# Deer Creek Restoration Project Final Report
# Funding Year: 2000-2001
# Recipient: Clackamas County Service District #1

**PROJECT DESCRIPTION**

Water Environment Services (WES) is restorating an urban stream in north Clackamas County that supports ESA listed fish species. In summer, 2000, WES staff removed invasive species and placed large, woody debris into the stream. WES and Metro/USFWS have a grant contract for replanting the site with native trees and shrubs. WES hosted three volunteer planting events with the Friends of Trees on January 20, February 17, and March 17 of 2001. Attendance at all three volunteer events was very good, and planted 5,000 trees and shrubs of 30 different native species (see attached planting list). WES also worked with the Soils for Salmon program to place mulch over the site as a soil amendment. Mycorrhizal fungi and Soil Moist Fines were also purchased and used through the Metro contract to determine whether those soil amendments are successful in riparian planting projects. WES has initiated maintenance activities on the site which will last for the next four year. The maintenance plan for the site includes summer waterings, remulching of trees and shrubs, and manual removal of invasive plant species.

**GOALS AND BENEFITS**

Goals for the Deer Creek project site include removing invasive plant species, and re-establishing a healthy, native riparian corridor along the stream. A healthy riparian area functions to provide shading to Deer Creek, which will lower water temperatures and benefit aquatic and fish species utlizing the creek as habitat. Another goal of the project site is to involve Clackamas County citizens in stream restoration and salmon recovery efforts in their neighborhoods, and provide public education for long term environmental stewardship.

**WORK TASKS AND TIMELINES**

October: Work Crews on site to remove invasive species
November: Work Crews on-site to remove invasive species, Friends of Trees and WES preparing planting events, ordering plants, mulch, and planting materials
December: Work crews on site to remove invasive species, trash; Mycorrhizal fungi and Soil Moist ordered and delivered.
January: Preparation for January 20th planting event; on January 20th 110 volunteers planted 600 trees and shrubs.
February: Preparation for February 17th event; on February 17th 100 volunteers planted 800 trees and shrubs.
March: Preparation for March 17th planting event; on March 17th 147 volunteers planted 725 trees and shrubs.
April: Maintenance begins; grant contract with Metro closed out

**PROJECT BUDGET**

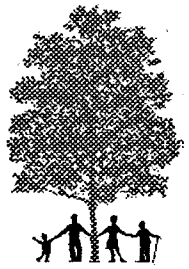
Please see attached

**PROJECT STAFF/VOLUNTEERS**

WES staff: Karen Streeter, Jim Burch, Matt House, Carol Drudis
Friends of Trees Staff: Tuck Clinehens, Anil Devnani
Volunteers: Cub Scouts, Clackamas High School Students, citizens of Clackamas County; Friends of Kellogg and Mt. Scott Creeks Watershed (approximately 375 total)

**PROJECT RELATIONSHIP TO GREENSPACES PROGRAM**

The Deer Creek project site is located within Metro's Urban Growth Boundary, and as a result, geographically is within the range of the Greenspaces Program. The goal of the greenspaces program is



Friends of Trees

April 8, 2001

**TO:**
WES
Attention: Karen Streeter
9101 SE Sunnybrook Blvd. Suite 441
Clackamas, OR 97015

**Remit to:**
**Friends of Trees**
**2831 NE MLK Jr. Blvd.**
**Portland, OR 97212**

# Invoice # NA Apr-07

Friends of Trees TIN 93-0999999
RESTORATION EXPERNSES FOR WES SITES

| **Description** | **Amount** |
|---|---|
| Mt. Scott Headwaters (plants) | 69.30 |
| Deer Creek (plants) | 2,475.00 |
| Phillips Creek (plants) | 1116.50 |
| Cedar Park (plants) | 993.90 |
| Deer Creek/Phillips Creek (live stakes) | 1500.00 |
| Bamboo | 859.09 |
| Containerized Plants | 316.50 |
| Mulch | 508.00 |
| | |
| **Total this invoice** | **$7838.29** |
| | |
| | |

Please Pay by May 15th. Thanks You!

to provide funding for urban projects that emphasize environmental education, habitat enhancement and watershed health. The Deer Creek project directly supports that goal because it is an open space owned by Clackamas County, located in the heart of urban Clackamas County, and is restoring the environment for future generations.

## WHAT WORKED, WHAT DIDN'T, HELPFUL HINTS

What Worked: Using the Friends of Trees to help with planning planting projects and plan volunteer events worked great. Using Corrections Crews to remove invasive species is a source of low cost labor, and helps keep projects under budget. Mulching the site to amend the soil will help plant growth and retard the reinvasion of invasive species.

What Didn't Work: One of our planting events was on St. Patricks day, and another date was moved because we had set it for a holiday weekend. We forgot to order Porta Potties for one of the planting dates, and had to shuttle people back and forth to the WES building to use the restroom. We had not anticipated so many volunteers at our first planting event (January), and had too many cars for the size of parking lot we had arranged for. We overflowed into a larger parking lot, and luckily the lot owners were generous and not upset about this.

Helpful Hints: Citizens seem to really be looking for volunteer opportunities such as these. Parents like to teach their kids about the value of the environment, and many schools are requiring attendance at planting events to get credits in school. Mulching the site holds water, which will be invaluable over this year's drought summer, and mixing in the Soil Moist Fines, which also store and release water over time, should also prove invaluable.

## ADVICE FOR OTHER PROJECT MANAGERS

1. Ask for assistance from resouce agencies who have hosted successful planting projects in the past, such as the Unified Sewerage Agency, Water Envirionment Services, the Friends of Trees, and the Oregon Department of Fish and Wildlife.
2. Look to your County Correction's Department for work crews. These folks are very cost effective, bring their own equipment, and provide a hard day's work for very little money. Correction's Crews can only work on publicly owned land, however.

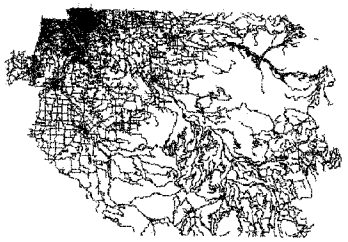
## MONITORING AND MAINTENANCE PLAN

| Month, Annually | Activity |
|---|---|
| April | Spot spray nonnative invasives with a 2%, dyed solution of Rodeo or Mow/cut back exotics when they reach 3'-4' in height (if mowing 1st following with herbicide application when plants reach 3'-4' tall, most likely in May-June) |
| May | Mow dead aboveground biomass if applicable. Water vegetation depending on weather conditions |
| June | Water vegetation, Clipping/Mulch if needed (FOT) |
| July | Water vegetation |
| August | Water vegetation, Cut back/Mow exotic vegetation, Mulch if needed (FOT), Monitoring (FOT) |
| September | Water vegetation, Spot spray nonnative vegetation as described above |
| October | Water vegetation depending on weather conditions |

## ACCURATE COUNT OF NUMBERS AND SPECIES OF TREES AND SHRUBS PLANTED

Please see attached planting list for Deer Creek.

# Deer Creek Restoration Project



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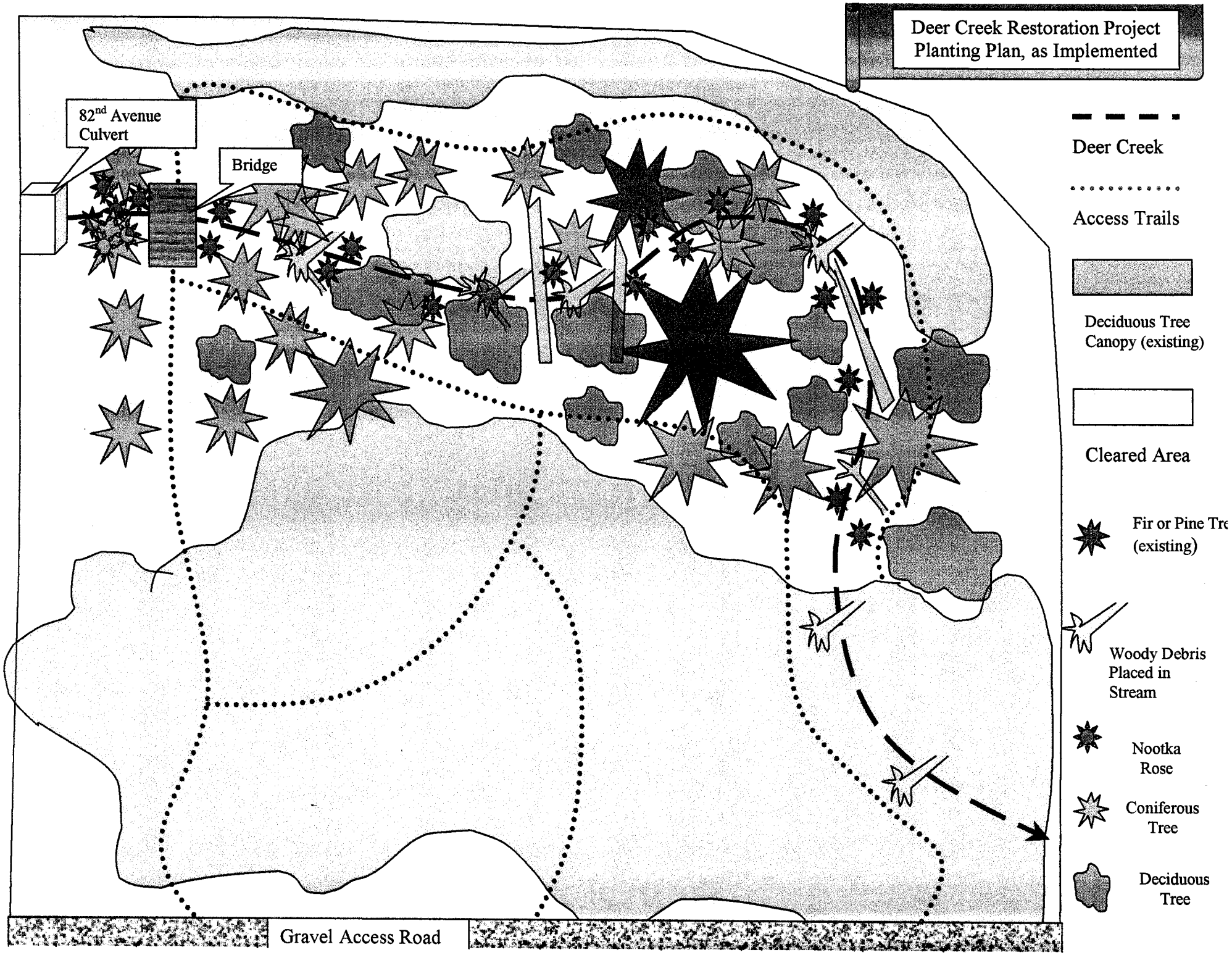
WATER ENVIRONMENT SERVICES
A Department of Clackamas County

Water Environment Services
9101 SE Sunnybrook Blvd.
Suite 441
Clackamas, OR 97015
(503) 353-4567

October 30, 2000 11:09 AM


Deer Creek Restoration Project
Planting Plan, as Implemented
82nd Avenue Culvert
Bridge
Deer Creek
Access Trails
Deciduous Tree Canopy (existing)
Cleared Area
Fir or Pine Tre (existing)
Woody Debris Placed in Stream
Nootka Rose
Coniferous Tree
Deciduous Tree
Gravel Access Road

| Deer Creek Planting Plan | | | | |
|---|---|---|---|---|
| **Species** | Quantity | January 20, 2001 | February 17, 2001 | March 17, 2001 |
| *Acer circinatum* | 100 | | 50 | 50 |
| *Acer macrophyllum* | 50 | | | 50 |
| Alnus rubra | *300* | 100 | 125 | 75 |
| *Amelanchier alnifolia* | 100 | 100 | | |
| *Arbutus menziesii* | | | | |
| Cornus stolonifera | | | | |
| *Crataegus douglasii (BP)* | 50 | | 50 | |
| *Crataegus douglasii* | 200 | 125 | 25 | 50 |
| *Fraxinus latifolia* | *300* | | 150 | 150 |
| *Gaultheria shallon* | | | | |
| *Berberis aquifolium* | | | | |
| *Malus fusca* | | | | |
| *Oemleria cerasiformis* | 200 | | | 200 |
| *Physocarpus capitatus* | 300 | | 300 | |
| *Populus trichocarpa* | 200 | | 175 | 25 |
| *Pseudotsuga menziesii* | 50 | | | 50 |
| Rhamnus purshiana | | | | |
| *Rose gymnocarpa* | 200 | 200 | | |
| *Rosa pisocarpa* | 100 | 100 | | |
| *Rose nutkana* | | | | |
| *Rubus spectabilis* | | | | |
| Rubus parviflorus | | | | |
| *Salix lasiandra* | 200 | 100 | 50 | 50 |
| *Sambucus racemosa* | | | | |
| *Sambucus cerulea* | | | | |
| Spiraea douglasii | 100 | 100 | | |
| Symphoricarpos albus | 200 | 200 | | |
| *Thuja plicata* | 350 | | 175 | 175 |
| *Tsuga heterophylla* | | | | |
| ***Total*** | **5000** | **1025** | **1100** | **875** |

# Deer Creek Restoration Project Grant Application FINAL BUDGET

Restoration Cost Breakdown 2000-2001

| Metro Request | Invoice From | Invoice Amount |
|---|---|---|
| Site Preparation (6 days of correction crews, $250/day) | Clackamas County Corrections | $ 1,500 |
| Mycorrhizal Fungi and Soil Moist Fines | JRM Chemical | $ 600 |
| Bamboo Stakes | Friends of Trees | $ 859 |
| Containerized Plants | Friends of Trees | $ 317 |
| Sawdust Mulch | Friends of Trees | $ 508 |
| Live Stakes | Friends of Trees | $ 1,000 |
| Plants | Friends of Trees | $ 2,475 |
| **Total Reimbursement Amount** | | $ 7,259 |

| WES Match | Hourly Rate | Unit | Units | Hours Worked | Total |
|---|---|---|---|---|---|
| Planting Volunteers, March 17 | $6.50 | volunteer | 110 | 4 | $ 2,860 |
| Planting Volunteers, February 17 | $6.50 | volunteer | 100 | 4 | $ 2,600 |
| Planting Volunteers, January 20 | $6.50 | volunteer | 147 | 4 | $ 3,822 |
| Clackamas High School Students (Monitoring) | $6.50 | Students | 15 | 15 | $ 1,463 |
| WES Staff | $25.00 | surface water tech | 2 | 40 | $ 2,000 |
| Compost (Soils for Salmon Program) | | | | | $ 2,000 |
| **Total Match Amount** | | | | | $ 14,745 |
| **Total Project Cost:** | | | | | $ 22,003 |