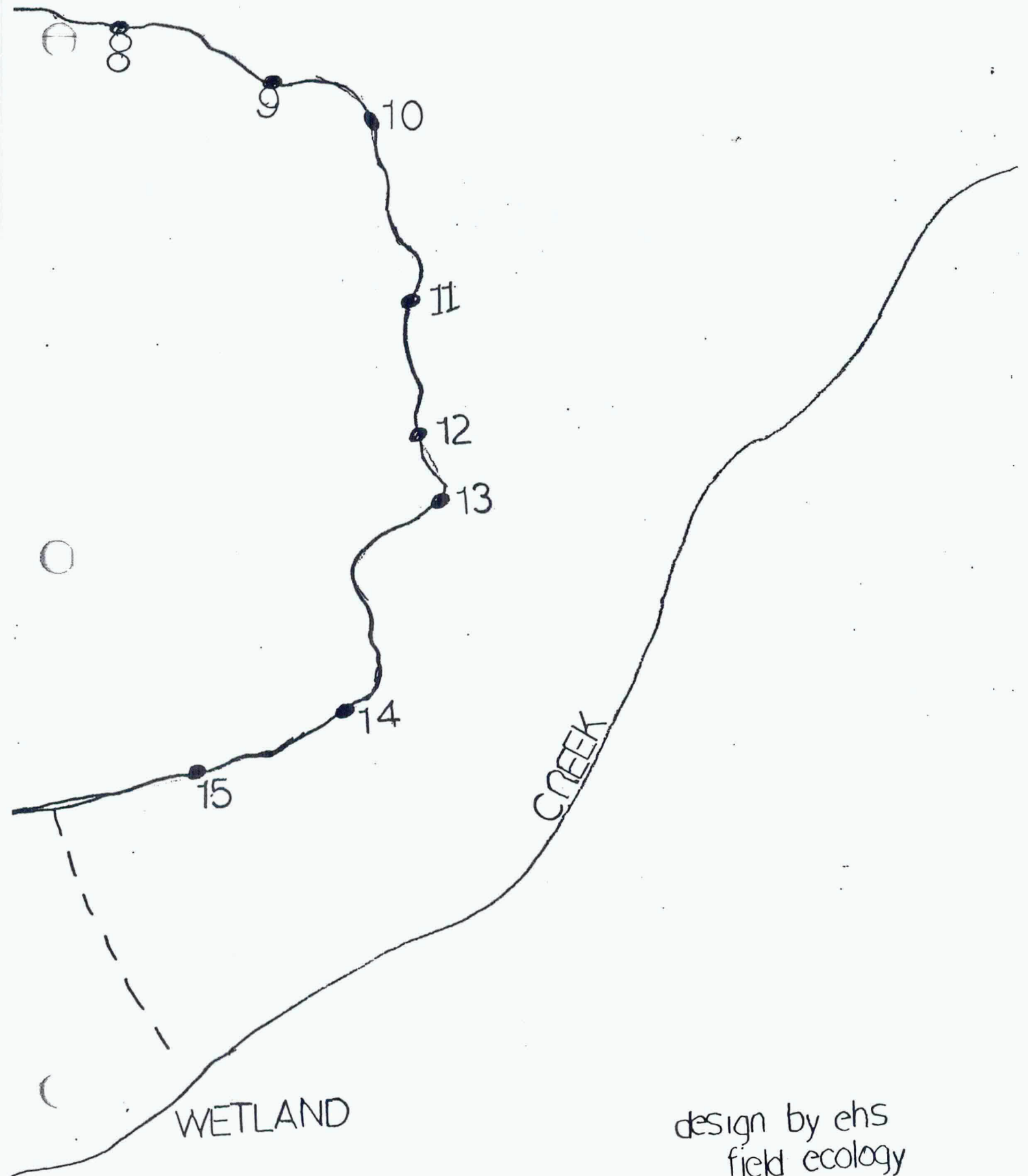




EVERGREEN FISHERIES PARK

Biddles Interpretive Trail





design by ehs
field ecology

**Evergreen Fisheries Park
Biddles Interpretive Trail**

Viewing Marker 1:

The large tree directly ahead of you is a broadleaf maple, in the distance is a red cedar. A group of 4 alders is off the right. As far as shrubs, the shrub to the left of the post is thimbleberry, to the far right is osoberry (also called Indian plum). The ground cover is made up of pacific waterleaf, and miner's lettuce.

As you travel from marker 1 to marker 2:

notice the stump on the left with ----cup growing out of it. On the right is a similar stump with bracken fern growing out of it. Stumps provide seeds medium and water retention spots for a variety of species. You will see many of these "nurse stumps" as you walk the trail.

Viewing Marker 2:

A great view of the creek and riparian area. Be on the look out for squirrels, they love this area. We have seen both grey and Douglas (also called chickaree) squirrels. This is a cherry grove, you can tell cherry trees by their bark with the horizontal lines of streaks. the shrub on the left is snowberry, sword fern on the right. A small group of western hazel is to the right.

Viewing Marker 2B:

Osoberry in front, invasive stinging nettle behind you. This is a great site for the making of brush pile habitat. We take the dead brush from other areas on the trail and pile it here. Great for small song birds, and small mammals for cover and protection.

Viewing Marker 3:

Easily the best look at great riparian habitat on the trail loop. Towering western red cedar, broad leaf maple with some western hazel and a native but introduced holly on the left and right. Notice the downed trees and vegetation close to the floor of the ravine, this may not look it to the untrained eye, but this makes for excellent wildlife habitat. You should be able to identify the ground cover of waterleaf and sword fern by now. Be on the look out for a variety of birds, including stellar's jay, chickadees, and varied thrushes, along with an occasional hawk.

Viewing Marker 4:

One of the large stumps that were left after this preserve was logged. There are more if you look in the distance. These were great sources of clear cedar lumber. They are now decomposing slowly and providing habitat, nutrients, and cover as nature recycles what man has impacted.

Viewing Marker 5:

This is an example of natural windfall or winter damage as you look at the smaller trees in front of you. You can also see where someone has looked for critters in the stump in front without putting the bark back like they should. We must keep damage to a minimum even when we are educating.

Viewing Marker 6:

Here is an area that was completely covered by blackberries. Americore crews have gone in and pulled non native plants and we will soon revegetate the area with native plants for habitat improvement. We want it to look like the area you see behind the clearing !!!

Viewing marker 7:

If you look closely down on the ground in this area you will see that the soil is literally rock. This is in fact old creek rock and a dry creek bed, another spring that has been lost in the area. The blackberries were the plant best suited to the conditions and have colonized the area. We will go in and restore this area much as we are now doing in area 6. If you face northeast and look up you will see the snag - like top of a Douglas fir. This is a prime perching spot for eagles, hawks and osprey.

Viewing marker 8:

Here we see fern and fringe cup along with some wacky growing maples. These trees had no dominant shoots or lost the shoot to climatic conditions. There are several branches and the trees "twist" in their growth to find sunlight. One of the few Douglas firs inside the trail loop is right behind you. This is still the most common and most valuable lumber tree in the Pacific Northwest.

Viewing marker 9:

A grove of alder in the background to offset a shrub crop of osoberry, salmon berry, and our "little" maple, the vine maple. If you look carefully up the hill you can see the same snag trees, sometimes this is a better place to stop and watch since you have more cover here.

Viewing marker 10:

you are now at the northeast part of the trail. In the future we will have abridge or a boardwalk to connect the present loop with trail loop 2. This trail will be accessed from behind the main hatchery building. This is another creek bed where there used to be running water.

Viewing marker 11:

This is the one tree we had to saw through to get the trail in. You can see where animals have pawed or clawed at the old rotten inside bark looking for an insect meal. The small plant to the right of the viewing marker is elderberry. As you travel from marker 11 to marker 12 you will see elderberry on both your left and your right.

Viewing marker 12:

Look very carefully at the small cedar trees. Are they all separate trees? Where are they rooted? Can you explain what has happened here?

Viewing marker 13:

A continuation of the cedar grove. Here we have mature or at least older trees that are surrounded by young cedars. These have naturally seeded, and are growing in which ever direction they can to get light. You can notice the increase in cedar duff on the forest floor in this area. The big trees still have a long way to go to equal the size of some of the old stumps on the trail !!

Viewing marker 14:

This will be the head of the trail when we are able to link the rest of the property to the preserve by way of a bridge over the wetland. This is eliminate the southwest exit except for trail maintenance. We will have a large interpretive board in this area.

Viewing marker 15:

We now head back out of the cedar into an area that is really dominated by alder and maple again. Notice the weird bark formation on some of the alders.

Viewing marker 16:

This is an area where we constantly battle blackberries and even more commonly stinging nettle. We will create a brush pile here that will eventually close off the lower section of the trail.

Viewing marker 17:

This small stream is almost dry during the summer months. We have to remember how important small creeks like these are to habitat. You can see skunk cabbage in the distance, salmon berry to the immediate left and closer to the ground is horsetail. Small stream like this are valuable for incubation of young, such as frogs, salamanders, and newts.

MABRY PLANT AND LANDSCAPE NURSERY
OFFENDER INDUSTRIES

PO# 20042

8101 NE 117th Avenue, Vancouver WA 98682
Phone (360) 737-6045 Fax (360) 896-9878

Order Date: 4/15/00

Date Needed: 4/22/00

Order placed By: Anil Devnani

Phone:

Fax:

Bill to: Evergreen Fisheries Park

Project: Evergreen Fisheries Park

Delivered/PickUp 4/20/00

Date: 5/10/00

Quantity Ordered	Flag Code	Size	Quantity Shipped	Species	Common name	Price	Total
9		1 gal	Green	<i>Abies grandis</i>	Grand Fir	\$2.50	\$22.50
5		1 gal	Red	<i>Acer macrophyllum</i>	Big leaf Maple	\$5.00	\$25.00
86		1 gal	Wht / Grn	<i>Cornus stolonifera</i>	Red Osier Dogwood	\$2.50	\$215.00
27		6' br	Pink	<i>Fraxinus latifolia</i>	Oregon Ash	\$5.00	\$135.00
22		1 gal	Blu / Pnk	<i>Oemleria cerasiformis</i>	Osoberry	\$2.50	\$55.00
107		3' br	Pnk / Blu	<i>Physocarpus capitatus</i>	Ninebark	\$1.75	\$187.25
5		1 gal	Oran / Grn	<i>Prunus emarginata</i>	Bitter Cherry	\$2.75	\$13.75
17		1 gal	Oran / Wht	<i>Pseudotsuga menziesii</i>	Douglas-fir	\$2.50	\$42.50
26		1 gal	Yel / Red	<i>Rhamnus purshiana</i>	Cascara	\$2.50	\$65.00
6		1 gal	Blu / Oran	<i>Ribes sanguineum</i>	Red Flowering Currant	\$2.50	\$15.00
129		2' br	Red / Wht	<i>Rosa nutkana</i>	Nootka Rose	\$0.50	\$64.50
80		10' br	Blue	<i>Thuja plicata</i>	Western Red Cedar	\$8.00	\$640.00
35		1 gal	Wht / Yel	<i>Tsuga heterophylla</i>	Western Hemlock	\$2.50	\$87.50
							\$1,568.00
						tax	\$119.17
							\$1,687.17

Clark Public Utilities Stream Enhancement Program

EVERGREEN FISHERIES PARK

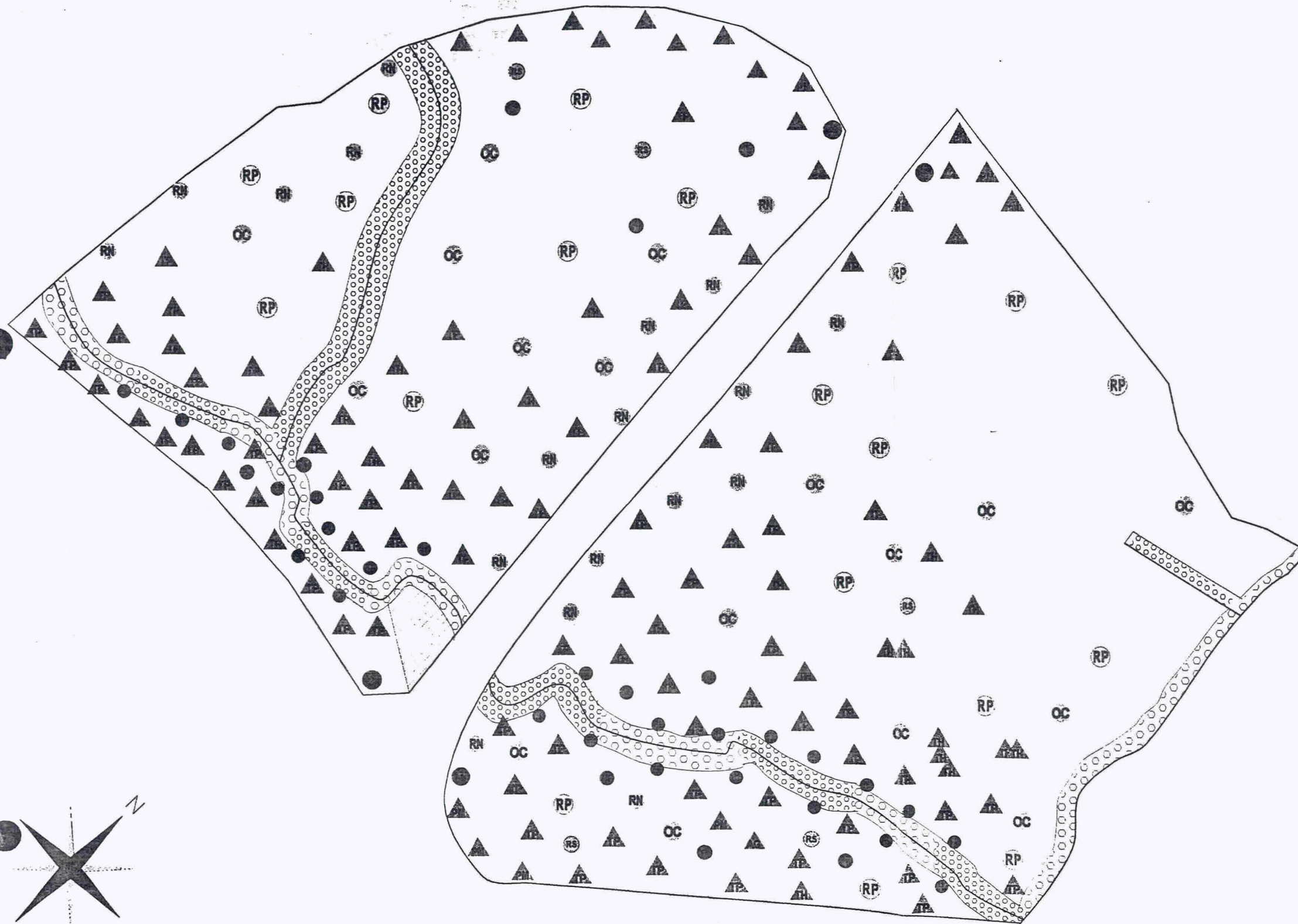
April 2000

PLANTING DESIGN

Prepared by

Anil Devnani

10 FT 30



~	Stream	
▨	Future Viewing Platform	
⊙	Dogwood	86
⊘	Ninebark	107
▲	Grand fir	9
●	Bigleaf maple	5
●	Oregon ash	27
⊙	Osoberry	22
●	Bitter cherry	5
▲	Douglas-fir	17
⊙	Cascara	12
⊙	Red flowering currant	6
RN	Nootka rose	129
▲	Western red cedar	85
▲	Western hemlock	35

Total Plants 546

