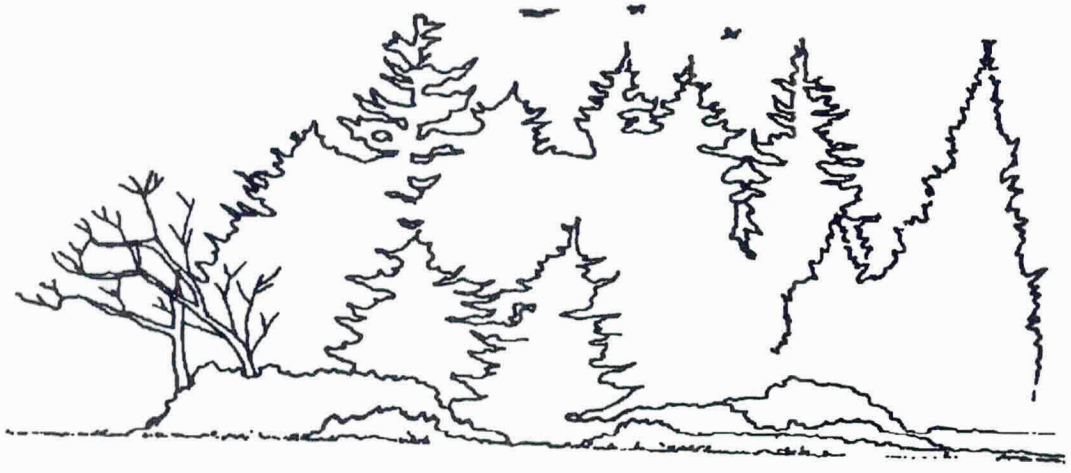
METRO GREENSPACES PROGRAM

HABITAT RESTORATION PROJECT FOR LITTLE WOOD ROSE NATURE PARK 1997-98

FINAL REPORT

PARKS AND RECREATION DEPARTMENT
CITY OF TUALATIN



PROJECT REPORT
LITTLE WOOD ROSE NATURE PARK, TUALATIN
METROPOLITAN GREENSPACES PROGRAM
METRO CONTRACT #905414

I. PROJECT DESCRIPTION:

Little Wood Rose Nature Park is a 6.5 acre forested area, designated in the Parks and Recreation Master Plan as a passive recreation park (See Figure 1, Vicinity Map). Surrounded by single family housing and a church, the rectangular park serves as a refuge from the urban environment for both wildlife and humans. Since 1993, over 225 trees at Little Wood Rose Nature Park have fallen or been removed due to Laminated Root Rot and/or Red Ring Rot disease. This removal has changed the park dramatically, leaving large open areas which were once shady and cool.

A comprehensive restoration plan was approved by City Council in October, 1996 (See Figure 2, Restoration Site Plan). The goal of this plan is to re-establish a sustainable, western Oregon native woodland ecosystem which requires low maintenance and provides good wildlife habitat, public access, and educational opportunities. Funding for this restoration plan is only partially supplied by the receipts from the logs removed from the site, FEMA windstorm disaster assistance, and a National Tree Trust seedlings grant.

The primary objective of the restoration plan and this grant was to re-plant trees to re-create the forest environment. In addition, non-native, invasive vegetation needed to be removed to allow room for the newly planted trees to grow, as well as to enhance plant diversity and to improve the appearance of the park. To implement the restoration plan, a combination of volunteers and "Ameri-corps" groups were recruited to help remove the non-native vegetation and plant and water native trees and shrubs. As overall enhancement of wildlife habitat was a goal of the plan, bird and bat houses were built and installed.

II. GOALS AND BENEFITS OF PROJECT:

1. Re-forest the park
2. Enhance wildlife habitat
3. Increase citizen education, involvement and stewardship
4. Improve general appearance and health of park

III. WORK TASK AND TIMELINES:

Task	Date	Responsible Party
General planning/coordination	January	City staff
Purchase plant materials	January	City staff
Mailing to neighbors/volunteers	February 1	City staff
Non-native plant removal	February 19-22	NWSA
Tree planting day	February 22	Volunteers/NWSA
Non-native plant removal & wetland planting	March 31-April 4	NWSA
Arbor Week planting	April 7-11	Volunteers
Bird/Bat house installation	April	Volunteers
Non-native plant removal, planting and watering	June 6, 13, 25, July 3	NWSA
Supplemental watering	June- September	Staff

IV. FINAL PROJECT BUDGET:

Category/Item	Request of Metro	Cash Matching	In-kind Match	Total
Personnel				
Service Group	$ 5,200.00	$ 1,500.00		$ 6,700.00
Materials				
Trees	$ 735.75	$ 1,216.25	$ 80.00	$ 1,952.00
Shrubs	$ 758.75			$ 758.75
Seed	$ 120.50	$ 16.30		$ 136.80
Barkdust		$ 134.00		$ 134.00
Hoses (4@50')	$ 168.08			$ 168.08
Buckets	$ 42.25			$ 42.25
Maintenance Cost				
Watering			$ -	$ -
Herbicide		$ 385.00		$ 385.00
Rentals				
Restroom	$ 65.00			$ 65.00
Professional Services				
Chipping		$ 3,000.00		$ 3,000.00
Snags		$ 400.00		$ 400.00
Safety trail work		$ 448.70		$ 448.70
Volunteer Labor				
at $5.50/hr			$ 698.50	$ 698.50
Indirect/Overhead				
Staff time:				
Program Implementation			$ 1,582.95	$ 1,582.95
Maintenance/supervision			$ 1,330.52	$ 1,330.52
Other				
Bat/bird house materials	$ 44.66			$ 44.66
Refreshments		$ 24.60		$ 24.60
Signage Repair		$ 94.70		$ 94.70
Total	**$ 7,134.99**	**$ 7,219.55**	**$ 3,691.97**	**$ 18,046.51**

TIME EXPENDED (HOURS)

Month	Project Manager	Maintenance Staff	Volunteers
January, 97	4	0	
February	22	26	100
March	8	14	
April	6	0	27
May	6	6	
June	8	9	
July	7	7	
Total Hours	61	59	127

Salary	$25.95	$21.46	$5.50
Total costs	**$1,582.95**	**$1,330.52**	**$698.50**

V. PROJECT STAFF/WORKERS/VOLUNTEERS:

Virginia Dodson was the project manager for the project. She coordinated most aspects of this project. In particular, she hired the service groups, ordered materials and supplies, and organized the tree plantings. Bob Martin, Parks Maintenance Supervisor, assisted with some of the maintenance planning and implementation. Wayne Brooks and Al Mota, Parks Maintenance Staff, helped to train and supervise the Northwest Service Academy's on-site work. Bonnie Beukelmann-Watson, Parks Volunteer Coordinator, assisted with the publicity for the volunteer work parties and recruited and supervised volunteers on the planting days.

The Northwest Service Academy (NWSA) was hired to do the majority of the on-site work. In February, NWSA worked for four days clearing ivy and preparing the area for a volunteer planting day. NWSA worked again in March to remove blackberry and plant wetland plants around the central wetland. NWSA continued removing exotics and watering plants in June and July. In addition, they installed bat houses built by high school students and inventoried plants that had been planted since November, 1996.

Volunteers were recruited for two big events (See Attachment A, news clippings). On February 22, over 40 people showed up to plant bare root trees and potted shrubs, for a total of 100 volunteer hours. A "Friends of Trees" crew leader helped to supervise the tree plantings. Members of the Rotary Club and Boy Scout Troop 35, who have "adopted" the park, were also present. Several high school clubs also participated. Other volunteers were neighbors of the park or interested citizens. On April 5, Cub Scout Pack 480, planted about 100 evergreen seedlings from the National Tree Trust and installed a wood duck box they had built. Eighteen scouts and parents spent a total of 27 hours helping.

VI. HOW PROJECT RELATES TO THE GREENSPACES PROGRAM:

This project is consistent with the objectives of the restoration and enhancement grants program. The grant enabled the Parks and Recreation Department to do more than just replace the lost trees. Other habitat enhancements to the park could occur, such as removing non-native vegetation and re-planting those cleared areas. The Department was pleased to be able to hire a youth group to do the bulk of the work which provided them with opportunities to learn and work.

This project increased public awareness and involvement. Tualatin citizens were already aware of and concerned about the tree loss at this park. Thus, a successful restoration project was essential both for public relations reasons as well as for the park itself. The volunteer planting days provided citizens with an opportunity to become involved and learn more. Through the media, citizens were made aware of the considerable efforts the city had gone through to restore the park.

Many agencies and organizations were involved in this project. U.S. and Oregon Fish and Wildlife, and Oregon Department of Forestry provided valuable input into the restoration plan and implementation. Friends of Trees, Rotary, and many other non-profit groups and clubs were involved in planning and implementation.

VII. WHAT WORKED/WHAT DIDN'T/HELPFUL HINTS:

Overall, this restoration project has been a success. Most of the goals have been met. Little Wood Rose Nature Park has been transformed from a devastated logging site to a lush and diverse nature park. Many people use the park daily to run, walk their dog and bike. Wildlife use has not been evaluated, but birds can be heard singing in the trees. With time, the trees will grow to once again provide deep shade and cover.

The bulk of the non-native plants have been removed. All of the plants purchased have been planted and the plant mortality rate is very low. The trees are being watered as needed using hoses and buckets. Three bat houses and one wood duck box have been installed. No word on whether they are in use yet.

Frequent visits to the site and readjusting the plan was important. A lot of vegetation came back naturally in the spring. However, not all of the re-growth was desirable and some plants had to be cut back to allow room for the trees to grow and the paths to be seen. The plantings were done to cover bare ground, crowd out undesirable plants, and provide more diversity than is presently there.

Removing English ivy in February seems to be the ideal time. No other plants were damaged and the ivy was easy to remove. In April, trillium bloomed where the ivy once was.

The combination of volunteers, paid service groups, and staff is a good model for accomplishing a restoration project. There are pros and cons for utilizing each type of group, but in combination, the situation was win-win.

VIII. ADVICE FOR OTHER PROJECT MANAGERS:

Volunteer days have to be well organized. Contact reliable groups and organizations well beforehand to ensure an adequate number of people will be present to do the work. You can't rely on Joe-citizen to show up. Make sure there is more than enough to do. If you run out of plants to plant, have clippers on hand for removing ivy. Keep it short, two to three hours is about all people can stand. Have a couple of staff members or trained volunteers walk around and check on everyone to ensure they are planting correctly.

Don't forget restrooms for your work crews who are on-site for more than 2-3 hours. If they are not available near-by, it is worth renting one.

The amount of work accomplished and general knowledge of "Ameri-corps" groups varies considerably. The key seems to be good leadership. If the service group does not have sensible, motivating leaders, you may have to provide them in-house.

IX. MONITORING AND MAINTENANCE PLAN:

The restoration plan plant list is shown in Figure 3. This list identifies the approximate number of trees and shrubs planted in each area. However, no one kept track of exactly where volunteers planted each plant. To help with long-term monitoring of plant success, cover and diversity, a transect was established through the middle of the park with the help of Metro during the summer of 1997. Baseline information on the vegetation was collected. Future monitoring can easily be done by using this transect and comparing the baseline data with the current year's plant composition. See Attachment B, monitoring project report by Sasha Weinstein.

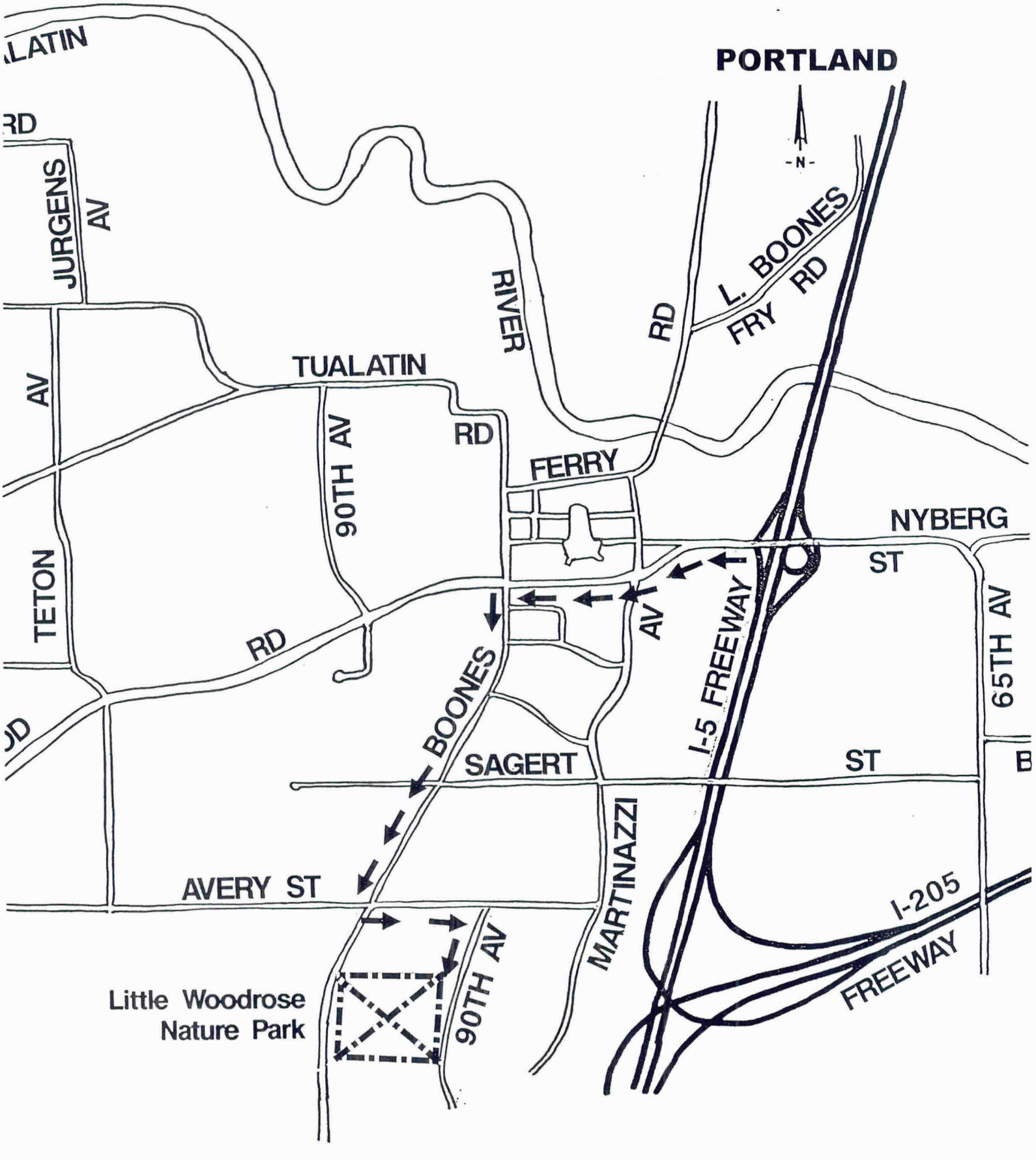
Monitoring will also include photographing the park at eight different photo points. This will provide qualitative information on the vegetative growth of the area over time. Figure 4 shows the location of the photo points and Attachment C contains the colored copies of the photos taken at each photo point on July 1997. Slides, also taken in July at each photo point, are also included with this report.

Maintenance of the park is the responsibility of the Parks Maintenance Crew who spend approximately one to eight hours a week in the park. Maintenance includes watering plants, litter pick-up, weed control, and general maintenance as required. Blackberry, ivy and other non-natives will be kept in check with spot applications of herbicide. Areas which lack ground cover will be seeded this fall with a native grass and wildflower mix, as suggested by the Weinstein's monitoring report.

This park has been adopted by the Tualatin Rotary and Boy Scout Troop 35. Their immediate plan is to repair the existing trail through the park. They will also pick up litter and do other tasks as needed which will supplement the maintenance staff's time.

FIGURE 1

Vicinity Map



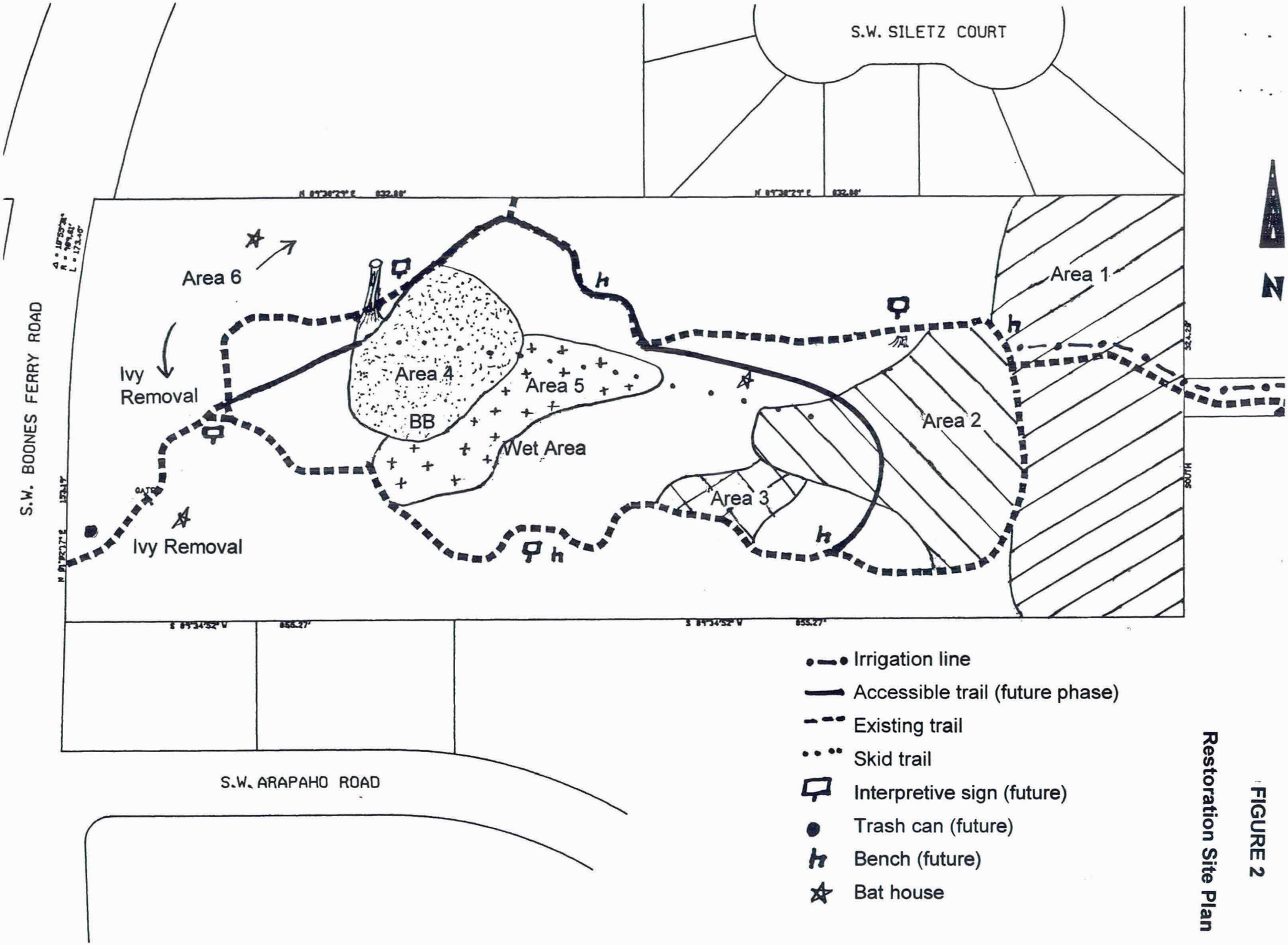


FIGURE 2
Restoration Site Plan

FIGURE 3

LITTLE WOOD ROSE NATURE PARK RESTORATION PLAN
PLANT LIST

Area 1 - Dry/Sunny			
Western Red Cedar	55	Snowberry	15
Vine Maple	15	Salal	10
Big Leaf Maple	15	Nootka Rose	5
Red Alder	12	Red Flowering Currant	5
Oregon Ash	3		
Area 2 - Dry /Sunny/Sloping area			
Big Leaf Maple	5	Oceanspray	10
Western Red Cedar	20	Nootka Rose	15
Vine Maple	8	Elderberry	15
Oregon Ash	5	Wildflower seed mix	
Area 3 - Shady/Dry area			
Western Red Cedar	5	Sword Fern	15
Vine Maple	10	Snowberry	15
Red Alder	3	Red Flowering Current	5
Oregon Ash	2	Scouler's Willow	10
		Salal	5
Area 4 - Dry/Sunny/small area		Grass/wildflower seed mix	
Ponderosa Pine	25		
White Oak	15		
Western Red Cedar	5		
Area 5 - Wet/Sunny area			
Oregon Ash	10	Red-osier Dogwood	20
Red Alder	20	Elderberry	13
Western Red Cedar	15	Spirea	45
Big Leaf Maple	15	Nookta rose	15
Vine Maple	15	Pacific Ninebark	10
Scouler's willow	25	Slough Sedge	1
		Snowberry	10
		Sword Fern	10
Area 6 - Unlogged, shady			
Evergreen Huckleberry	10		
Sword Fern	15		
Seedlings (various locations)			
Western Red Cedar	35		
Western Hemlock	35		
Incense Cedar	35		

08/19/97

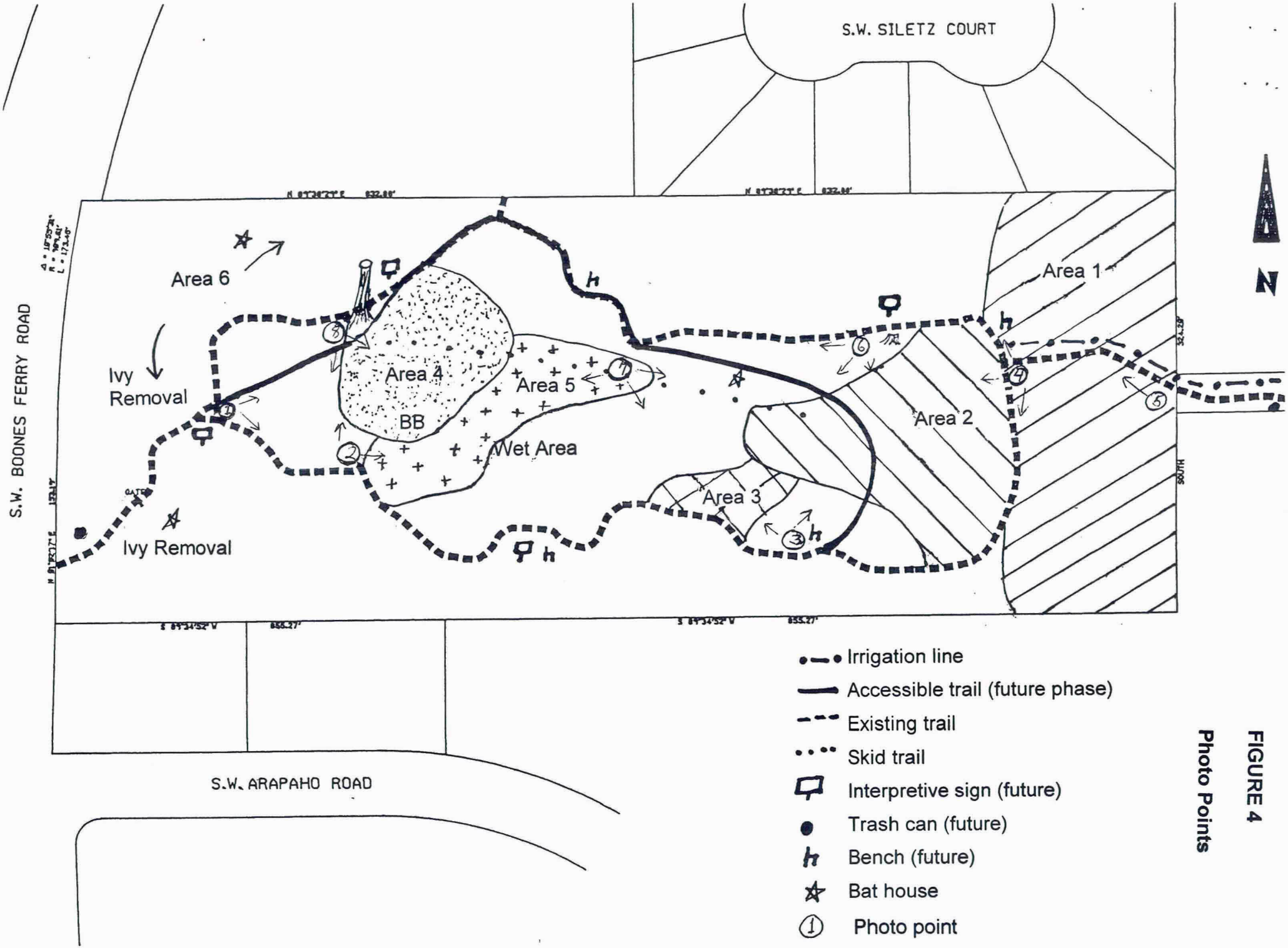


FIGURE 4
Photo Points

TUALATIN TIMES
TUALATIN, OREGON
A COMMUNITY NEWSPAPER
Thursday, February 20, 1997

Plant trees Saturday at Little Wood Rose

TUALATIN — The city will hold a tree planting day Saturday at Little Wood Rose Nature Park, where volunteers will finish the planting work begun in November.

The event runs from 9 a.m. to noon at the park, located at 21000 S.W. Boones Ferry Road, just north of Arapaho Road. Volunteers will meet at the 90th Avenue entrance to the park. Bring gloves, shovels and pruners, and dress for the weather.

A number of bare root trees need to be planted this month, and there is more ivy and blackberry to remove.

For more information, call Bonnie Watson or Virginia Dodson at the Parks and Recreation Department, 692-2000.

Attachment A

METROWEST

THE OREGONIAN, THURSDAY, FEBRUARY 19, 1997

News of Banks, Beaverton, Cornelius, Forest Grove, Gaston, Hillsboro, King City, North Plains, Sherwood, Tigard, Tualatin and other communities in Washington County

■ **TREE PLANTING:** Volunteers are needed to plant bare-root trees and remove ivy and blackberries from 9 a.m. to noon Saturday at Little Wood Rose Nature Park in Tualatin. Bring gloves, shovels and pruning shears and meet at the park's Southwest 90th Avenue entrance.

SENIOR CENTER ACTIVITIES

TAX ASSISTANCE

Tax aides will be available at the center on Tuesdays and Fridays from 9:00 a.m. until noon starting February 4 and continuing to April 15. This tax aide program sponsored by AARP provides free tax assistance to elderly persons and others with low to moderate incomes. Call 692-6767 for an appointment.

RENTAL ASSISTANCE

Elderly rental assistance (ERA) will be available this tax season. To be eligible for ERA one must: be a renter, be 58 years of age or older; have a household income of less than $10,000 a year; have paid more than 20 percent of income for rent, fuel and utilities; and have assets of no more than $25,000. For seniors over 65 there is no assets limit. For an appointment with a tax aide, call 692-6767.

SENIOR INFORMATION

The Senior Center publishes a newsletter that has a calendar of events, menus and other information for seniors. Call 692-6767 to get on the mailing list.

VALENTINE'S DAY

The Center will celebrate Valentine's Day on February 14. Come for lunch and a good time. No reservations needed.

BOOK REVIEW

Our book discussion group will meet at 11:00 a.m., Thursday, February 27, to review "How the Irish Saved Civilization" by Thomas Cahill and "Charms for the Easy Life" by Kate Gibbons.

The Senior Center and program are provided through a cooperative effort by the City of Tualatin, Washington County Department of Aging, and Loaves & Fishes. Hours: 9:00 a.m. - 6:00 p.m., Val Elligsen, Director - 692-6767.

"LOVE YOUR LIBRARY" CLEANING PARTY

The volunteers were signed up... hats and noise makers were in place... food was ordered... but bad weather and rising waters postponed the Library's annual New Year's Eve Cleaning Party.

However, we are re-grouping, re-stocking, and getting ready for a Valentine theme cleanup: ***Love Your Library!*** Complete with entertainment, door prizes and (after the dusting and cleaning is done), chocolate and desserts by candlelight! Mark your calendar for Saturday, February 15 from 7 - 10 PM. This is one evening out when you won't need a date, but you do need a reservation. Call Bryce at the Library, 692-2000 extension 433 to reserve your place now!

LITTLE WOOD ROSE NATURE PARK PLANTING DAY

A tree planting day is scheduled for Saturday, **February 22, from 9:00am to 12:00pm**.

Come join other volunteers to complete the planting work begun in November. A number of bare root trees need to be planted this month. Also there is more ivy and blackberry that needs to be removed. Volunteers should meet at the 90th Avenue entrance to the park. Bring gloves, shovels, pruners and dress for the weather. For more information, contact Bonnie Watson or Virginia Dodson, Parks and Recreation Department, at 692-2000.

The Parks and Recreation Department would like to recognize the contributions of all the volunteers who turned out on November 16. Over 100 people helped plant trees and removed English ivy. A big thank you to the Tualatin Rotary Club, Tualatin High School Rotary, People for the Planet, Horizon Community Church, Cub Scout Den 8, Boy Scout Troop 530, Boy Scout Pack 480, Brownie Troop #1966, Boy Scout Troop 35, and all the Park neighbors and concerned citizens that came out to help on that cold rainy day.

FREE WATER-WISE LANDSCAPE SEMINAR

The Columbia-Willamette Water Conservation Coalition, representing your local water providers in Clackamas, Multnomah, Washington and Yamhill Counties, are sponsoring two free water-wise landscape seminars to help you prepare your landscape for summer and fall. Mike Darcy, KXL's *In the Garden* host will explain the basics of plant placement,such as locating plants according to sun and/or shade requirements. Dave Snell, Irrigation Specialist and Manager for *Familian Northwest*, will explain water-saving irrigation technology.

SEMINARS

Westside Seminar
Saturday, March 15, 1997
1:00 pm - 4:00 pm
Portland Community College - Rock Creek - Forum Building 3114
17705 NW Springville Rd. - Portland

Eastside Seminar
Saturday, April 5, 1997
1:00 pm - 4:00 pm
Mt. Hood Community College - Cafeteria
257th and SE Stark - Gresham

December 20, 1996

Spirit OF THE Wolf

Tualatin High School 22300 SW Boones Ferry Road, Tualatin, OR 97062 Volume V, Issue 3

TuHS clubs repair park

■ Various clubs plant new trees to replace diseased ones

■ Ian G. Kraus
news editor

Nov. 16 TuHS' Rotary Club, the Horticulture Club and the People for the Planet planted new trees at Little Woodrose Park to replace old trees that had been lost to disease.

Many of the trees had been removed and the park had become somewhat sparse. The park was closed earlier this year because of the sick trees.

The clubs also took out excess ivy and blackberry bushes. Removal of excess plants will help the new trees grow and benefit the older trees as well.

This will improve the overall atmosphere of the park and allow more people to enjoy Tualatin's outdoors.

Though there was bad weather which shortened the endeavor, the clubs still worked from 8 a.m. to noon.

The focus was on putting in native trees. Previously not all of the plants were indigenous.

This was all part of a collective effort with Tualatin Park and Recreation to make our parks more hospitable. It allows work to be done by volunteers at no cost to the City of Tualatin.

Ann Zitzelsberger commented, "This restored vegetation. The parks needed more native plants."

There is a strong probability that these groups will continue to work with City officials. There may be another outing sometime in February.

Zitzelsberger added, "There is still more work to be done."

Students who are interested in participating in this community service should contact Zitzelberger in room 164. This would be an excellent chance for nature-conscious students to help improve our environment and our parks.

Participants clear excess underbrush.

Introduction to Work

■ Students help by doing various projects throughout the city

■ Kelli Toner
staff writer

Two clubs, the Intro to Work club and the Job Club, are available to all students at Tualatin High School. This year they have done various projects thorughout the communtiy.

The Intro to Work Club's latest project is building bat houses for Tualatin City Parks and Recreation. Tualatin is trying to restore its parks, and city officials feel that bat houses will help to preserve some of the wildlife in the parks. The first school to build them, TuHS has so far put up one of their houses in Little Woodrose Nature Park off Boones Ferry Road. The club plans to continue with three more in other parks around Tualatin on Earth Day.

Another project Intro to Work plans on doing this year is building more benches outside by the entrances to our school. The students have put up a few already near the student parking lot entrance and plan to continue building more in various other places.

"The Intro to Work Club would like to thank TVT Die Casting Manufacturing, Inc. for all their support with the funding of this project," comments Terry Schlaes, Intro to Work advisor.

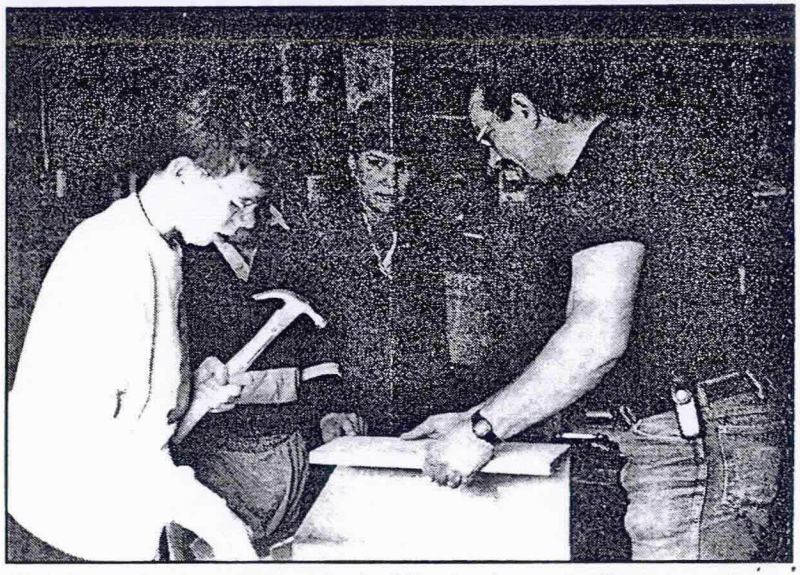
This year, the Job Club has coordinated with other Job Clubs throughout Portland.

A big part of the Job Club's curriculum is site visits, which give students the opportunity to tour various businesses and talk to employers about what kind of skills would be needed for certain jobs. They also can ask about what it would take to get a job there. Two of their site visits include Durametals, which they went to March 13, and Nordstrom, which they went to the week before. What they have learned from both visits is that whichever business they go to, they all say the same thing--you need great communication skills.

Outside of site visits, Job Club also does goal setting, work portfolios and social activities, such as bowling, dancing and partying at Bullwinkles.

In May, the Job Club will participate in the Rose Festival Parade by making their own float as a fund-raiser for the program. They will participate in the Starlight Parade and then, will get the chance to see their float on t.v. in the Rose Festival Parade.

If you are interested in either of these clubs, contact Shlaes in the Intro to Work office, room 164.



Erik Spurrell starts a new project building bat houses for Tualatin parks.

LITTLE WOOD ROSE NATURE PARK

Tualatin Parks And Recreation
Metro Greenspaces Restoration Grant #90544
1997-ongoing

Description of Site

Little Wood Rose Nature Park is located in the city of Tualatin on Boones Ferry Road, south of Avery St. The park is a 6.5 acre rectangularity shaped parcel of woodland within a single family housing neighborhood. The park is a bowl shape, with the slopes being relatively dry and the depression in the center being a seasonally wet area. The park has a trail which circles the park. Prior to 1993, the entire area was dominated by a Douglas fir (*Pseudtsuga menziesii*) canopy, interspersed with western red cedar (*Thuja plicata*), black cottonwood (*Populus balsamifera*), Oregon black ash (*Fraxinus latifolia*) and cherry (*Prunus sp.*). The shrub layer was composed of vine maple (*Acer circinatum*), red elderberry (*Sambucus racemosa*), salal (*Gaultheria shallon*), Oregon grape (*Mahonia aquifolium*) and sword fern (*Polystichum munitum*). From 1993 to 1996 over 200 Douglas fir were logged due to the presence of laminated root rot. As a result, large open areas permeate the once closed canopy park.

Goals and Objectives of Restoration

The major goal of the project is to re-establish a western Oregon native forest in the logged areas of the park. An additional objectives is for the re-established forest to provide wildlife habitat and human access through passive recreation and education opportunities.

Process of Restoration

The park was divided into several different ecological area. A planting list was devised for each area. During the winter of 1997, prior to planting, service groups removed ivy and Himalayan blackberry from the site. Service groups and volunteers planted trees and shrubs. Planted shrubs and trees were then flagged for future reference. An irrigation system as well as bat boxes and one wood duck house were installed at the site.

Summer 1997 Monitoring

As the main goal of the project was to recreate a western Oregon forest, we decided to develop a vegetation monitoring protocol which would monitor the project's progress towards this goal. Blowers, Langtree and Weinstein visited the site on July 23 1997 and Macdonald and Weinstein visited the site on August 1 1997 to collect data from the last 20m square plot. In total on site monitoring took approximately 4 hours.

Vegetation Monitoring

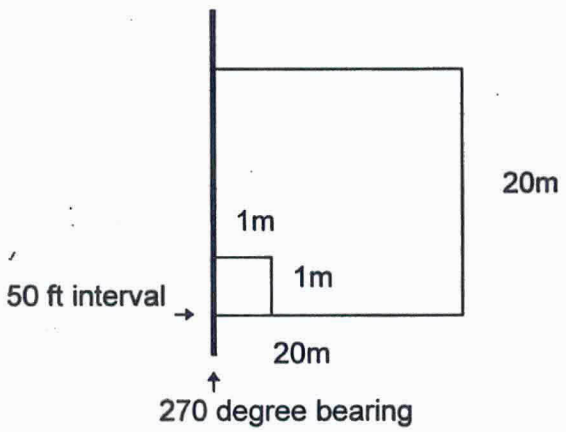
Plot Transect

Protocol:

We set up a plot transect at Little Wood Rose Nature Park. The transect was set up such that it bisected the different ecological areas within the park.

The transect begins at the wood post on the left side of the entrance to the park (the wood post is the one located opposite the corner of the neighbor's property). The transect lies on a bearing of 270 degrees (adjusted for declination). Please see included map for location of transect. Every 50 ft a 1m x 1m plot is set down, every 150 ft (or every third 1m x 1m plot) a 20m x 20m plot is set up. To aid future monitoring efforts we left the flags which mark the plot corners on the site. They alternate green, orange, pink, with pink flags indicating that a 20m square plot needs to be measured. The bottom left corner of all plots is located on the transect, and the 1m and 20m square plots are nested within one another.

Protocol for Setting Up Plots (note that 20m sq. plots are only be set up every 150 ft)



Within the 1m x 1m plots, percent cover of all species is estimated (including canopy and bare ground cover). Within the 20m x 20m plots all woody species (trees and shrubs) over 1 foot in height are identified and counted.

Comments on Protocol:

As the protocol is the same as that used at Gabriel Park, please see the write up for Gabriel Park for details.

Results:

Several of the plots show a high incidence of blackberry and Herb robert or woody debris/wood chips. These plots are often in the most disturbed part of the site. The opening of the canopy has made growing space available and the non- native Himalayan blackberry and Herb robert are taking advantage of the plentiful sunshine. Herb robert will probably die back on its own as the canopy is reestablished.

Himalayan blackberry, however, should be continually removed. On our site tour, Virginia Dodson (project manager) noted that they were currently managing for Himalayan blackberry. In cases were woodchips and woody debris dominate the plots, Virginia Dodson suggested that in some cases the woodchips may be so thick that they are preventing regeneration. In addition, the woodchip dominated areas tend to be in the bottom of the bowl and the south facing slope. Both areas offer more extreme conditions (in the case of the bottom of the bowl, winter inundation with water and in the case of the slope, dry conditions). These factors are probably also contributing to the lack of understory.

Where the 1m x 1m plots give the most information on the groundlayer, the 20m x 20m plots offer the most insight into the shrub to canopy layers. The plots distinctly show the difference between heavily logged areas and the unlogged areas. [See, for example, the difference in species composition between plots 3b (a heavily logged area and 6b (a remnant forest area)].

Please see the appendix for Little Wood Rose for tables of collected data.

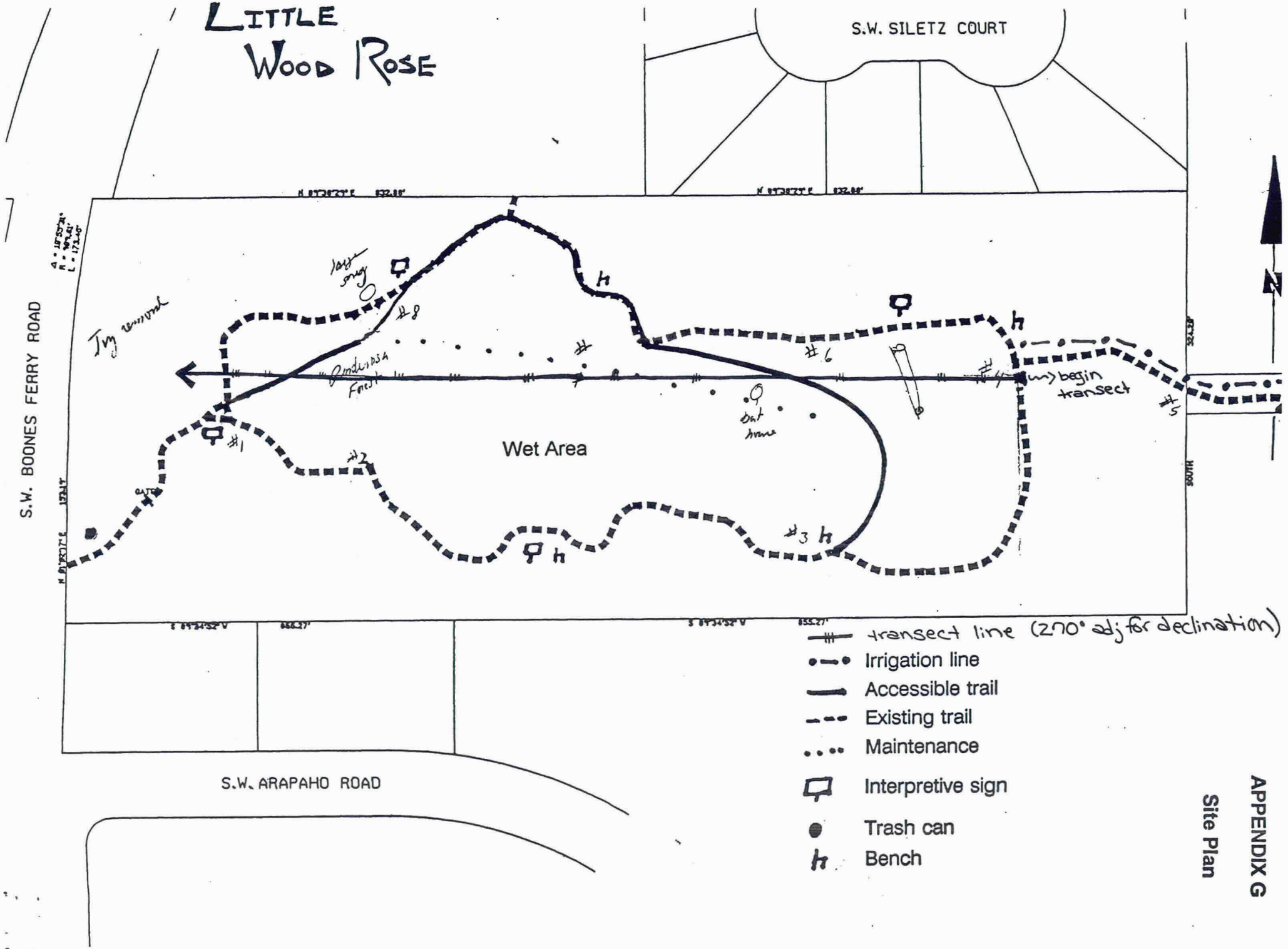
Evaluation:
Overall, the site looks good. However, continued monitoring and maintenance will be critical. Herb robert, trailing blackberry, Himalayan blackberry, bedstraw are competing with the plantings and other natives throughout the site.

Some of the western red cedar and Oregon ash are inappropriately placed where they are subject to dry and hot conditions in the summer on the steep slopes. Especially Oregon black ash like their "feet wet" and western red cedar is not, under natural conditions, found in high densities in more upland areas.

Recommendation:
To continue to meet its objectives some plantings will need additional care. The site is fairly dry and the trees need to grow quickly and begin providing shade. Tualatin City Parks staff and/or volunteers should concentrate on nurturing these trees through summer dry spells. Without shade soon, residual native plants such as Pacific trillium (*Trillium ovatum*) that are just "hanging on" may begin to die out. Himalayan blackberries will be a major competitor with native plants in the next few years if they are not controlled and/or shaded out.

Seeding fireweed in the disturbed areas could be a first step in restoring the soil systems destroyed by the compaction. As mentioned, control of the Himalayan blackberries will be necessary as soon as possible to maintain viability of planted species. Herb robert and bedstraw will probably not be a problem once they are shaded out.

Continuation of walk throughs to check on plantings, invasive non-natives and general condition of the park should be continued along with continuing with the plots set up this summer. Continued use of the plots and transect established at this site will offer insight into the changes in the groundlayer through canopy layer. The data collected this year can be used as a baseline against which to measure future changes.



APPENDIX G

Site Plan

Little Wood Rose Nature Park Appendix

1m x 1m Plots

Plot 1 (50ft):

Common Name	Scientific Name	% Cover
Herb Robert	*Geranium robertanum*	85%
Trailing Blackberry	*Rubus ursinus*	85%
Bracken Fern	*Pteridum aquilinum*	40%
Cleavers	*Galium aparine*	40%
Sword Fern	*Polystichum munitum*	10%
Nipplewort	*Lapsana communis*	5%
Canopy	*NA*	0%

Plot 2 (100ft):

Common Name	Scientific Name	% C
Trailing Blackberry	*Rubus ursinus*	
Woodchip/Woody Debris	*NA*	
Bracken Fern	*Pteridum aquilinum*	
Herb Robert	*Geranium robertanum*	
Western Red Cedar	*Thuja plicata*	
Canopy--8ft Cedar	*NA*	

Plot 3a (150ft):

Common Name	Scientific Name	% Cover
Bracken Fern	*Pteridum aquilinum*	30%
Trailing Blackberry	*Rubus ursinus*	30%
Herb Robert	*Geranium robertanum*	30%
Columbia Brome	*Bromus vulgaris*	15%
Red elderberry	*Sambucus racemosa*	10%
Cleavers	*Galium aparine*	4%
Woodchip/Woody Debris	*NA*	0%
Canopy	*NA*	0%

Plot 4 (200ft):

Common Name	Scientific Name	% C
Woodchips/Woody Debris	*NA*	
Trailing Blackberry	*Rubus ursinus*	
Canopy	*NA*	

Plot 5 (250ft):

Common Name	Scientific Name	% Cover
Woodchip/Woody Debris	*NA*	100%
Canopy--Western Red Cedar	*Thuja plicata*	25%

Plot 6a (300ft):

Common Name	Scientific Name	% C
Canopy--Domestic Cherry	*Prunus sp.*	
Herb Robert	*Geranium robertanum*	
Himilayan Blackberry	*Rubus discolor*	
Nutka Rose	*Rosa nutka*	
Bracken Fern	*Pteridum aquilinum*	
Domestic Cherry	*Prunus sp.*	
Trailing Blackberry	*Rubus ursinus*	
Salal	*Gaultheria shallon*	
Unidentified Seedlings	*NA*	

Plot 7 (350ft):

Common Name	Scientific Name	% Cover
Trailing Blackberry	*Rubus ursinus*	65%
Himilayan Blackberry	*Rubus discolor*	50%
Woodchip/Woody Debris	*NA*	25%
Vine Maple	*Acer circinatum*	15%
Canopy--Hazelnut	*Corylus cornuta*	10%

Plot 8 (400ft):

Common Name	Scientific Name	% C
Canopy--Oregon Black Ash	*Fraxinus latifolia*	
Woodchip/Woody Debris	*NA*	

Plot 9a (450ft):

Common Name	Scientific Name	% Cover
Woodchips/Woody Debris	*NA*	60%
Himilayan Blackberry	*Rubus discolor*	20%

Plot 10 (500ft):

Common Name	Scientific Name	% C
Woodchips/Woody Debris	*NA*	
Himilayan Blackberry	*Rubus discolor*	

Oregon Black Ash	*Fraxinus latifolia*	15%
Herb Robert	*Geranium robertanum*	4%
Canopy	*NA*	0%

Plot 11 (550ft):

Common Name	Scientific Name	% Cover
Herb Robert	*Geranium robertanum*	100%
Trailing Blackberry	*Rubus ursinus*	85%
Sword Fern	*Polystichum munitum*	20%
Bracken Fern	*Pteridum aquilinum*	15%
Canopy--Oregon Black Ash	*Fraxinus latifolia*	15%

Plot 12 (600ft):

Common Name	Scientific Name	% C
Herb Robert	*Geranium robertanum*	
Trailing Blackberry	*Rubus ursinus*	
Nipplewort	*Lapsana communis*	
Bracken Fern	*Pteridum aquilinum*	
Canopy--Pacific Dogwood	*Cornus nuttallii*	
Rose sp.	*Rosa sp.*	
Prickly Lettuce		

Plot 13 (650ft):

Common Name	Scientific Name	% Cover
Herb Robert	*Geranium robertanum*	100%
Willow Herb	*Epilobium ciliatum*	25%
Mullien	*Verbascum thapsus*	20%
Tansy Ragwort	*Senecio jacobaea*	7%
Cat's Ear	*Hypochaeris radicata*	5%
Lamb's Quarter	*Chenopodium album*	4%
Fireweed	*Epilobium angustifolium*	3%
Canopy	*NA*	0%

Plot 14 (700ft):

Common Name	Scientific Name	% C
Canopy--Douglas Fir	*Pseudtsuga menziesii*	
Ocean Spray	*Holodiscus discolor*	
Herb Robert	*Geranium robertanum*	
Ground--some evergreen debris	*NA*	
Sword Fern	*Polystichum munitum*	
Salal	*Gaultheria shallon*	
Prickly Lettuce		
Himilayan Blackberry	*Rubus discolor*	
Hazelnut	*Corylus cornuta*	
Ivy		
Snowberry	*Symphoricarpos albus*	

Plot 15 (750ft):

Common Name	Scientific Name	% Cover
Trail	*NA*	100%
Canopy--Douglas Fir	*Pseudtsuga menziesii*	90%

20m x 20m Plots

Plot 3b (150ft):

Common Name	Scientific Name	Number
Red Elderberry	*Sambucus racemosa*	24
Hazelnut	*Corylus cornuta*	22
Domestic Cherry	*Prunus sp.*	17
Thimbleberry	*Rubus parviflorus*	15
Western Red Cedar	*Thuja plicata*	7
Bigleaf Maple	*Acer macrophylum*	6
Vine Maple	*Acer circinatum*	6
Snowberry	*Symphoricarpos albus*	5
Pacific Dogwood	*Cornus nuttallii*	3
Snags	*NA*	3
American Holly		2
Red Flowering Current	*Ribes sanguineum*	2
English Walnut		1
Ocean Spray	*Holodiscus discolor*	1

Plot 6b (300ft):

Common Name	Scientific Name	Numb
Thimbleberry	*Rubus parviflorus*	1
Domestic Cherry	*Prunus sp.*	
Red Elderberry	*Sambucus racemosa*	
Hazelnut	*Corylus cornuta*	
Douglis Fir	*Pseudtsuga menziesii*	
Baldhip Rose	*Rosa gymnocarpa*	
Oregon Black Ash	*Fraxinus latifolia*	
Snowberry	*Symphoricarpos albus*	
Pacific Dogwood	*Cornus nuttallii*	
Snags	*NA*	

Baldhip Rose	*Rosa gymnocarpa*	1
Red Oak sp.	*Quercus sp.*	1

Plot 9b (450ft):

Common Name	Scientific Name	Number	
Red Elderberry	*Sambucus racemosa*	65	dense patch
Domestic Cherry	*Prunus sp.*	19	
Hazelnut	*Corylus cornuta*	6	
Willow	*Salix sp.*	6	
Douglas Spirea	*Spiraea douglasii*	4	
Bigleaf Maple	*Acer macrophylum*	4	
Cascara	*Rhamnus purshiana*	4	
Salal	*Gautheria shallon*	4	
Snowberry	*Symphoricarpos albus*	4	
Pacific Crabapple	*Malus fusca*	4	
Douglas Fir	*Pseudotsuga menziesii*	3	
Oregon Black Ash	*Fraxinus latifolia*	3	
Vine Maple	*Acer circinatum*	3	
Mountain Ash	*Sorbus sp.*	3	
Baldhip Rose	*Rosa gymnocarpa*	2	
English Hawthorn	*Crataegus sp.*	1	

Plot 12b (600ft):

Common Name	Scientific Name	Numb
Red Elderberry	*Sambucus racemosa*	
Hazelnut	*Corylus cornuta*	
Ponderosa Pine	*Pinus ponderosa*	
Domestic Cherry	*Prunus sp.*	
Pacific Dogwood	*Cornus nuttallii*	
Ocean Spray	*Holodiscus discolor*	
Snowberry	*Symphoricarpos albus*	
Western Red Cedar	*Thuja plicata*	
Nootka Rose	*Rosa notkana*	
American Holly		
Red Flowering Current	*Ribes sanguineum*	
Oregon White Oak	*Quercus garryana*	

Plot 15b (750ft):

Common Name	Scientific Name	Numb
Hazelnut	*Corylus cornuta*	
Domestic Cherry	*Prunus sp.*	
Ocean Spray	*Holodiscus discolor*	
Cascara	*Rhamnus purshiana*	
Pacific Dogwood	*Cornus nuttallii*	
Snowberry	*Symphoricarpos albus*	
Douglas Fir	*Pseudotsuga menziesii*	
Baldhip Rose	*Rosa gymnocarpa*	
Red Elderberry	*Sambucus racemosa*	
Rose	*Rosa sp.*	
Laural Hedge		
Bigleaf Maple	*Acer macrophylum*	
Vine Maple	*Acer circinatum*	
Tall Oregon Grape	*Mahonia aquifolium*	
Salal	*Gaultheria ovatifolia*	
Unknown shrub	NA	