TUALATIN HILLS PARK & RECREATION DISTRICT
NATURAL RESOURCES OFFICE • 15707 S.W. Walker Road • Beaverton, Oregon 97006 • 645-3539 • Fax 614-9514

**MEMO**

TO: Lynn Wilson
Restoration and Education Grants Coordinator
Metro
600 Northeast Grand Avenue
Portland, Oregon 97232-2736

FROM: Ralph Cook, Jr., Naturalist
Tualatin Hills Park & Recreation District

DATE: Thursday 19 December 1996

SUBJECT: **Final Report**
on
Beaverton Creek (Tech Ctr) Wetlands Park Restoration
Metro Contract Number: 904239

Project Objectives:
To add snags and basking logs to islands
To plant trees (Oregon ash and willow species) and some clumps of shrubs on the islands of this wetland, plus create cover for waterfowl along the narrow channels with Douglas' spiraea.

The Park District Natural Resources Department considers the net result of this project a success. While high water through the spring of 1996 seriously impacted the areas planted and dislodged one of the basking logs, the project did accomplish its major goals. Some plants survived (a percentage is not available); the basking log was returned and re-anchored; and the snags and basking logs are frequently used. For example, on May 30, 1996 a western painted turtle was spotted on one of the basking logs, and the larger native willows, which were staked, tied and screened for beavers, are doing well.

As stated in the June 18th Status Report, the general appearance of the wetlands is quite good. At the edges of the channels, Reed canarygrass which dominates the entire wetland, was loosened by last winter's and spring's high water and floated downstream to, in part, become lodged near the spillway. As a benefit, reed canarygrass is less dominant in the channels. While some of this movement of reed canarygrass may have occurred before our planting, some may have occurred afterward. As a consequence, it may have carried some of our plantings with it. During this past growing season, only a few of the new plantings were spotted. However, this wetland is studied closely on a continual basis. A survey using a small boat in the spring of 1997 should reveal whether or not our plantings remain.

Also as stated in the June 18th report, the south and west side edges to the upland have developed even more abundantly in small fruited bulrush (Scirpus microcarpus), red-stem dogwood (Cornus stolonifera), soft rush (Juncus effusus) and red alder (Alnus rubra). The hillside leading to the water is dense in native grasses and lupins. Wildlife sightings, in addition to the western painted turtle, include a male belted kingfisher, a pair of cinnamon teal with ducklings, a spotted sandpiper, cedar waxwings, hooded and

common mergansers green-wing teal, American goldfinches, Vaux's swifts, common yellowthroat, and green-backed heron besides the usual waterfowl, great blue heron and red-tailed hawks.

On Earth Day, April 20, 1996, the Park District hosted more than 60 volunteers at this site. They removed blackberries and to compensate for the estimated loss of the initial plantings of this project, they planted native willows southwest and south of the water's edge opposite the islands. These willows were staked, tied and screened against beaver damage. They appear healthy today. Incidentally, these volunteers paid for a park bench, which the Park District Maintenance Department then installed, overlooking the site.

This park is a "high-visibility, high-use" facility, yet it is a natural area. Its appeal, of course, is its open water with waterfowl, great blue heron, beavers, nutria, fish and raptors. It's a popular place for schools to study wetlands, for people to walk their dogs, and for lunchtime and after-work walks. It withstands intense use well because it keeps human activity within viewing areas and on a peripheral asphalt path. Dog signs work moderately well. Light Rail is coming near-by. Considering the large-scale development of high-density residential units and commercial facilities in the Light Rail plan for this area, this park will continue to receive even greater use. We naturalists feel it can play a key role in establishing an appropriate appreciation for natural areas among the local residents and users.

This project has been instrumental in our enhancement of this park to better fulfill its potential.

Photo-documentation of the project, project forms, invoices, the planting-plan and RFP, which the contractor performed, and my evaluation of the the contractor's work follow:

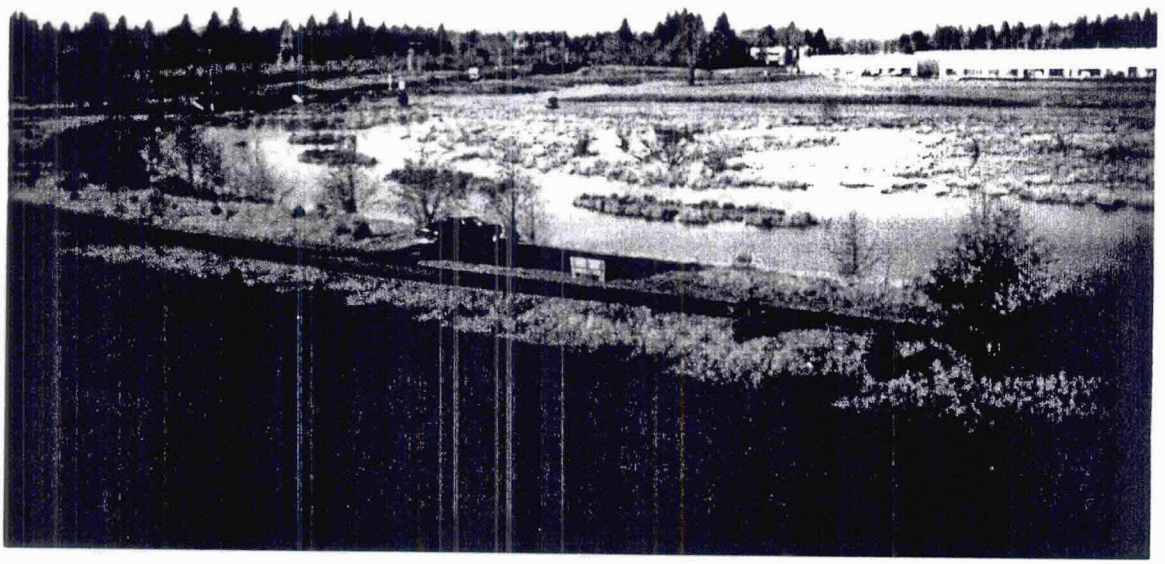
Ralph Cook, Jr.

Ralph Cook, Jr.
Naturalist

DISK: THPRD-09

FILE: MTRO96FN.RPT

Excerpt from Status Report 18 June 96.



This "panoramic" photo taken in November 1994 shows Beaverton Creek Wetlands Park during high water. The islands are nearly inundated. The channels between the islands of reed canarygrass are well defined. Since this is late fall, the alders along the edge lack leaves and permit this view of the water and islands. When the alders leaf out this view will be limited, as in the current photo on the next page.

During the following summer the channels became nearly closed as "shelves" of reed canarygrass crept outward. The islands became more fully exposed, but remained separate. A broad mud bar became exposed at the extreme right of this photo.

As seen here, except for one deteriorating willow snag just to the right of the center of the shot, the wetland lacked perching sites and cover for waterfowl.

This project added snags and basking logs to the island and (hopefully) Douglas's spiraea as future cover along the edges of the channels.

See the next page for today's appearance.

This photo, taken December 18th 1996 shows Beaverton Creek Wetlands Park from the same angle as the previous photo.

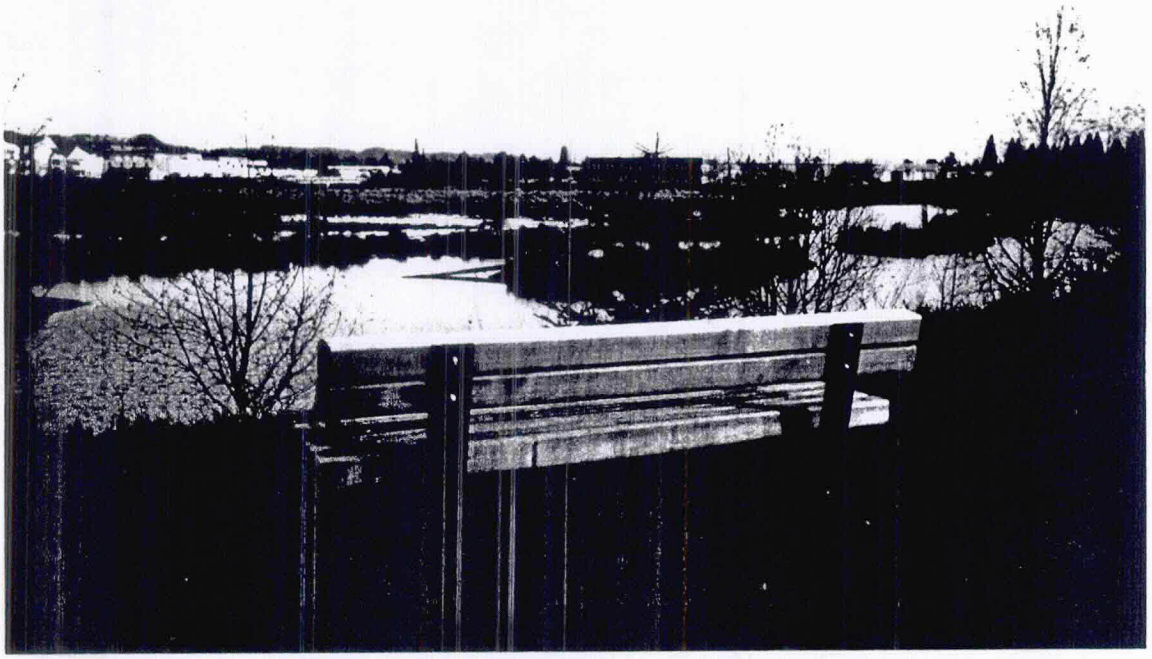
Alder trees edge the water. An interpretive sign has been installed. Snags have been "planted" and basking logs "moored" on the islands.

This shot reveals the snags on Island No. 5. They are seen immediately behind the interpretive sign.

We chose to "plant" cut, live western redcedars. Our reason for this was derived from our first experience "planting" snags at Beacon Hill Park. The dead snags we cut and planted there were too readily broken in the shipping and handling process. Our contractor, David Halstead of Halstead's Arboriculture Consultants (who did both projects with us), rationalized that if we cut live trees they would remain supple and be less damaged in the project. No effort was made to preserve rootballs and keep the trees live, but they stayed green for several months because the holes in which they were planted reached well below the water table of the islands.

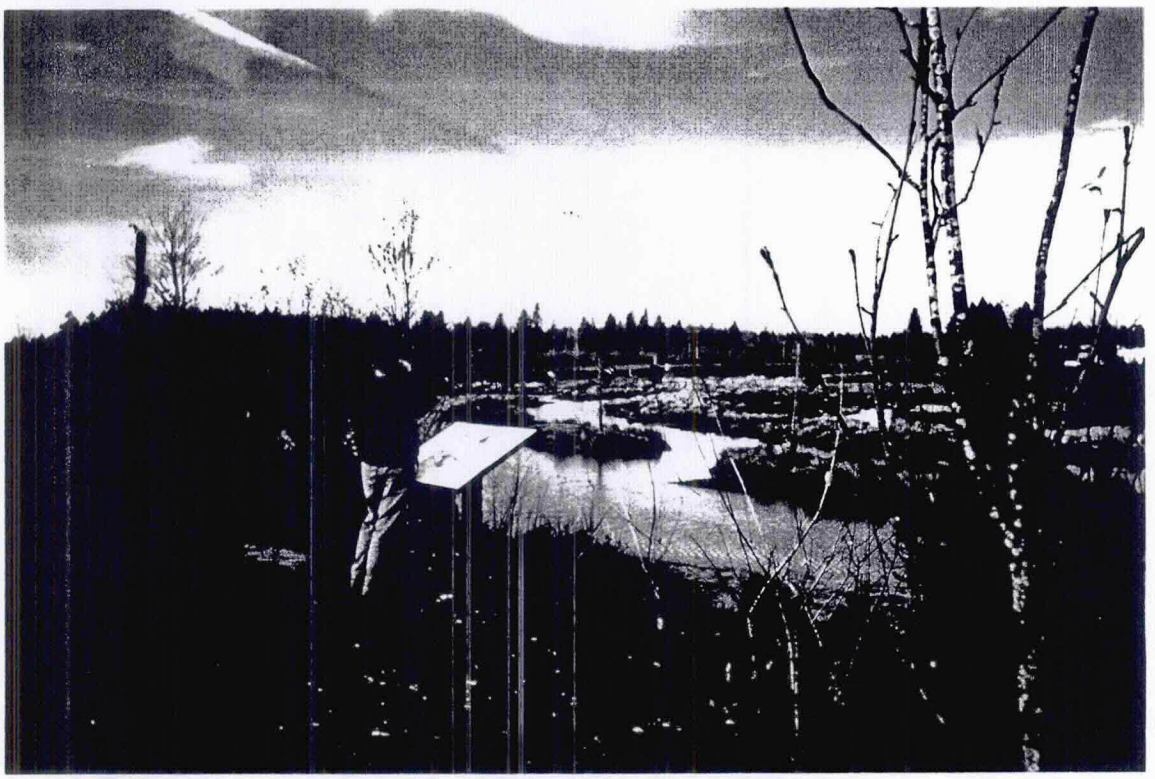
The basking logs (one barely visible at the left edge of the island) were moored at the edges of the islands with "duck bill anchors" used by our Park District to secure picnic tables.

These two photographs better reveal the snags and basking logs placed on the islands. Stoplogs in the weir have been removed for the winter, rainy season. Consequently the water level has dropped and mud bars are exposed in the foreground. Red-stemmed dogwood, alder, Oregon white oaks, and small-fruited bulrush line the water's edge. Although winter's high water impacted the Reed canarygrass, it still dominates these wetlands. Notice the high-density housing in the background.



This park bench, paid for by volunteers, "looks out" on the basking log where Park District Naturalist, Elayne Barclay, discovered a Western painted turtle basking. Below, clumps of Reed canarygrass broken loose by last winter's freshets are lodged against the weir structure.

This is one of the native willows planted by volunteers and protected from beavers by 36-inch, heavy-gauge screen. Beavers will reach over lower screen and will crush lighter gauges, such as chicken wire. The yellow plastic tape prevents the wind from chafing the tender bark of the young tree against the edge of the screen. Project basking logs and snags can be seen in the background. Although they are anchored with duckbills, the basking log at the left has been swung down-current. It should be repositioned at the conclusion of the rainy season. In the photo below: Two viewing areas in this park include benches. This area features interpretive sign as well. This park is popular, and its popularity is expected to rise significantly as high-density housing is further developed near-by.



904 239

# 1999 Monitoring Report

## Beaverton Creek Wetlands Park
(Beaverton Creek Tech Center Park)

### Wetland and Natural Area Enhancement Project
1994 - 95

Beaverton Creek Wetlands Park from TV Highway, high above the park. Heavy floods immediately following this planting project swept away many islands of Reed canarygrass (*Phalaris arundinacea*), leaving extensive open water seen today.

Tualatin Hills Park & Recreation District
Natural Resources Office
Ralph Cook, Jr., Naturalist

File: Metro1.wpd

**Introduction:**

The original objective of this project for Beaverton Creek Tech Center Park (now Beaverton Creek Wetlands Park) was, through a Habitat Restoration Grant, to "...create protective shelter (and) offer more nesting/perching habitats...for wildlife..." The work plan was to place snags and basking logs on the islands and plantings of shrubs and willows on the islands and along the channels.

This placement of snags and basking logs and the planting was done as planned. However, immediately afterward an intense flood scoured the channels and islands of our plantings.

Much of the wetland had been invaded by reed canarygrass (a principal reason for our project). The reed canarygrass biomass composed of old stems and leaves in various stages of decay and living stems and roots appeared to be quite buoyant. There were "shelves" of reed canarygrass leading into deeper water from the soil-based edges of the channels, and islands of reed canarygrass, which had probably broken away from the canarygrass shelves. Due to the shallow roots, it was easily dislodged. When the intense flood occurred, the islands of reed canarygrass were carried away downstream. Some lodged in a peninsula leading from the weir at the outlet of the wetlands nearly all way to the first island immediately upstream. Our plantings at the edges of the channels were never found. Many disappeared from the islands.

The snags were "planted" in deep holes and, thus, remained. The basking logs were secured with duck-bill anchors and remained.

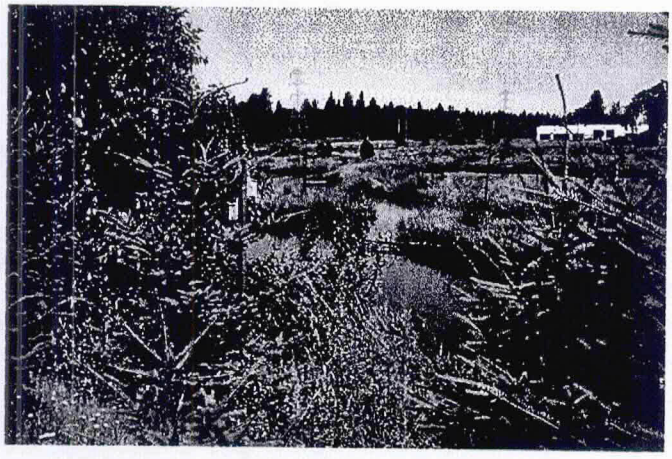
Today two and one-half-foot to five-foot high willow species can be seen on the islands and may be remnants of our planting. One group of Spiraea douglasii can be seen.

In spite of the flooding and while still dominated by reed canarygrass, the project area does offer better habitat today. The snags and basking logs are used as perching and basking sites. There is greater biodiversity on the islands.

An interpretive sign and two park benches have been added to the park. The upland edges of the wetland are now very dense with rushes, sedges, redstem dogwood and alder. Oregon white oaks and pine and fir species have been planted, and an Eagle Scout candidate erected several bird nesting boxes (See following photos.).

There are many apartment units near-by associated with the MAX Light Rail. The park has become increasingly popular, and is home to many birds, beavers and an occasional river otter.

**Photo Point 1**
July 8, 1999
(NOTE: Locations of Photo Points are shown on the map included in this report.)



...taken from a Photo Point adjacent to the interpretive sign seen in the foreground on the cover photo of this report.

This photo shows the "planted" snags on Islands 4 and 5 are in place. A pole with nesting boxes is at the left.

Douglas-firs and Red alders, which were small trees when this planting was done, now obscure many of the Photo Points.

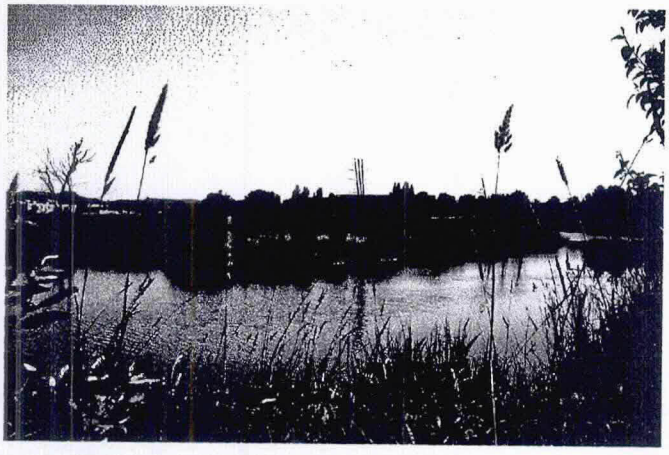


**Photo Point 2**
Islands 4 and 5.

Heavy flooding during the first winter after the planting scoured the channels and islands, removing the new plantings. The snags, planted in deep holes, and the basking logs, secured with duck-bill anchors remain in place.

**Photo Point 3**
Island 1

Not only are the three snags and the one basking log in place, but with binoculars a small cluster of Spiraea douglasii (Part of our planting or volunteer plants?) can be seen between the basking log and the right-most snag.

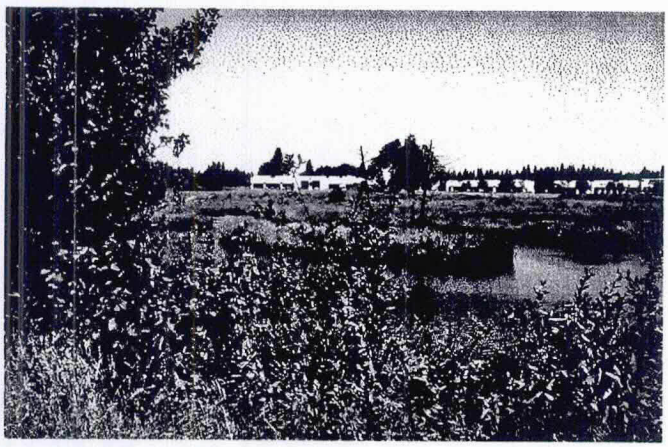
Compare the amount of open water today seen in these photos to that indicated on the map and that shown in the initial photos.

The downstream movement of Reed canarygrass biomass is evident at the left of this photo. A peninsula of canargyrass extends upstream from the weir nearly to Island 1.

**Photo Point 4**

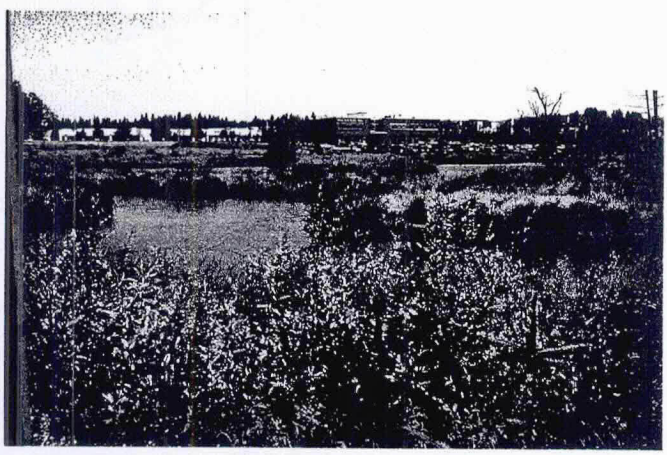
Not only have the trees and shrubs in the foreground grown since the initial photos were taken, but there is a six-month seasonal difference, as well. Here, leaves obscure Island 2, previously clearly shown in Photo Point 4. Island 2 has one, small basking log, still in tact, at its northeast "corner." With binoculars four and five-foot (estimate) Pacific willows (*Salix lasiandra*) can be seen on the island (Part of our planting or volunteers?).

**Photo Point 5**



Islands 2 and 3 (nearly obscured by foliage in the foreground). With binoculars two and one-half-foot (estimate) Pacific willows can be seen on the island. The two snags are still in place, and perform as intended, as do all of the planted snags, as perching sites for birds.

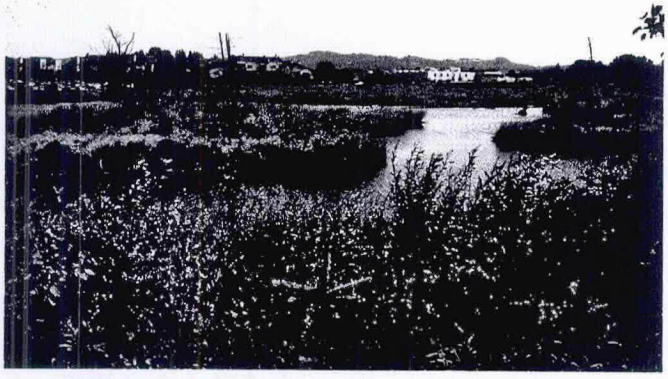
**Photo Point 6**



The snag on Island 4 is in place (seen at the far right). The island also features tall grasses, soft rushes, some small Pacific willows, and common tansy and dandelions. A pole with a bird nesting box is at the far left edge of the photo.

**About the photos**:
These photos were taken with a Kodak DC-260 Digital Camera and enhanced (sharpened and adjusted for light level) with Corel Photo-Paint 8; then inserted as graphics in Corel WordPerfect 8. Each page is filed separately for ease of editing. The quality of digital imaging is largely dependent on the pixel resolution and the quality of the printing paper. These are 1536x1024 pixel images, printed with an Epson Stylus Color 600 printer on Ink Jet paper.

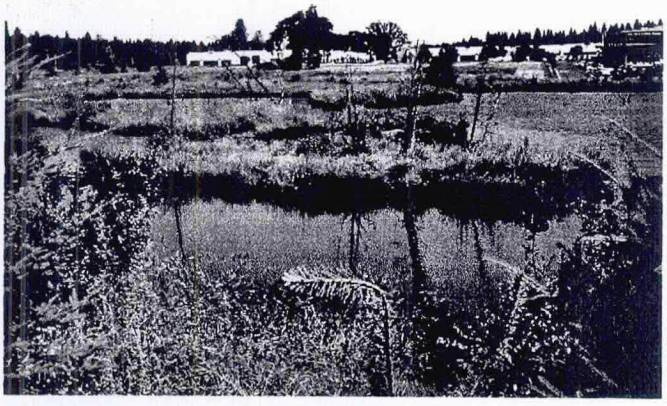
**Photo Point 7**



Island 4 (left) and Island 5 (right). Whereas the snag on Island four is at the far right in Photo Point 6, here it is just left of center.

The Park District "planted" snags initially at Beacon Hill Wetlands Park, because there were no perching sites and the neighbors wanted instant trees. All concerned were surprised at the unexpected instant success. However, the snags at Beacon Hill were obtained as dead trees. This resulted in breakage to the smaller branches during the process of harvesting, transportation and planting. Here at Beaverton Creek Wetlands Park, live Western redcedar trees that needed to be cleared from a construction site were used. The only cutting was to top them so that they could be transported on the length of trailer chosen. Thus, today, except for the topping, they look more like natural snags. The large snag at the left is a willow, which can be seen in the initial photos of the site.

**Photo Point 8**



Island 5: The snag at the west end of the island and the three at the east and the basking log at the west end are all in place. The yellow flowers in the foreground, on the islands, and in the background include Hairy cat's-ear (*Hypochaeris radicata*), Bird's-foot trefoil (*Lotus corniculatus*) and Common tansy (*Tanacetum vulgare*).

**A frustrated beaver?**

Beavers are not supposed to eat pines or firs, but here is a 5-inch fir that has been fallen presumably by a beaver. Reliable citizens have reported seeing nutria building dams and consuming woody material. The tooth marks on this tree are rather narrow. A juvenile beaver or a nutria?

**Attachments:**
Original photos
Two Maps: Photo Point Map and Site Map
File: Metro4.wpd


PHOTO POINT 1.


PHOTO POINT 2.

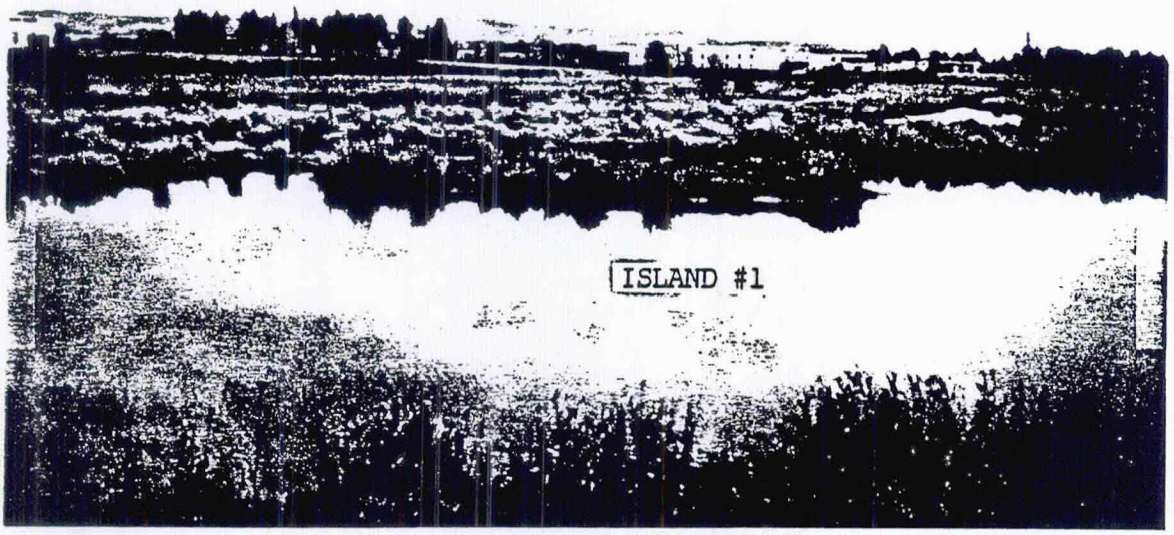



PHOTO POINT 3.


PHOTO POINT 4.

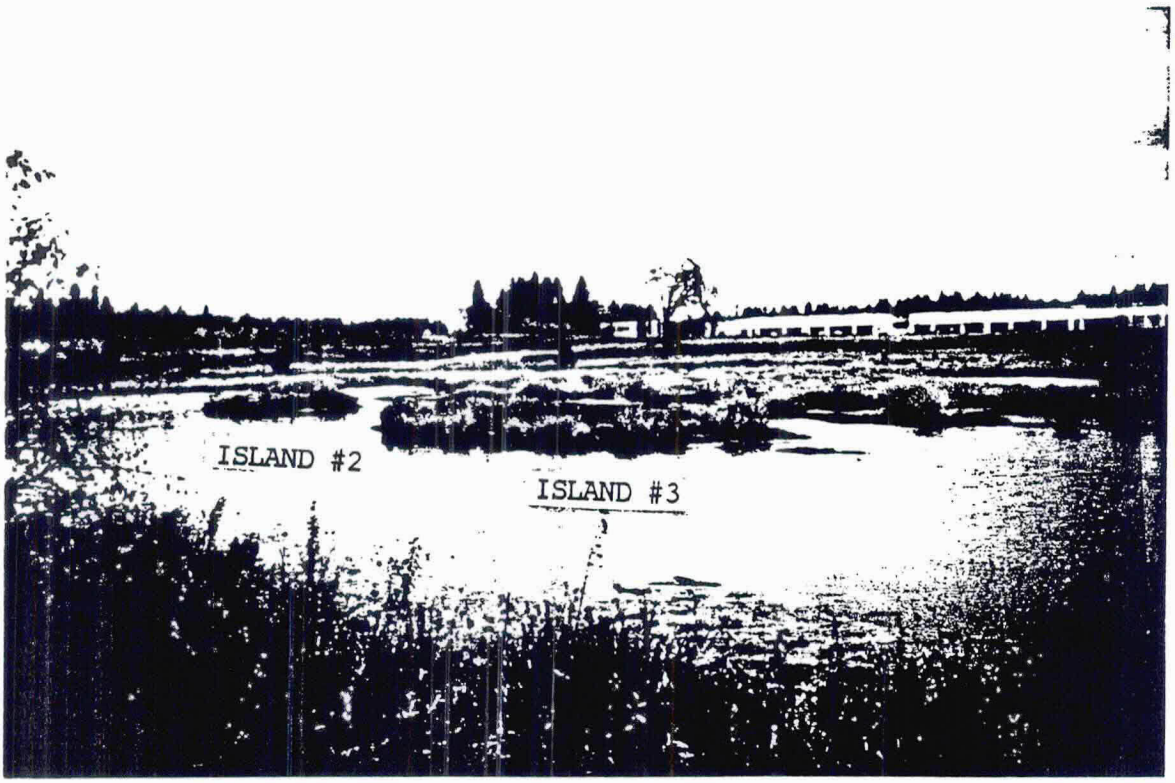



PHOTO POINT 5.

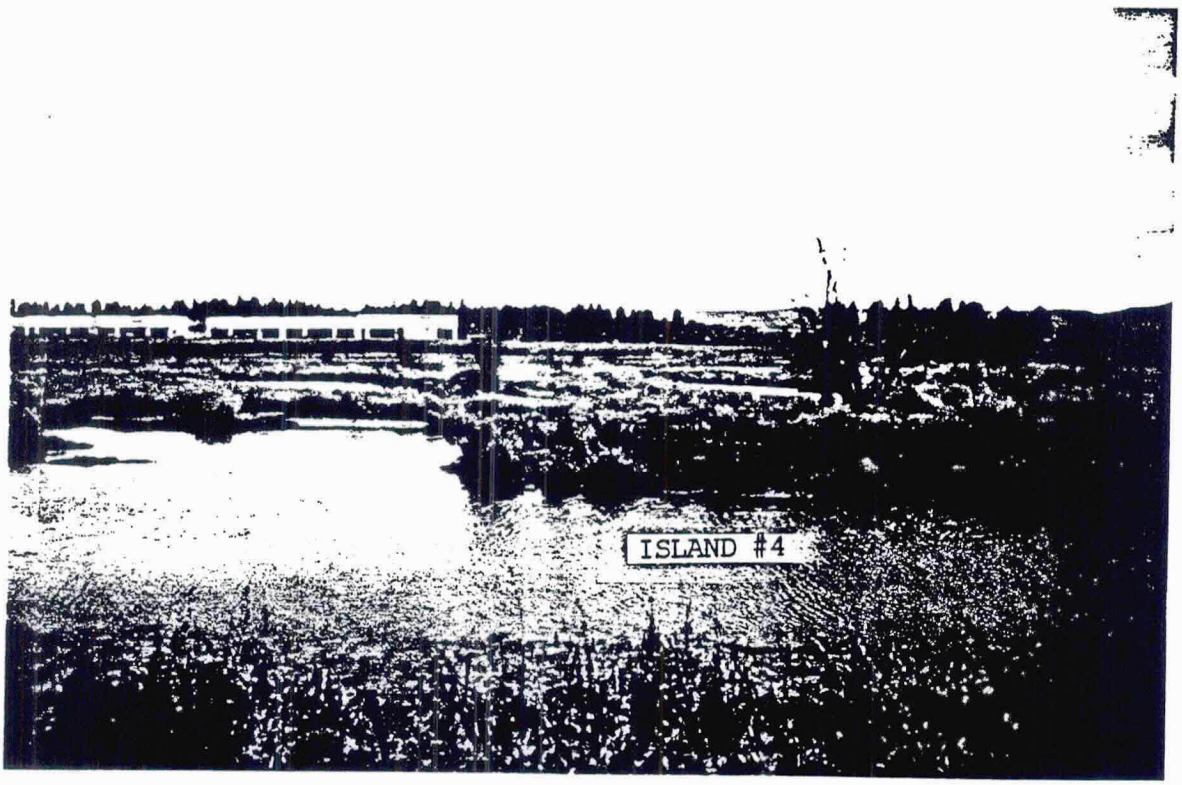



PHOTO POINT 6.

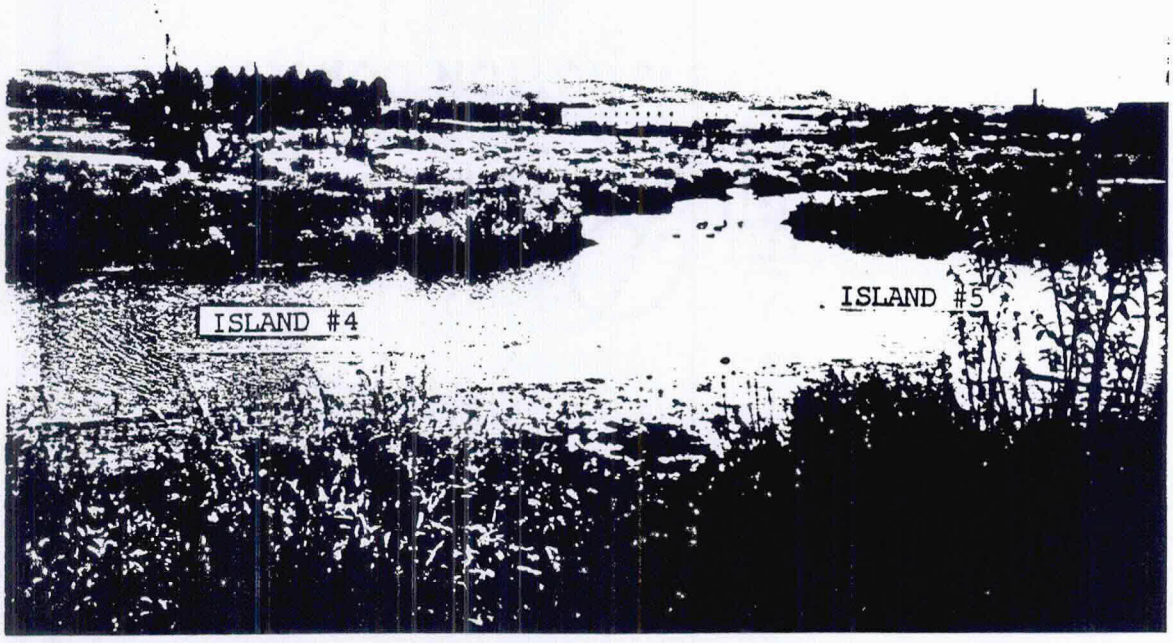



PHOTO POINT 7.


PHOTO POINT 8.

# Revised Map of Planting Plan 1995 Restoration Project

BEAVERTON CREEK TECH CTR PARK (Beaverton Creek Wetlands Park)
TUALATIN HILLS PARK & REC DIST

1 Nov '95 R. Cook, Jr.
UpDate: July 1999

Scale In Feet → 50 100 200 300 400 500 600 700

N North

9 Photo Points
3 ⇨ Position & Direction of Shot & Shot Number

Pacific Willow (Salix Lasiandra)
BEAVERTON CREEK
PONDEROSA PINES
WATER QUALITY POND (1997)
WEIR
476.27 FLOOD PLAIN EDGE
570 ft
FLOOD PLAIN
492.02 ft
5 PONDEROSA PINES
153RD AVE
WOOD POWER POLE ≈12FT
450.94
BEAVERTON CREEK
REED CANARYGRASS
WILLOW SNAGS
PARKING
OFFICE BLDG
UPLAND EDGE
PARK BOUNDARY
NORTHERN RAILROAD
98.15
150.64
402.78
SEDGES, GRASSES, RUSHES, DOGWOOD, ALDER
Photo Point 3
Island #1
Island #2
Island #3
Photo Point 4
Basking Logs
PARK BENCH
2 Photos Point
5in Pine Eaten by Beaver
Island #4
Island #5
Island #6
SNAG
LARGE WILLOW SNAG
5 Photos 6 Points
EDGE • SEDGES, GRASSES, RUSHES, DOGWOOD ALDER AT EDGE
MUD FLAT
JOHNSON CREEK
INTERPRETIVE SIGN
8 Photo Points
PARK BENCH
ALDER AT EDGE
SCATTERED SMALL CONIFERS & WILLOWS
126.64
362.66
PARK BOUNDARY
9 Photos Point
BLACKBERRIES
BLACKBERRIES
421.9
TUALATIN VALLEY HIGHWAY
PAVED TRAIL TO 153RD AVE
Pacific Madrone

S Snag
Basking Log
Open Water
Marshy with REED CANARYGRASS Observed 1994-95

## Project Objectives

Snags & Basking Logs for the Six Islands #'s 1-6.
Trees for the Islands.
Shrubs for the Islands & Channels A, B, C & D.

# BEAVERTON CREEK TECH CENTER & ADJACENT PROPERTIES.

R. Cook
8 Feb '94
Rev 12/9/94

PARK BOUNDARY
=Conifer
IRON ROD
(A) =Alder
(W) =Willow
Unknown Grasses
= Periodically Flooded Wetlands w/Reed canarygrass.

N

North Boundaries

Marker 1.
In center of ditch.
Marker 2.
Approx 8 ft South of toe of floodplain.
Marker 3.
Approx 20 ft Southeast of toe of floodplain

384 ft.
R=54ft
470ft
S5° 25' 50" W
570ft
492.02
LIGHT INDUSTRIAL
MOWED UPLAND
LARGE OREGON WHITE OAK
CULVERT OUTFALL
ALDER CLUMP
Marker 1
SURVEY BENCH-MARK ON BRIDGE
BURLINGTON NORTHERN
SWALE
SWALE PLANTED IN NATIVE GRASSES
FLOOD PLAIN
QUEEN ANNE'S-LACE TEASEL AND OTHER TALL WEEDS
476.27
FLOOD PLAIN
Marker 2
FIVE PONDEROSA PINES
SHRUBS AND TREES
450.94
Marker 3
WEIR
98.15
150.64
BEAVERTON CREEK CONFLUENCE
BEAVERTON CREEK
S.W. 153RD AVE
REED CANARY GRASS
PARKING
CREDIT UNION
PARKING
VIEWPOINT
402.78
POWERLINE
PLANTED IN CONIFERS
4 TO 7 FT. CONIFERS
126.64
MUD FLAT
NEW POT
Bench
362.66
BLACKBERRIES
IRON ROD
TUALATIN VALLEY HIGHWAY
421.9
WHITE RIGHT-OF-WAY POST
RAILROAD
TWIN CULVERTS
JOHNSON CREEK
USA 4X4
295.9ft
Boundary to
ENTRANCE... PAVED PATH
Iron rod w/cap in street.

VICINITY MAP
PARK SITE
N
SW MURRAY BLVD
MILLIKAN
AVE
BEAVERTON CREEK
153rd
TUALATIN VALLEY HIGHWAY

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1700 | FAX 503 797 1797

METRO

June 29, 1998

Dear Project Mangers:

It is a busy time of year for all of us. However, I need to put one more thing on your plate. As a Metro Greenspaces Grant recipient you committed to doing an annual monitoring report on your restoration project for 4 years after instalation. I am enclosing the "exhibit 2" from your contract that lists some of the obligations you committed to. I am also enclosing a sample photo site and log, so you will see that it does not have to be too involved.

The monitoring form highlights some of the information we feel is important to document the success of the project. If this form does not fit your project or if you have your own format, please feel free to use your own or modify the one enclosed.

This type of information is invaluable for Metro to continue the grant program. We need to show products and results from this program to keep it alive. Many of you have been good partners through more than one grant. I want to make this monitoring process as painless as possible. Please call me with any questions or concerns.

P.S. Our grant applications for this cycle are out.

Sincerely,

Lynn Wilson
Restoration and Education Grants Coordinator
(503) 797-1781

monprj.lt