

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF APPROVING A ) RESOLUTION NO. 96-2330  
REFINEMENT PLAN FOR TRYON CREEK )  
LINKAGES TARGET AREA AS ) Introduced by Mike Burton  
OUTLINED IN THE OPEN SPACE ) Executive Officer  
IMPLEMENTATION WORK PLAN )

WHEREAS, In July 1992, Metro completed the Metropolitan Greenspaces Master Plan which identified a desired system of natural areas interconnected with greenways and trails; and

WHEREAS, at the election held on May 16, 1995, the electors of Metro approved Ballot Measure 26-26 which authorizes Metro to issue \$135.6 million in general obligation bonds to finance land acquisition and capital improvements pursuant to Metro's Open Spaces Program; and

WHEREAS, the Tryon Creek Linkages was designated as a Greenspace of regional significance in the Greenspaces Master Plan and identified as a regional target area in the Open Space, Parks and Streams Bond Measure; and

WHEREAS, in November 1995, the Metro Council adopted the Open Space Implementation Work Plan, which calls for a public "refinement" process whereby Metro adopts a Refinement Plan including objectives and a confidential tax lot specific map identifying priority properties for acquisition; and

WHEREAS, Resolution No. 95-2228<sup>A</sup> authorizes the Executive Officer to purchase property with accepted acquisition guidelines as outlined in the Open Space Implementation Work Plan, now therefore,


BE IT RESOLVED,

That the Metro Council adopts the Tryon Creek Linkages Refinement Plan, consisting of objectives and a confidential tax lot specific map identifying priority properties for acquisition, authorizing the Executive Officer to begin the acquisition of property and property rights as detailed in the Open Space Implementation Work Plan adopted in November, 1995 and in Resolution No. 95-2228<sup>A</sup>.

ADOPTED by Metro Council this 16<sup>th</sup> day of May, 1996.

  
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Jon Kvistad, Presiding Officer

Approved as to Form:

  
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Daniel B. Cooper, General Counsel

## Staff Report

### **CONSIDERATION OF RESOLUTION NO. 96-2330, FOR THE PURPOSE OF APPROVING A REFINEMENT PLAN FOR THE TRYON CREEK LINKAGES TARGET AREA AS OUTLINED IN THE OPEN SPACE IMPLEMENTATION WORK PLAN**

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**Date: April 26, 1996**

**Presented by: Charles Ciecko  
Jim Desmond**

#### **PROPOSED ACTION**

**Resolution No. 96-2330 requests the adoption of Target Area boundaries and objectives for the Tryon Creek Linkages Target Area. These boundaries and objectives will be used to guide Metro in the implementation of the Open Space Bond Measure.**

#### **BACKGROUND AND ANALYSIS**

**The Target Area description in the Bond Measure Fact Sheet (authorized by Council Resolutions 95-2113, 94-2050 and 94-2029B) is as follows:**

**"Tryon Creek Linkages. Acquisition of 20 acres in Tryon Creek watershed in Southwest Portland."**

**In the 1992 Greenspaces Master Plan, the Tryon Creek Linkages is described as follows:**

**"Tryon Creek watershed. One of the major remaining free-flowing tributaries running from the West Hills to the Willamette River. Tryon Creek State Park provides a remarkable assemblage of natural vegetation and wildlife habitat in the midst of a very urban area."**

#### **Target Area Description**

The Tryon Creek watershed lies primarily within Multnomah County and the City of Portland jurisdictions. However, portions of the target area cross into Clackamas County and the City of Lake Oswego boundaries. The target area is bounded by Terwilliger Boulevard and the Willamette River to the east; Lake Oswego to the south; the neighborhoods along 50th Avenue and Capitol Highway on the west; and Garden Home Road and 1-5 to the north. The headwaters of Tryon Creek are found south of the intersection of Garden Home Road and Capitol Highway, and the creek joins the Willamette River at a point north of Roehr Park in the City of Lake Oswego. The largest of the target area's significant public open spaces is Tryon Creek State Park, a 635 acre natural day-use area between Terwilliger Boulevard and SW Boones Ferry Road. Tryon Creek State Park contains a 60 to 80 year old second growth forest of mixed coniferous and deciduous trees, and extensive trails and bike paths. Over 50 species of birds and many small mammals inhabit the park, including the sensitive pileated woodpecker. Steelhead and coho use Tryon Creek for spawning and cutthroat trout are found throughout the creek system.

The City of Portland owns three parks including West Portland Park, near the headwaters of Arnold Creek; Maricara Park, and the 23 acre Marshall Park, containing forest cover, habitat and water resources, including Tryon Creek. A joint Metro/Bureau of Environmental Services (BES) acquisition west of West Portland Park, has added approximately 10 acres to the open space inventory. The City of Lake Oswego area parks include Springbrook, Iron Mountain, and Waluga Park. Lewis and Clark College is a large landowner in the area and is planning an expansion of their athletic fields and additional construction.

The Tryon Creek drainage basin comprises Tryon Creek, Arnold Creek, Falling Creek, Playhouse Creek, Park Creek, and other smaller tributaries in a 4,500 acre area. The developable land is primarily zoned for single family housing. Increased construction in recent years has resulted in increased stormwater runoff and detrimental impacts to water quality. The condition of the creeks and tributaries varies, depending on the level of development surrounding them. In some instances, native vegetation and wildlife habitat is well established, in other cases, the stream courses have become degraded and non-native invasive plants are common. Specific sites throughout the watershed were assessed for biological significance by Maurita Smyth. Her report (attached here as Appendix C) provides a detailed description of the vegetation, wildlife and overall open space value of the most conspicuous parcels of undeveloped land.

Some protection to the stream courses is provided through the City of Portland's Environmental Conservation and Environmental Protection Overlay Zones which follow the creek corridors in Multnomah County. In addition, the *Southwest Hills Resource Protection Plan* prepared by the City of Portland identified resource protection measures for Tryon Creek State Park, Arnold Creek, Arnold Creek headwaters, Falling Creek and the Marshall Park area.

The Tryon Creek Linkages target area lies in close proximity to the Willamette Greenway with possible connections to it and the 40-Mile Loop Trail along SW Taylors Ferry Road and Macadam Avenue and the mouth of Tryon Creek to the south. The Terwilliger Trail, which runs through the Tryon Creek Linkages target area and, in particular, the state park, may provide a future connection to the proposed Fanno Creek Greenway.

### **Refinement Process**

The Open Space Implementation Work Plan adopted by the Metro Council in November 1995, required that a Refinement Plan be submitted to the Council for approval for each target area. The Refinement Plan will contain objectives and a confidential tax-lot-specific map identifying priority properties for acquisition, enabling Metro to begin the acquisition of property and property rights as detailed in the Open Space Implementation Work Plan and in Resolution No. 95-2228. Resolution No. 95-2228 authorizes the Executive Officer to acquire real property and property interests subject to the requirements of the *Acquisition Parameters* and *Due Diligence* guidelines of the Open Space Implementation Work Plan."

During the refinement process, field visits were conducted by Metro staff and environmental and planning consultants, biological assessments were undertaken on several important parcels, and planning documents were assessed. Twenty-four individuals were interviewed, representing property owners, governmental agencies, natural resource experts and non-profit advocacy groups. The stakeholders interviewed are noted in Appendix A, and the key refinement findings are summarized below.

## Findings

- All the creek corridors in the Tryon Creek watershed are important to protect for water quality, habitat value and flood control. The riparian areas are also important for controlling temperature and siltation.

Acquisition of property by Metro or increased protection of certain areas as a result of easements, partnerships, or land use regulation would positively impact water quality in this drainage system. Arnold Creek flows into Tryon Creek and its headwater site is sparsely populated and largely undeveloped, but the headwater seep itself has become highly disturbed and the surrounding area is threatened with development. West of SW 35th Ave., the area was platted in 1889 as West Portland Park into 250 foot by 450 foot blocks with 40 foot wide rights-of-way. This unbuilt grid layout does not take into account natural topography. If developed according to existing plats, significant environmental damage would result.

A second important headwater occurs on the property east of Maricara Park. This two acre seep provides water quantity and quality to Arnold Creek and, thus, to Tryon Creek. The habitat value for this site is high based on the plant diversity, presence of water and connection to undisturbed open space.

- Water quality is a primary concern in Tryon Creek. New development is increasing runoff, altering natural flow regimes, and sanitary sewer lines that follow the creek periodically spill contaminated water. The amount of suspended sediments being deposited has increased. Maintenance or enhancement of fish resources will require careful treatment of water quality issues. Buffer areas around the park would enhance watershed protection.
- Several unique parcels ranging from approximately 1.5 to 10 acres were identified for possible acquisition due to their strategic location, resource values and overall conformity to Metro's acquisition criteria. The high land values in the area, together with the relatively small Metro acquisition budget, create the necessity to identify partners among the public and private sectors. A successful group of partnerships could result in leveraging opportunities and an increased amount of acquired land. At least two potential partners have already expressed interest in participation, including the City of Portland.
- Priorities for acquisition should be focused on parcels that directly enhance the State Park or that protect water quality in tributaries. A contiguous open space corridor from Lancaster Court, through Marshall Park, joining Tryon Creek State Park has support among a large number of the stakeholders. A pedestrian connection from Tryon Creek State Park to the mouth of the creek would also be desirable. It is also very important to provide fish passage at the mouth of Tryon Creek. Currently a sewer pipe crosses near the mouth.
- The sanitary sewers in or along the creeks have been in place for many years and it would be prohibitively expensive to move them. According to the Bureau of Environmental Services, they are working with an environmental consultant to remedy associated problems. BES's primary role in relation to this target area will be stewardship.

- Areas along the creek channels that have physical constrictions to fish passage should be reconfigured at some point in the future. The culvert at Tryon Creek and SW Boones Ferry Road is one example.
- A new high school is proposed on Terwilliger Boulevard adjacent to the state park. Many groups and citizens are opposed to this siting due to potential environmental impacts.
- Oregon Department of Parks and Recreation is not considering the purchase of any property around Tryon Creek at this time. This site is low on their priority list.

As a result of these findings, general objectives to guide Metro's acquisition and protection efforts throughout the target area include:

- Protection of water quality in Tryon Creek and its tributaries.
- Linkage between publicly owned open spaces.
- Optimization of the Metro/BES purchase in the West Portland Park area through infill acquisitions and expanded stewardship by neighborhood groups.
- Leverage of limited funds through a combination of strategic purchases and partnership agreements with public agencies and private land owners.
- Contribution to the region-wide network of greenways through linkages on the perimeter of the target area.

A public workshop to discuss the proposed Refinement Plan was held on April 18th in Lake Oswego. Approximately 100 people attended the workshop; their comments are summarized in Appendix B. A biological report by Maurita Smyth, an independent consultant, is attached as Appendix C.

A questionnaire (attached as Appendix D) was circulated and 30\* were returned with the following results:

Q. #1. Prioritization of Key Elements	First Preference	2nd	3rd	4th	5th	6th
Forested riparian areas	77%	10%	13%	0%	0%	0%
Watershed protection	14%	37%	18%	7%	17%	7%
Arnold Creek headwaters	7%	17%	34%	24%	7%	11%
Fisheries preservation	4%	14%	11%	37%	24%	10%
Greenway connection to Willamette River	0%	17%	14%	0%	32%	37%
State Park Buffer Areas	0%	34	11%	31%	21%	33%

\* Not all respondents answered all questions.

Q. #2 Other Activities	First Preference	2nd	3rd	4th	5th	6th
Stream restoration	63%	17%	17%	3%	0%	0%
Linkages to regional greenways	27%	53%	17%	0%	3%	0%
Trails for hiking, biking, horseback riding	7%	10%	14%	41%	28%	0%
Wildlife viewing	0%	14%	30%	20%	33%	3%
Educational	0%	10%	24%	31%	31%	4%

**Regional Parks and Greenspaces Advisory Committee**

A presentation of the Staff Report was given by Metro staff and its consultants at a public meeting in Room 370A of Metro Regional Center on April 25, 1996. This analysis and the resulting objectives were approved by a unanimous vote of the Regional Parks and Greenspaces Advisory Committee.

To adequately protect the water quality and natural resources along Tryon Creek, a Tier I area of approximately 200 acres has been identified. This area contains forested riparian areas along Tryon Creek and headwaters in non-contiguous areas. Tier II includes approximately 70 acres of land that serve to buffer Tryon Creek State Park and connect the park to the mouth of the creek.

**GOAL:**

Protect and enhance the ecological integrity and recreation value of Tryon Creek.

**OBJECTIVES:**

The following are prioritized specific objectives of the Tryon Creek Linkages Refinement Plan:

**Tier I Objectives:**

- Protect the streambed and riparian zone along Tryon Creek for habitat value, flood control and water quality benefits through acquisition, easements, or other preservation strategies.
- Provide linkage between Tryon Creek State Park and Marshall Park.
- Acquire the key parcels in the headwaters of Tryon Creek and Arnold Creek, and their associated seeps and wetlands.

**Tier II Objectives:**

- Provide linkage from the Tryon Creek State Park to the mouth of Tryon Creek at the Willamette River.
- Protect the riparian buffer zones along Arnold Creek and other tributaries in the watershed to provide wildlife corridors, enhance water quality and improve native fish runs.

**Partnership Objectives:**

- Work with neighborhood groups, Oregon Department of Parks and Recreation, and BES to improve habitat along the creeks and promote public education and stewardship.
- Work with private landowners to explore opportunities for conservation easements and water quality protection strategies.
- Work with the City of Portland to assist in land acquisition adjacent to city property such as Marshall, Maricara, and West Portland parks.
- Work with the Portland School District to protect the headwater seep by Maricara Park.
- Work with the City of Lake Oswego, Lewis and Clark College and Riverview Cemetery to coordinate linkages outside the Tryon Creek Linkages target area.
- Work with the City of Portland Sewage Treatment Plant to acquire land at the mouth of Tryon Creek and enhance water quality.

**Executive Officer's Recommendation**

The Executive Officer recommends passage of Resolution No. 96-2330.

**Appendix A  
Stakeholders Interviewed -- Tryon Creek Target Area**

**Liz Callison,  
Friends of West Hills Streams**

**Jack Wiles,  
Oregon State Parks, Portland Office**

**Ron Chinn,  
Marshall Park Neighborhood Association**

**Stephanie Wagner & Louise Shorr,  
Friends of Tryon Creek State Park**

**Chris Beck,  
Trust for Public Land**

**Leonard Gard,  
Land Use Specialist,  
SW Neighborhood Offices**

**Patrice Mango/Ivy Frances,  
Bureau of Environmental Services**

**Judy Henderson,  
Tryon Creek Corridor Committee**

**Diana Lee Haluka  
General Services  
City of Portland**

**Jay Mower,  
Friends of Terwilliger**

**Patricia Huber,  
Property Owner**

**Sonya Kazen,  
Collinsview Neighborhood**

**Gary Evans,  
Dept. of Parks and Recreation,  
City of Lake Oswego**

**Deborah Lev  
Natural Resources Coordinator  
City of Lake Oswego**

**Michael Sestric,  
Lewis and Clark College**

**Dawn Uchiyama,  
Landscape Planner, City of Portland  
Property Owner**

**Guy Orcutt,  
Tryon Creek Council**

**Dennis Comfort,  
Park Naturalist  
Tryon Creek State Park**

**Lucille Beck,  
Friends of Tryon Creek**

**Dick Caldwell,  
Columbia Regional District  
Oregon Department of Fish and Wildlife**

**Jim Sjulín,  
Natural Resources Director,  
City of Portland Parks Department**

**Margarete Nebetta,  
Oregon State Parks**



## Appendix B

**Tryon Creek Linkages Public Workshop  
Lake Oswego City Hall  
April 18, 1996**

### Comments and Questions:

What happens after acquisition? What are the management programs you plan to put in place?

Staff responded by explaining stabilization and land banking, noting that the bond did not contain funds for management but was issued exclusively for acquisition.

We think you're on the right track with your refinement. The only concern we have is that isolated parks will receive inappropriate use from visitors, and would suggest that a caretaker arrangement be explored.

Staff responded that caretaker arrangements are something we are open to and would be happy to explore, but that we wouldn't be opening properties to the public without a management plan.

The Board of Directors of Friends of Tryon Creek has passed a resolution to the effect that the property separating Marshall Park from Tryon Creek State Park should be a top priority and that a trail linking the two should be established.

Calahan Watershed Association-- we are very much in support of your plan, and appreciate the watershed protection priorities it reflects.

The Stephenson Neighborhood Association would like to talk to your staff about how we can donate our environmental protection zone property to the program.

Metro should add to places you've already purchased near the West Portland Park so that the investment you've made there won't be compromised by inappropriate uses on adjacent land.

What is an Environmental Protection Zone?

Staff responded that an EP zone is restrictive zoning that establishes buffers around stream corridors. It is further surrounded by an environmental conservation zone in which development is limited by and often includes mitigation requirements.

To what degree have discussions begun with owners in Tier 1?

Staff responded that in the interest of preserving landowners' privacy, a detailed response was inappropriate, and that because we did not want to get out in front of our refinement process, discussions had in fact been limited. However, once refinement is complete, contact will be swift and extensive.

A spokesman for the Marshall Park Neighborhood Association stated they are 100 percent in support of Metro's efforts, and would like to note that lots between Marshall and Tryon parks would be good acquisitions.

Do you do anything other than outright purchases of property?

Staff responded that the bond measure allowed it to use every tool available to protect lands and, including bargain sales, acceptance of gifts of land, conservation easements, and management agreements. Staff is interested in leveraging bond money to the greatest extent possible through the creative use of such tools.

A member of the audience endorsed acquiring a linkage between Marshall and Tryon parks as a top priority.

Do you have enough money to purchase all of Tier 1?

Staff responded that although funds were limited, through the use of partnerships and creative land protection strategies, the goal was, although a challenge, one that was achievable.

Don't give up on the linkage between Tryon Creek and the Willamette River - it's important to anadromous fish.

## Appendix C

### Biological Site Evaluations Summary Report - Tryon Creek Area, Portland and Lake Oswego, Oregon

**Metro Parks and Open Spaces Program  
Submitted by Maurita Smyth, Environmental Consultant  
April 9, 1996**

This summary includes individual sites previously identified for biological evaluation by interested local parties and Metro staff. Individual site descriptions are based upon a single site visit conducted on March 13th or March 18th, 1996. Many shrubs were beginning to leaf out, but most spring flowering plants were not showing. Consequently, the list of plant species identified during field surveys is not all inclusive of deciduous plants that may or likely exist on any individual site. Additional information on some sites may be found in the Greenspaces inventories conducted in 1990 and 1991 and the Goal Five Inventory conducted in preparation of the Southwest Hills Resource Protection Plan, Bureau of Planning, Portland 1991. For sites with potential to be included in the Metro Parks and Open Spaces program, additional biological information would be needed to develop site specific management plans.

#### **Methods**

Prior to and during field reconnaissance, information was gathered from all available sources on potential areas to be surveyed. Sources included the Tryon Creek Watershed Atlas, the Report on Historic and Current Fish Populations of Streams Within the Greater Portland Metropolitan Area, Tryon Creek Corridor Committee report on the Foley property, among other sources. Interviews were also conducted in the field with local residents, property owners, and representatives of various neighborhood friends groups. Aerial photos interpretation in conjunction with a review of topographic maps was completed to further identify sites that were greater than .75 acres and vegetated at least with overstory trees. Initially, eight potential sites were chosen for field investigation based upon the pre-field information review and recommendations by Metro staff of sites important to local residents.

Field surveys consisted primarily of a walk through noting all plant species, the presence, type, and condition of water features (e.g., springs, seeps, creeks), level of disturbance, complexity and diversity of observed plants and animals or their sign, interspersion or connection to other habitats, and unique features. Habitat value was calculated using the habitat parameters listed above. Notation was also made as to a site's potential for enhancement or restoration and whether it has the potential to provide flood storage or water quality benefits to aquatic wildlife (includes fish).

#### **SITE DESCRIPTIONS**

##### **Site #1 - Arnold Creek Headwater area**

Location: This site is located between SW 43rd and SW 39th streets to the west and east, and Arnold and Coronado streets to the north and south, respectively. The survey included ten acres of a recent Metro purchase, plus additional adjacent lands that border the new purchase.

**Size:** estimated 20 acres, of which approximately 2.0 acres would be new purchase

**Description:** This site is a mixed second-growth (young/mature) conifer-deciduous forest dominated mostly by native plants with some non-native invasive species along the periphery and where the habitat has been disturbed, such as along the recently installed sewer line. Dominant overstory trees include red alder, big-leaf maple, and Douglas-fir with some recruitment as sapling trees. Western red cedar is also present on the site. The shrub layer is well developed. Non-native shrubs include Himalayan blackberry existing as dense stands in border areas and the sewer line near the edge of the habitat, and English holly existing as mostly scattered individuals or small clumps.

Dead wood habitat occurs as scattered stumps and downed logs in varying age classes, many with root wads attached. There is recent windfall especially at the east end and some broken topped trees, mostly big-leaf maple. The creek had running water on the day of the site visit which was clear. The actual headwater seep at Palatine is located in a backyard and is highly disturbed. The seep area at the east end, on what I believe, is the park block site, exhibits hydrologic function, however, a trail runs through the middle of the seep and that area is highly disturbed. The parcels that have are adjacent to Metro's land and the park block essentially continue the habitat provided within the recent purchase. They provide additional buffer to the creek riparian area and the seep.

Wildlife species or their sign observed during the site visit include: golden-crowned kinglet, rufous-sided towhee, ruby-crowned kinglet, Steller's jay, pileated woodpecker (sign), dark-eyed junco, American robin, northern flicker, varied thrush, black-capped chickadee, winter wren (on territory), and band-tailed pigeon. Observed mammals included eastern gray squirrel, chickaree, and mole sign. According to local nearby residents coyote and raccoon have also been observed on the site.

Presence of TES species or other species of concern: Pileated woodpecker sign was observed on several trees within the site. No other species of concern were observed during field surveys.

**Level of disturbance:** The level of disturbance is relatively low throughout most of the site. Non-native invasive plants exist along the periphery and along the sewer line, however, the neighborhood and BES are in the process of removing much of the blackberry and replacing it with native plants. The headwater seep and the east end seep are highly disturbed.

**Habitat Value:** The site's habitat is high based upon the presence and diversity of native plants, the low level of disturbance, well-developed tree, shrub, and herbaceous layers, its size (which provides secure nesting habitat for some species), and the presence of water as a seasonal creek and seeps. Continued problems with non-native plant invading the site is likely high and the site is somewhat isolated from other habitats by virtue of its position in the stream continuum but connected hydrologically and by the continued forest cover to downstream areas.

**Site #2: School District 1 Property located at 25th and Trachsel streets**

**Location:** This site is bordered on the north by Trachsel Street and on the east by the dead-end of 25th Street. The northwestern border is city owned open space land and the southwestern border is Maricara Park.

**Description:** This site and the city-owned parcels to the west are composed of young/mature upland mixed conifer-deciduous forest with dominant overstory trees varying throughout the site. For the most part, the overstory on the School District site is dominated by an even-aged stand of Douglas-fir with an average diameter at breast height (dbh) of approximately 10 inches. Some scattered fir trees range from 20 to sometimes 30 inch dbh. The shrub layer is highly diverse. Salmonberry exists as a distinct stand in the moister part of the site near the large seep area described below. There are also seedling and sapling Cascara trees, and scattered hazelnut trees. A few western red cedar saplings are also present.

Canopy closure at leaf on is estimated to be 90% or greater with some small opening, e.g., near the trail which transects the property from east to west. Dead wood habitat is scattered as standing snags and as downed wood averaging 10-20 inch dbh in decay Class III to IV range (bark is soft or not present, insects have well worked tunnels, and the log may be embedded in the ground and covered with moss).

In the center to west end of the site, there is a large (estimated at approximately 2 acres) of headwater seeps. Water was running clear at the time of the field survey (March 18, 1996), emanating from a broad area and flowing south to Arnold Creek. Wildlife species or their sign observed during the site visit include: rufous-sided towhee, American crow, golden-crowned kinglet, black-capped chickadee, Steller's jay, pileated woodpecker (sign), winter wren (on territory), red-breasted nuthatch, brown creeper, pine siskin, hermit thrush, mourning dove, and band-tailed pigeon (feathers and part of a carcass), eastern gray squirrel, and chickaree (sign).

Presence of TES or other species of concern: Pileated woodpecker sign was observed in the site. Band-tailed pigeon is not a listed species, however, the Oregon Department of Fish and Wildlife (ODFW) has been closely monitoring this species because its primary habitat requirement, seeps or springs which are needed as a mineral source during breeding season, is becoming more scarce.

Level of Disturbance: low. This site includes a main trail and several smaller, but not frequently used, trails. Non-native plants can be found at the edges, but the site remains for the most part an intact native forest.

**Habitat Value:** Habitat value for this site is high, based upon the structural and species plant diversity, the mix of forest types--deciduous, coniferous, wet and upland, the presence of water and the existence of a headwater seep area, connection to adjoining open space which is relatively undisturbed and to other downstream habitats in the tributary and to mainstem Arnold Creek, dominance of native plants, and the presence of suitable habitat for species of concern.

The site is also large enough with a low level of disturbance to support nesting habitat for neotropical migrant birds, such as warblers and vireos.

### **Site # 3: Confluence area of three headwater tributaries to Arnold Creek**

**Location:** This site includes the treed stream corridors of Arnold Creek tributaries located south of Arnold Street, north of Stephenson Street and east of SW 35th Avenue. It also includes a portion of the mainstem of Arnold Creek lying approximately due north of SW Oak Creek Drive. Most of this site is located on multiple parcels that compose private backyards.

**Description:** This multiple-ownership site generally consists of a mixed conifer-deciduous forest canopy of varying width depending upon encroachment from housing. Dominant overstory trees include Douglas-fir, red alder, big-leaf maple, and at the three tributary confluence area itself, western red cedar. The shrub layer in some places is predominantly Himalayan blackberry and in other places supports native species such as Indian plum, hazelnut, and sword fern.

Since access across private property was not provided, habitat typification was completed based upon peripheral views from several places and aerial photo interpretation. A gravel road crosses the creek near Lancaster Street; however, this road has been blocked at the south end, thereby eliminating car traffic. Wildlife species or their sign observed during the field survey include Steller's jay and rufous-sided towhee.

**Habitat Value:** Generally habitat value would be low to moderate for many bird and mammals species. Salamanders have been observed within the site (personal communication with resident on SW 35th); however, species identification has not been made. The site is essentially linear, disturbance level and potential is high, and non-native invasive plants are common. However, the site continues to provide shade and cover to the stream and what aquatic organisms that may live there. It is also connected upstream via one of the tributaries which originates in Mountain Park development and downstream to other areas on the mainstem of Arnold Creek.

### **Site # 4: Marshall Park Neighborhood Property**

**Location:** This site is located between Lancaster and Collins Circle streets west of 18th Place.

**Description:** This site comprises approximately 10 acres of forested and pasture habitats. The west/southwest portion of the site is dominated by a western red cedar forest with approximately 90-95% canopy closure. Shrub and herbaceous vegetation within most of this forest is sparse due to the high degree of shading. The extreme ends of this forest habitat have a more developed shrub layer and include such native species as Indian plum, salmonberry, red elderberry, and snowberry; and non-native species such as Himalayan blackberry, English holly, and laurel. Non-native grasses, likely ryegrass and Johnson grass, can be found in these areas. Douglas hawthorne trees are also located south of the forested area.

Dead and down logs are scattered throughout the cedar forest and several new trees fell during the 1996 winter storms. Downed logs are mostly in the Class III-IV decay class, with the exception of new falls. Snags are few, but show signs of use by hairy woodpecker and sapsuckers.

North of Tryon Creek, the forested area is dominated by a mix of deciduous/conifer species, including big-leaf maple, red alder, Douglas-fir and western red cedar. Some of the big-leaf maple exceeds 20 inches dbh and a few showed signs of damage from winter storms.

Wildlife or their sign observed during the field survey on March 18, 1996 include black-capped chickadee, rufous-sided towhee, house finch, winter wren, raccoon, coyote, and garter snake. According to local residents, pygmy owl live in the cedar woods, and newts have been observed in the site.

Both the mainstem Tryon Creek and the tributary creek had clear running water at the time of the field survey. According to a neighbor, both streams run perennially, but at low levels during summer months.

In addition to the creeks, there are two smaller drainages on both sides of Tryon Creek. One is a small ditch several hundred yards west of Collins Court. This drainage appears to be a remnant stream from a seep area that may have existed on site prior to development of the pasture. It may also be indicative of drainage from uphill development, including the nursery. This small drainage feeds into mainstem Tryon Creek in the broader floodplain area, most of which is now in pasture with the exception of a narrow riparian strip along the mainstem. The other drainage is a relatively large feeder stream that originates on the west side of Lancaster Drive and flows through a steep vegetative canyon along the south border of the site. This stream borders housing lots on Broadleaf Street, but is relatively untouched by development and has good native plant diversity.

**Habitat Value:** Habitat value on this site ranges from moderate to high. Although the agricultural habitat is highly disturbed due to non-native plants and impacts from long-term grazing, the site does provide a mix of open fields, forest, and edge habitats that support or could support a variety of wildlife species. Vegetation is diverse both structurally and genetically.

The site can be enhanced and native plant dominance restored over time. Because the site sits on a broad flat and includes the confluence of major tributaries and the mainstem Tryon Creek, the site has great potential to provide stormwater and water quality benefits. If fish passage problems can be solved downstream, anadromous and resident fish could be restored to this part of Tryon basin, an area that likely supported these species historically.

#### **Site # 5: Atwater Road Drainage**

**Location:** Unnamed creek running east from Knaus Road south of Country Commons Road and, in part, parallel to the eastern portion of Atwater Road within the Lake Oswego urban

growth boundary. The site includes that portion of the creek that flows across the north-south (dead ended) portion of Atwater Road, south of Country Commons Road.

**Description:** The site is highly disturbed lacking in species and structural plant diversity. It includes agricultural fields to the west which are actively used for grazing. This pasture area is dominated by grasses and some scattered shrubs and trees, including Himalayan blackberry. Where the creek actually crosses the closed portion of Atwater Road (which is a small footpath), the area is flat and supports a wetland with open water and scrub-shrub components. Canopy closure at full leaf on is estimated to be about 75%. A few snags with cavities exist on site. The site is surrounded by suburban development, some of it very recent.

Below the site, the stream enters into an older established neighborhood. Here the creek runs behind houses and open areas within a steep canyon. The housing section of the creek shows typical disturbance, e.g., lack of shrubs and cleared areas as lawns or bare ground to creek side.

**Habitat Value:** Habitat value for this site is low due to the high level of disturbance, the likelihood of further habitat degradation from new development, the lack of native plant species and structural diversity, and lack of connection to other habitats with the exception of downstream to Tryon Creek.

#### **Site # 6: Arnold Creek at SW 16th Drive**

**Location:** Mainstem Arnold Creek including an area immediately west of SW 16th Drive following Arnold Street to Boones Ferry Road.

**Description:** This site includes the mainstem Arnold Creek channel and adjacent riparian area which is mostly dominated by a conifer dominated forest. Western red cedar, big-leaf maple, and red alder are dominant overstory trees. Shrub and herbaceous layers are well developed.

At SW 16th Drive, Arnold Creek drops in a dramatic waterfall. This falls is comprised of large boulders which may have naturally formed due to a landslide or could be the result of the cut and fill road development along Arnold Street and SW 16th Drive. The falls is likely a barrier to upstream migration of salmonid fishes. Large fir and cedar trees have fallen across the stream channel, providing shade to the aquatic environment and travel corridors for mammals and herpetofauna.

**Habitat Value:** Habitat value is moderate to high based upon the dominance of native plants, a well developed canopy of conifers and deciduous trees, structural and species plant diversity, and connection upstream on mainstem Tryon Creek and several tributaries.



### **Site #7 Headwater Tributary Area south and east of Collins Property**

**Location:** This site is bounded on the north by Arnold Street, the south by the closed area of Coronado Street, the east by private lots off Palatine and Coronado streets, and the west by private lots along SW 16th Drive.

**Description:** This habitat is essentially an extension of the habitat at Site # 6 and the three-forked tributary headwaters become one stream which empties into Tryon Creek just downstream of Site #6. In this area, the forest is dominated in the overstory tree by big-leaf maple, mature western red cedar, and Douglas-fir in the drier upland area. Unstable slopes have been gravelled in some areas. The house on the site is located over a tributary stream.

**Habitat Value:** The habitat value for the entire site is generally high due to the dominance of native plants; species and structural diversity; connection to Arnold Creek; its size, which is estimated at 17 acres in several land ownerships; and its relatively undisturbed state. There are, however, some backyard impoundments in the upper reaches of the headwaters and flow was muddy during the site visit.

### **Site # 8 Property at the mouth of Tryon Creek**

**Location:** This site is located east of Macadam(State Street, Lake Oswego) on Stampher Road in unincorporated Clackamas County.

**Description:** The site includes several houses and outbuildings along the west boundary and in the south central portion near the Willamette River. Currently most of what was lawn interspersed among cottonwood and other hardwood trees is now under up to four feet of sediment deposited in the February, 1996 flood.. This area is bounded on the south by the City of Lake Oswego's sewage treatment plant. A sewage treatment outfall is located on the site several hundred feet downstream of Macadam Road. Water from this outfall was brown on the date of the site visit, March 29, 1996.

The north side of Tryon Creek has been riprapped with large boulders. The creek channel on March 29, 1996, was confined to the south bank, which is steep and vegetated mostly with Himalayan blackberry. The channel will likely widen to its former boundary after the sediment has been washed into the Willamette. The east boundary of the site is the Willamette River. No riparian vegetation, with the exception of a few trees, is located along this shoreline which also has several feet of sediment deposit.

Presence of TES or other species of concern: None observed during the field survey. Anadromous fish, such as steelhead, migrate upstream through the site. According to the owner, Pacific lamprey were observed moving upstream about 2-3 years ago.

**Habitat Value:** Habitat value is low for this site, which is mostly developed as buildings, or is vegetated by an open canopy of hardwoods with lawn in the herbaceous layer north of Tryon Creek and dominated by mostly non-native shrubs with cottonwood and alder on the south

shore. There is one large pool downstream of Macadam Avenue which holds steelhead in their migration upstream. Disturbance and its potential is high and will likely remain so.

#### **Site # 9 Property along SW Lancaster Road by SW 16th Drive**

**Location:** The site is located along the west side of Lancaster Road between SW Palatine, approximately 600 feet below SW 16th Drive.

**Description:** This site includes approximately 15 acres of steep-sloped upland and riparian forest dominated by moss covered big-leaf maple with some patches of Douglas-fir. Dominant shrubs include Indian plum, Oregon hazel, red elderberry, and vine maple, all native species. Herbaceous vegetation includes trillium, sword fern, stinging nettle, and Pacific waterleaf. A drainage originates on the site and flows downhill eventually merging with Arnold Creek at the Arnold and SW 16th Drive intersection after passing through a rural residential area. A pair of mallards was observed in the pool during the site visit. Woodpecker sign was visible on some stumps.

**Habitat Value:** The habitat value of this site would be moderate based upon the structural and species plant diversity and the presence of water. However, the site has been fragmented from downstream forest habitat by Lancaster Road; it is narrow, and there is high potential for disturbance from adjacent development.

#### **Site #9 Potential linkage property between Tryon and Marshall Parks**

**Location:** This site is located at the dead end of Kari Lynn Drive northeast of SW 11th Drive. The site is bounded in part on the north, east and south by Tryon Creek State Park land.

**Description:** This site was typified from its periphery at Kari Lynn Drive and comparing the site using aerial photos to adjacent state land. The site is approximately 13 acres of native upland mixed conifer/deciduous forest habitat. Dominant overstory trees include mature and large western red cedar and big-leaf maple. The site crosses Tryon Creek mainstem (this area not surveyed). Non-native plants include English ivy and buttercup, which are known to be pervasive throughout Tryon State Park. Wildlife or their sign observed include American crow, American robin, golden-crowned kinglet, and woodpecker sign.

**Habitat Value:** Habitat value is generally high based upon the dominance of native plants, species and structural diversity, the presence of water, its relatively undisturbed condition, and connection to Tryon Creek and associated upland and riparian forests.

#### **Site #10 Boones Ferry and Stephenson Road Neighborhood**

**Location:** This site is located along Boones Ferry Road almost due east of the intersection with SW Stephenson Road.

**Description:** The site is an upland deciduous dominated forest that abuts Tryon Creek State Park to its east. Overstory trees also include western red cedar (including seedlings) which is found mostly as a linear strip along the western boundary and red alder. Canopy closure is estimated to be 80-85% at full leaf on. Shrubs include natives such as Indian plum, Oregon hazel, and hawthorne sp. seedlings. English ivy, English holly (as small trees), and clematis are found throughout the site. Ivy is the most pervasive invader. Herbaceous vegetation includes trillium, and Pacific waterleaf. No water source exists on the site.

The site is highly disturbed due to the extent of ivy on the ground and growing up many trees. There is a horse trail that also transverses the property. This trail is much used and provides runoff and sediment downhill into Tryon Creek.

**Habitat Value:** Habitat value is low due to the even-aged nature of the stand which is mostly big-leaf maple and the pervasive presence of non-native ivy, clematis, and holly. Disturbance is high and will likely continue. Restoration potential is low.

#### **Site #11 Open space at Englewood Drive**

**Location:** This site is located near the dead end of SW Englewood Drive east of Boones Ferry Road and west of Tryon Creek State Park.

**Description:** This site is a steep sloped forested area dominated by Douglas-fir, big-leaf maple, and red alder. Oregon hazel and Indian plum are dominant shrubs in the area observed along SW Englewood Drive. Non-native English ivy and English holly are pervasive. Small (less than 6 inch dbh) snags occur on the site as scattered individuals.

The area was likely a conifer forest that was harvested and not replanted so is now dominated by deciduous trees. The site is connected to open space parkland to the north, east, and south and by rural mini farms to the west. A very small portion of the tributary that begins south of SW Englewood Drive and flows along Meadows Way eventually emptying into Tryon Creek flows in the very southeast corner of the site.

**Habitat Value:** Habitat value for this site would be low due to low species and structural diversity, its lack of water, and the presence of non-native invasive plants.

#### **Site # 12 Maplecrest Drive property**

**Location:** SW Maplecrest Drive between 14th Place and SW Maplecrest Court, immediately east of Marshall Park.

**Size:** Estimated 2 acres

**Description:** The site is essentially rural residential property that includes a house, outbuildings, and a horse pasture downstream of Maplecrest Drive. The mainstem Tryon Creek runs through the east side of the property with a large pool just downstream of the culvert at SW Maplecrest Drive. The mainstem substrate is composed of gravels and cobble

with some sedimentation apparent. A tributary stream enters the site from the northeast and joins the mainstem south of the house. The mainstem and tributary were flowing clear on April 7, 1996, the date of the field survey.

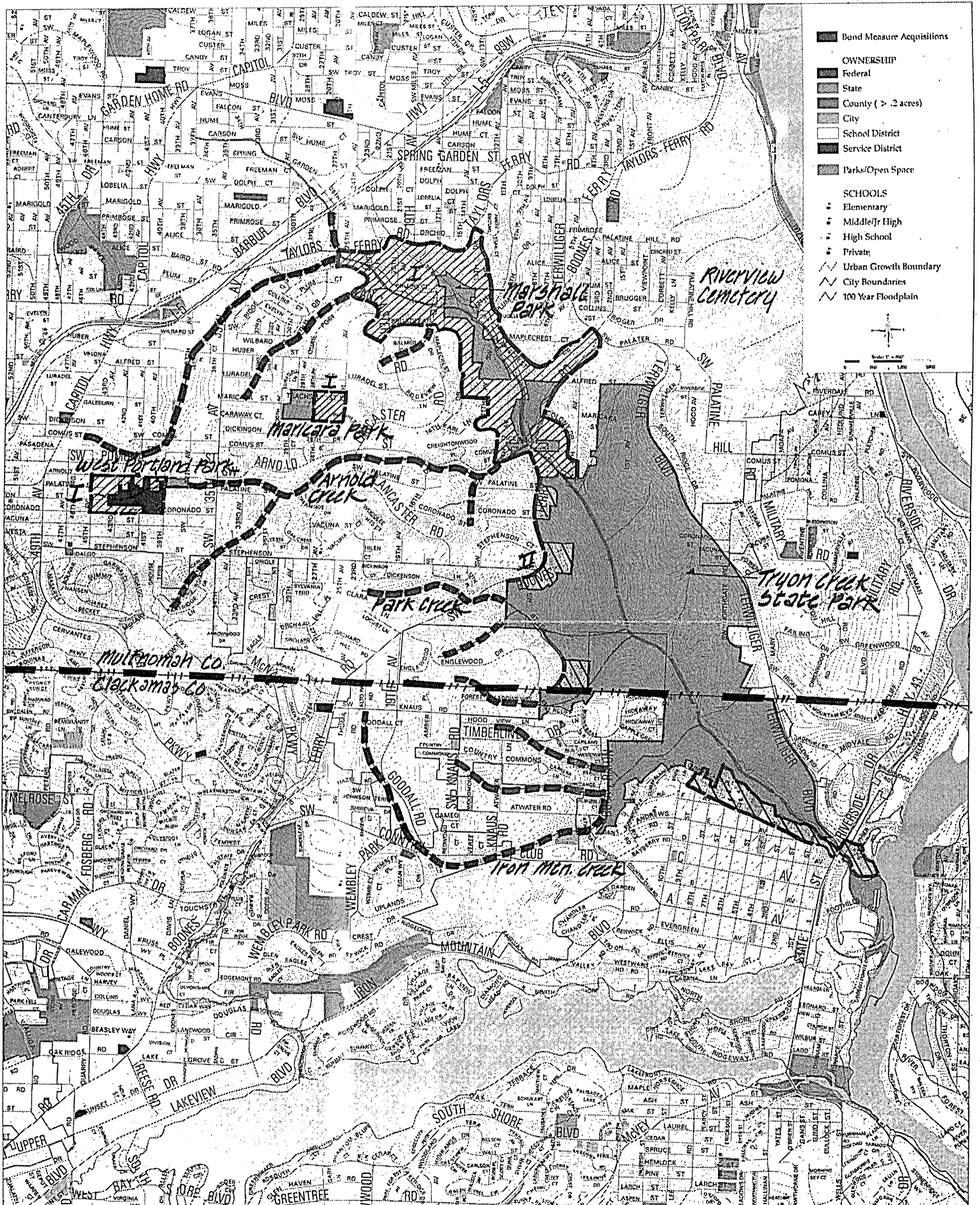
The middle of the site is dominated by a horse pasture. This area is wet and vegetated by grasses and forbs and is bounded by a chain link fence. The riparian vegetation consists of some shade conifers at Maplecrest Drive and no trees or shrubs within the pasture itself. Overstory trees on the west and east sides of the pasture include western red cedar and big leaf maple. On the west side of the site, overstory deciduous and coniferous trees range from 60-80 feet with average dbh of 15 inches. Ages likely range from young/mature (40-60 years average) to tall saplings. There are also some western hemlock seedlings in this forest. Wildlife species or their sign observed during the site visit include American crow, song sparrow, and black-capped chickadee.

**Level of disturbance:** The level of disturbance is high on this site, although native plants dominate the forested areas. The pasture is heavily used and there is virtually no riparian vegetation along the stretch of the Tryon Creek that transverses the property.

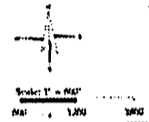
**Habitat Value:** Habitat value is generally low for this site with the exception of the west side forest which although small is dominated by native species and has a moderately developed shrub layer. The site has water and is connected vegetatively to upstream Tryon Creek aquatic and upland habitats, and downstream to Marshall Park and the tributary stream and its associated riparian forest at Maplecrest Drive. The site has good potential to be enhanced and the riparian and aquatic habitats restored.

**Special Note on Aquatic Habitat:**

Fish passage at Boones Ferry Road is now blocked by a perched culvert. Passage could be made available if 1) ODOT replaced the existing culvert with one designed to allow passage, or 2) the pool area immediately downstream of Boones Ferry were deepened by the placement of a berm at the downstream end of the pool (Uchiyama property). Placement of a berm in this area would raise the water level to allow anadromous and fish to pass upstream to suitable habitat that now exists in the mainstem and in Arnold Creek. The storm event in February resulted in major bank building in the floodplain at the confluence of Arnold and Tryon Creeks (north of Boones Ferry Road). This will provide long-term benefits to riparian habitat which had been lost due to previous bank undercutting. The addition of streamside shrubs both above and below this culvert would make this area passable and provide better instream habitat for prey.



- Bond Measure Acquisitions
- OWNERSHIP
  - Federal
  - State
  - County (> .2 acres)
  - City
  - School District
  - Service District
  - Parks/Open Space
- SCHOOLS
  - Elementary
  - Middle/Jr High
  - High School
  - Private
- Urban Growth Boundary
- City Boundaries
- 100 Year Floodplain



Measure 26-26: Tryon Creek Target Area