

BEFORE THE METRO COUNCIL

APPROVING THE NATURAL AREAS ACQUISITION
REFINEMENT PLAN FOR THE ABERNETHY AND
NEWELL CREEKS TARGET AREA

RESOLUTION NO. 07-3847

Introduced by Chief Operating Officer
Michael J. Jordan, with the
concurrence of Council President
David Bragdon

WHEREAS, on March 9, 2006, the Metro Council adopted Resolution No. 06-3672B “For the Purpose of Submitting to the Voters of the Metro Area a General Obligation Bond Indebtedness in the Amount of \$227.4 Million to Fund Natural Area Acquisition and Water Quality Protection,” recommending submission for voter approval a general obligation bond to preserve and protect natural areas, clean water, and fish and wildlife (the “2006 Natural Areas Bond Measure” or “Measure”); and

WHEREAS, at the election held on November 7, 2006, the voters approved Ballot Measure 26-80, the 2006 Natural Areas Bond Measure; and

WHEREAS, the Abernethy and Newell Creeks Target Area was identified in the Measure as one of 27 regional target areas for land acquisition, building on the success of land acquisitions pursuant to Metro’s 1995 Open Spaces Bond Measure Program; and

WHEREAS, as provided in the 2006 Natural Areas Bond Measure, Metro has undertaken a public refinement process to establish specific acquisition strategies, goals, objectives, and a confidential tax-lot specific acquisition target area map for each of the 27 target areas; and

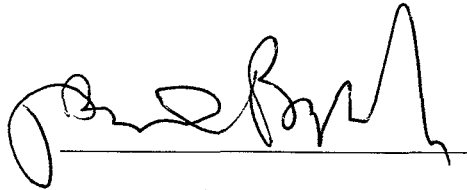
WHEREAS, Metro’s refinement process included the compilation of available information about each target area; biological field visits and expert analysis of maps; interviews with key stakeholders including natural resource experts, property owners, representatives from state and local government agencies, and advocates from water quality, fish, and wildlife preservation interest groups; and eight public open houses at sites throughout the region and a “virtual” open house available via the internet, at which draft refinement plans were made available for public review and participants could share their target area priorities either in-person or electronically; and

WHEREAS, on March 1, 2007, the Council approved Resolution No. 07-3766A, “Authorizing the Chief Operating Officer to Purchase Property with Accepted Acquisition Guidelines as Outlined in the Natural Areas Implementation Work Plan,” authorizing the Metro Chief Operating Officer to acquire properties identified on a Council-approved target area “confidential refinement map;” and

WHEREAS, the Council has reviewed the draft refinement plans and considered information it has received from citizens, scientists, advocates, and state and local governments; now, therefore

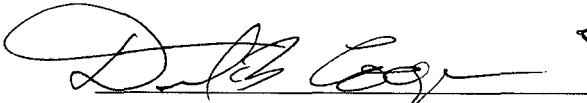
BE IT RESOLVED that the Metro Council adopts the Abernethy and Newell Creeks Refinement Plan attached hereto as Exhibit A, including the confidential tax-lot specific map reviewed by the Council in Executive Session on September 4, 2007, and signed by Council President David Bragdon, and hereby authorizes the Chief Operating Officer to acquire properties in the Abernethy and Newell Creeks Target Area consistent with the Council-approved Acquisition Parameters and Due Diligence Guidelines of the Natural Areas Implementation Work Plan.

ADOPTED by the Metro Council this 13th day of September 2007.

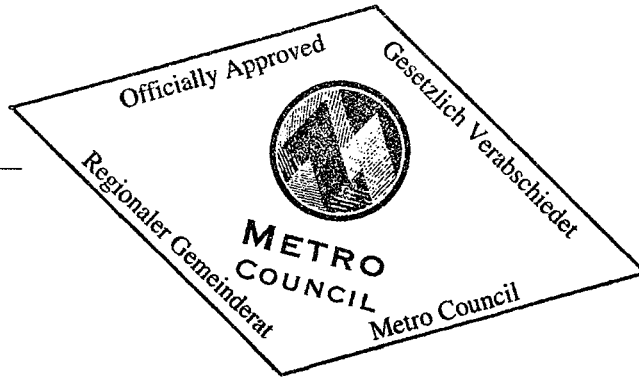


David Bragdon, Council President

Approved as to Form:



Daniel B. Cooper, Metro Attorney



**2006 NATURAL AREAS ACQUISITION PROGRAM
ABERNETHY AND NEWELL CREEKS TARGET AREA REFINEMENT PLAN**

Background

Although Newell Creek watershed was a target area for 1995 bond measure acquisition, the greater Abernethy watershed has received limited attention in terms of natural resource inventories or acquisition. This area will likely be a target for urban growth in coming years, yet at this time it retains relatively large tracts of forested upland headwater areas, oak woodlands and high quality aquatic habitat.

The 1995 refinement plan goal focused on acquiring acreage for a future regional natural park area within Newell Creek Canyon to protect the unique natural features and water quality of the creek. To date, 280 acres have been protected. Together with lands owned and managed by Oregon City and the Oregon Department of Transportation, Newell Creek watershed includes the largest intact forested natural area in the southern Portland metropolitan area.

The 2006 Natural Areas bond measure stated:

With successful protection of portions of Newell Creek, continued acquisition of undeveloped lands along its lower portion and along Abernethy Creek will expand fish and wildlife habitat critical to the area in and around Oregon City, especially threatened habitat for native steelhead and cutthroat populations.

A biological assessment supports previous finding of the key importance of the Abernethy Creek watershed including perennial streams that have high potential for future restoration and wildlife connectivity.

Target Area Description

The target area encompasses the lower third of the 14,500-acre Abernethy Creek watershed and includes major tributaries of Newell, Holcomb and Potter creeks. Historically, the Abernethy Creek watershed basin consisted of oak woodlands, prairie, and old-growth Douglas fir forests in the uplands, mixed deciduous-coniferous forests along streams, and wetlands. Abernethy Creek and its lower tributary Newell Creek provide significant fish and wildlife habitat in and adjacent to an urbanizing area and provide connectivity from foothills of the Cascades to the Willamette River. This important natural area, especially the lower Abernethy watershed, is severely threatened by nearby growth and development.

Located within Oregon City, Newell Creek originates near Clackamas Community College and winds north to its confluence with Abernethy Creek, a tributary of the Willamette River. Newell Creek supports significant native populations of fish, including coho salmon, cutthroat trout and steelhead. The presence of these native fish and the relatively large size of the bordering undeveloped land purchased with funds from the 1995 bond measure make the canyon biologically notable. These public holdings include a native forest of red cedar, Douglas fir, big-leaf maple and red alder with an understory of fern, snowberry and salmonberry. A portion of a former rail alignment purchased with 1995 bond funds has potential for a future trail.

Refinement Process

During the refinement process, Metro staff compiled available information about the Abernethy and Newell Creeks target area, analyzed maps and conducted biological field visits. Individuals were interviewed representing various government agencies, property owners, interested friends groups and natural resource experts. The key concerns expressed during the interviews are summarized in Attachment 1.

A public open house to discuss the proposed Refinement Plan was held on June 18, 2007 at Athey Creek Middle School, one of eight such open houses held throughout the region. Notices of the open houses were mailed to area residents and other interested citizens. Metro also conducted a “virtual” open house by making target area informational materials, including maps, available “online” via the internet and allowing participants to share their target area priorities electronically. A total of 527 people attended the regional open houses, and the online open house had 6,363 visits from 3,419 unique visitors. More than 700 target surveys were submitted either in person or online. Fifteen people completed the Abernethy and Newell Creeks survey. A copy of the survey questionnaire is included as Attachment 2. The map associated with the questionnaire for this target area is included as Attachment 3, and complete survey results are included as Attachment 4.

Findings

- Abernethy Creek and its lower tributary Newell Creek provide significant fish and wildlife habitat in and adjacent to an urbanizing area and provide connectivity from foothills of the Cascades to the Willamette River.
- Of the 14,500-acre Abernethy Creek watershed, the target area encompasses the lower third of the watershed that includes the major tributaries of Newell, Holcomb, Potter, Thimble, Martin and Root creeks. These streams are capable of bearing steelhead and resident cutthroat trout populations.
- A significant portion (280 acres) of remaining undeveloped land remaining in Newell Creek Canyon has been acquired to date, including the confluence with Abernathy Creek.
- Lower Abernethy Creek between the confluences of Willamette River and Newell Creek runs through a developed floodplain and long culvert of unknown condition and dimension.
- Obstruction to fish passage may exist at Hidden Lake (Mile 3.7) and Beaver Lake (Mile 8.9).
- In the lower watershed, fish and wildlife habitat quality of Holcomb and Potter creeks are relatively high.
- Large blocks of remnant native plant communities such as mature conifer forests and oak woodlands remain in portions of the watershed that can serve as significant wildlife habitat anchors and connectors to larger forest habitats such as Clear Creek Canyon.
- A limited number of private in-holdings remain in Newell Creek Canyon that, if acquired, could complete linkages of public lands and provide a potential trail alignment.
- Fifteen people responded to the Abernethy and Newell Creeks survey. Additional commentary was provided orally at the open house, which was consistent with the written responses. In rank order, the public priorities were:
 1. *Map area A* – Protect natural corridors along the main stem of Abernethy Creek and its major tributaries (Potter and Holcomb creeks) to protect water quality and habitat for fish downstream of Hidden Lake.
 2. *Map area D* – Protect remaining gaps along the creek corridor in Newell Creek Canyon and at the confluence area of Abernethy and Newell creeks for future restoration and wildlife connectivity.
 3. *Map area C* – Preserve large blocks of remnant native plant communities such as mature conifer forests and oak woodlands areas and provid upland habitat corridors or "stepping stones" to larger forest habitats such as Clear Creek Canyon.

4. *Map area B* – Protect natural corridors along the main stem of Abernethy Creek and its major tributaries to protect water quality and habitat for fish from Maple Lane Road to Beaver Lake.

Goals

- Protect undeveloped lands along lower Newell Creek for future restoration (especially threatened habitat for native steelhead and cutthroat populations) and wildlife connectivity.
- Protect natural corridors and uplands along the main stem of Abernethy Creek and its major tributaries to protect water quality and wildlife habitat.

Objectives

A target area map showing the tiered objectives described below is included as Attachment 5.

Tier I Objectives

- Protect natural corridors along the main stem of Abernethy Creek and its major tributaries (Potter and Holcomb creeks) to protect water quality and habitat for fish downstream of Hidden Lake.
- Acquire large blocks of remnant oak woodlands and associated habitat in upper Holcomb and Potter creeks.

Tier II Objective

- Preserve large blocks of conifer forests and oak woodlands to provide upland habitat corridors or "stepping stones" to other public lands.
- Protect remaining gaps along the creek corridor in Newell Creek Canyon and at the confluence area of Abernethy and Newell creeks for future restoration and wildlife connectivity.

Partnership Objective

- Pursue partnership opportunities with the City of Oregon City, the Trust for Public Land, and others to leverage regional bond dollars.

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 07-3847, APPROVING THE NATURAL AREAS ACQUISITION REFINEMENT PLAN FOR THE ABERNETHY AND NEWELL CREEKS TARGET AREA

Date: September 13, 2007

Prepared by: Jim Desmond
Kathleen Brennan-Hunter

BACKGROUND—REFINEMENT PROCESS

The Natural Areas Bond Measure (Resolution No. 06-3672B, “For the Purpose of Submitting to the Voters of the Metro Area a General Obligation Bond Indebtedness in the Amount of \$227.4 Million to Fund Natural Area Acquisition and Water Quality Protection,” adopted by the Metro Council March 9, 2006) provided that Metro would undertake a “Refinement Process” to “gather additional information about each individual target area and begin zeroing in on particular parcels that would be valuable to acquire” (Exhibit A to Resolution No. 06-3672B). In addition, the Natural Areas Implementation Work Plan (Resolution No. 07-3766A, “Authorizing the Chief Operating Officer to Purchase Property with Accepted Acquisition Guidelines as Outlined in the Natural Areas Implementation Work Plan,” adopted by the Metro Council on March 1, 2007) authorized the Metro Chief Operating Officer to acquire properties without further Council approval if they have been identified on a Council-approved target area “confidential refinement map.” To implement those directives, the Refinement Plans for each target area contain overall target area objectives and confidential tax-lot specific target area maps identifying priority properties for acquisition, enabling Metro staff to begin the acquisition of property and property rights as detailed in the Natural Areas Implementation Work Plan.

Additional background information, target area information, a description of the specifics of the refinement process regarding this target area, and the refinement plan’s findings, goals, and objectives are described in further detail in Exhibit A to this resolution, the Abernethy and Newell Creeks Target Area Refinement Plan.

ANALYSIS/INFORMATION

1. **Known Opposition**

None.

2. **Legal Antecedents**

Resolution No. 06-3672B, “For the Purpose of Submitting to the Voters of the Metro Area a General Obligation Bond Indebtedness in the Amount of \$227.4 Million to Fund Natural Area Acquisition and Water Quality Protection,” adopted on March 9, 2006.

The voters’ approval of Metro’s 2006 Natural Areas Bond Measure at the general election held on November 7, 2006.

Resolution No. 07-3766A “Authorizing the Chief Operating Officer to Purchase Property With Accepted Acquisition Guidelines as Outlined in the Natural Areas Implementation Work Plan,” adopted by the Metro Council on March 1, 2007, established the Acquisition Parameters and Due Diligence Guidelines for the purchase of properties as part of the 2006 Natural Areas Bond Program.

3. **Anticipated Effects**

Acquisition of natural area properties in the Abernethy and Newell Creeks target area to achieve the goals and purposes of the 2006 Natural Areas Bond Measure.

4. **Budget Impacts**

The FY 2007-08 budget includes budgetary authority to purchase \$35 million in natural area lands, with an additional \$15.4 million in contingency, if necessary. It is estimated, based on historical spending patterns, that this authority will be sufficient to cover the anticipated acquisition activity for this fiscal year. Additional unappropriated fund balance (\$64 million) exists for land acquisition in future years, along with the authority to issue up to an additional \$102 million in General Obligation bonds in support of this program.

RECOMMENDED ACTION

Staff recommends adoption of Resolution No. 07-3847.

Summary of Comments from Stakeholder Interviews for Abernethy and Newell Creeks Target Area

Stakeholder(s) Interviewed

Alice Norris
Doug Neeley
Scott Archer
Pete Walter
Betsy Torell
Tim Blackwood
Jerry Herrmann
Kate McCutchen
Alison Heimowitz
Rebecca Miller
Sarah Miller
Anna McKinney
Clair Klock

See science report completed by Betsy Torell of Jones and Stokes for findings and perspectives from additional stakeholders. Betsy was not limited to a specific number of interviews as we were and thus was able to compile substantial information concerning the state of the watershed.

Key Themes Discussed

Habitat Protection

- Target high quality aquatic and riparian habitat in main stem and tribss
- Expand target area to larger watershed so that headwaters in forested undeveloped uplands can be protected from future development.
- Identify and purchase sensitive and rare habitats in greater watershed including remaining larger oak habitats.

Habitat Linkages

- Make habitat connections from watershed to watershed.—Abernethy Creek to Clear Creek
- Use acquisition process to link Abernethy Creek to Newell, Livesy, and Holcomb.
- Potter Creek has one remaining impediment. Owner wants to fix it.
- Identify remaining obstacles to fish passage and work with private landowners and public agency partners to remove barriers and open migrating and spawning habitat to upper reaches of creek.
- Work with ODOT and City of Oregon City Public Works to determine conditions in Abernethy outfall culvert under 99E. Explore opportunities to improve connectivity with upstream habitat.

Partnerships

- Many property owners along Abernethy and tributary creeks have expressed interest and willingness to restore habitat on their land if provided guidance and support.
- Anecdotal reports of private property owners restoring habitat along Abernethy and tributaries and observing steelhead and lamprey use
- Park Place developers may have interest in purchasing buffers on either side of Redland Road.
- Mark Mouser, fish passage specialist with Clackamas County Transportation, also operates a private enterprise working with private landowners to remove fish passage barriers on private land. Identify successful projects and newly opened areas of quality habitat.
- Partner on outreach efforts between jurisdictions and soil and water conservation districts to reduce chemicals, fertilizers and pesticides, improve water quality and urban habitat. (see Clack SWCD for successful golf course lawns program)
- Use Nature in the Neighborhoods and other education and incentive programs to expand natural resource protections beyond the acquisition program.

QUESTIONNAIRE

TARGET AREA: ABERNETHY AND NEWELL CREEKS

In November 2006 voters directed the Metro Council to extend a regionwide program and acquire between 3,500 and 4,500 acres of additional natural areas to protect water quality and fish and wildlife habitat and to provide future generations opportunities for greater access to nature. Now it's time for the Metro Council to refine priorities in the 27 regional natural areas and trail corridors targeted for acquisition. Initial estimates are that a minimum of 150 acres of land would be protected within this target area.

The Metro Council wants your ideas and input. We've been talking with scientists, land-use experts, groups and individuals who have special knowledge about the natural resource values and community visions for these areas. With this information Metro has begun to identify the potential strategies and opportunities that will achieve the best results. Now we need to know: Do we have it right? What have we missed? What is most important to you?

2006 NATURAL AREAS BOND DESCRIPTION FOR THIS TARGET AREA

With successful protection of portions of Newell Creek, continued acquisition of undeveloped lands along its lower portion and along Abernethy Creek will expand fish and wildlife habitat critical to the area in and around Oregon City, especially threatened habitat for native steelhead and cutthroat populations.

QUESTIONS

- 1. The following priorities were identified in the Abernethy and Newell Creeks target area based on scientific information about benefits to water quality, habitat diversity, wildlife connectivity and/or restoration potential and from information provided by key stakeholders in the area. Rank in order of importance to you from 1 to 4, with 1 being the most important and 4 being the least important.**

- _____ Protecting natural corridors along the main stem of Abernethy Creek and its major tributaries (Potter and Holcomb creeks) to protect water quality and habitat for fish downstream of Hidden Lake. **(Map area A)**
- _____ Protecting natural corridors along the main stem of Abernethy Creek and its major tributaries to protect water quality and habitat for fish from Maple Lane Road to Beaver Lake. **(Map area B)**
- _____ Preserving large blocks of remnant native plant communities such as mature conifer forests and oak woodlands areas and providing upland habitat corridors or "stepping stones" to larger forest habitats such as Clear Creek Canyon. **(Map area C)**
- _____ Protecting remaining gaps along the creek corridor in Newell Creek Canyon and at the confluence area of Abernethy and Newell creeks for future restoration and wildlife connectivity. **(Map area D)**

2. In general, what should be emphasized in the Abernethy and Newell Creeks target area? Rank in order of importance to you from 1 to 5, with 1 being the most important and 5 being the least important.

- _____ Preserving habitat areas for important fish species such as coho salmon, trout and steelhead.
- _____ Preserving riparian areas and wetlands to protect water quality and wildlife habitat.
- _____ Protecting natural areas and corridors to benefit water quality, wildlife habitat and for future trail connections.
- _____ Providing a natural buffer between urban development and rural areas.
- _____ Providing access to nature for people by connecting natural areas with local and regional trails.

3. Are there other priorities that the Metro Council should consider in the Abernethy and Newell Creeks target area? Please be specific.

4. Do you have suggestions about partnerships Metro should pursue or other innovative ways to leverage regional funding and enhance this natural area?

5. Are you interested in participating in Metro's Natural Areas program by selling or donating your property or selling or donating a conservation easement on your property?

Yes No If yes, please be sure to provide your contact information below.

6. Do you have any other comments about this target area?

Please add my name to the Abernethy and Newell Creeks target area mailing list for future information, public meetings and events.

Name _____

Address _____

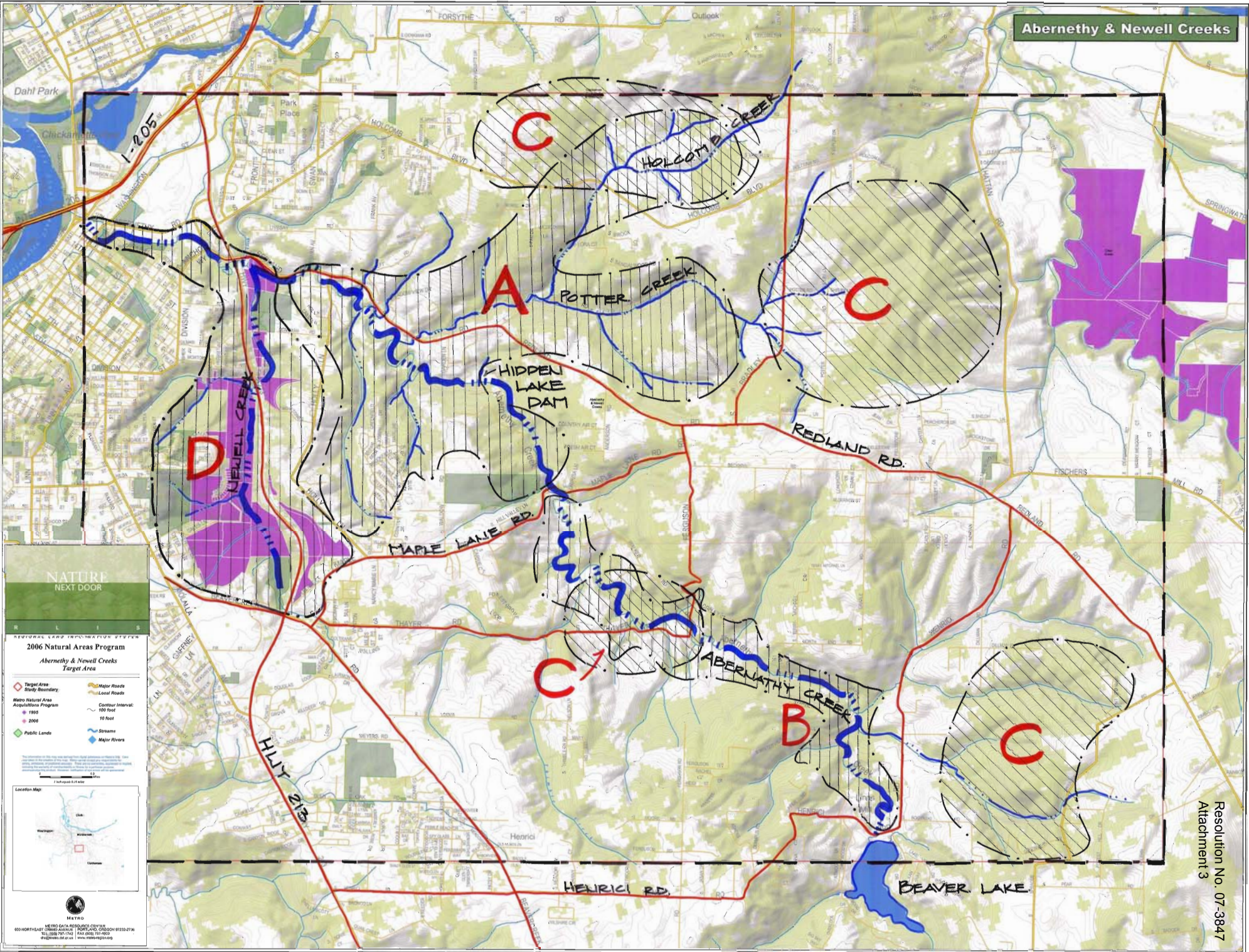
City/State/Zip _____

Phone _____

E-mail _____

**You may complete this questionnaire online at
www.metro-region.org/naturalareas**

or mail it to Metro at
600 NE Grand Avenue, Portland, OR 97232
(503) 797-1741



NATURE NEXT DOOR

REGIONAL LAND ACQUISITION STRATEGIES

2006 Natural Areas Program
Abernethy & Newell Creeks Target Area

Target Area	Major Roads
Study Boundary	Local Roads
Metro Natural Area	Contour Interval: 100 foot
Acquisition Program	10 foot
1985	Streams
2006	Major Rivers
Public Lands	

Location Map

MAYRO
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600 NORTH EAST CORNER AVENUE, PORTLAND, OREGON 97232-2716
TEL: 503.971.1111 FAX: 503.971.1122
WWW.MAYRO.ORG

Resolution No. 07-3847
Attachment 3

Abernethy and Newell Creeks Survey Results

- The following priorities were identified in the Abernethy and Newell Creeks target area based on scientific information about benefits to water quality, habitat diversity, wildlife connectivity and/or restoration potential and from information provided by key stakeholders in the area. Rank in order of importance to you.

	most important			least important	Rating Average	Response Count
Protecting natural corridors along the main stem of Abernethy Creek and its major tributaries (Potter and Holcomb creeks) to protect water quality and habitat for fish downstream of Hidden Lake. (Map area A)	46.7% (7)	13.3% (2)	13.3% (2)	26.7% (4)	2.20	15
Protecting natural corridors along the main stem of Abernethy Creek and its major tributaries to protect water quality and habitat for fish from Maple Lane Road to Beaver Lake. (Map area B)	6.7% (1)	20.0% (3)	53.3% (8)	20.0% (3)	2.87	15
Preserving large blocks of remnant native plant communities such as mature conifer forests and oak woodlands areas and providing upland habitat corridors or "stepping stones" to larger forest habitats such as Clear Creek Canyon. (Map area C)	26.7% (4)	13.3% (2)	33.3% (5)	26.7% (4)	2.60	15
Protecting remaining gaps along the creek corridor in Newell Creek Canyon and at the confluence area of Abernethy and Newell creeks for future restoration and wildlife connectivity. (Map area D)	20.0% (3)	53.3% (8)	0.0% (0)	26.7% (4)	2.33	15
	<i>answered question</i>					15
	<i>skipped question</i>					1

2. In general, what should be emphasized in the Abernethy and Newell Creeks target area? Rank in order of importance to you.

	most important				least important	Rating Average	Response Count
Preserving habitat areas for important fish species such as coho salmon, trout and steelhead.	14.3% (2)	21.4% (3)	14.3% (2)	14.3% (2)	35.7% (5)	3.36	14
Preserving riparian areas and wetlands to protect water quality and wildlife habitat.	7.1% (1)	14.3% (2)	28.6% (4)	50.0% (7)	0.0% (0)	3.21	14
Protecting natural areas and corridors to benefit water quality, wildlife habitat and for future trail connections.	35.7% (5)	28.6% (4)	21.4% (3)	7.1% (1)	7.1% (1)	2.21	14
Providing a natural buffer between urban development and rural areas.	13.3% (2)	33.3% (5)	13.3% (2)	20.0% (3)	20.0% (3)	3.00	15
Providing access to nature for people by connecting natural areas with local and regional trails.	33.3% (5)	6.7% (1)	20.0% (3)	6.7% (1)	33.3% (5)	3.00	15
<i>answered question</i>							15
<i>skipped question</i>							1

3. Are there other priorities that the Metro Council should consider in the Abernethy and Newell Creeks target area? Please be specific.

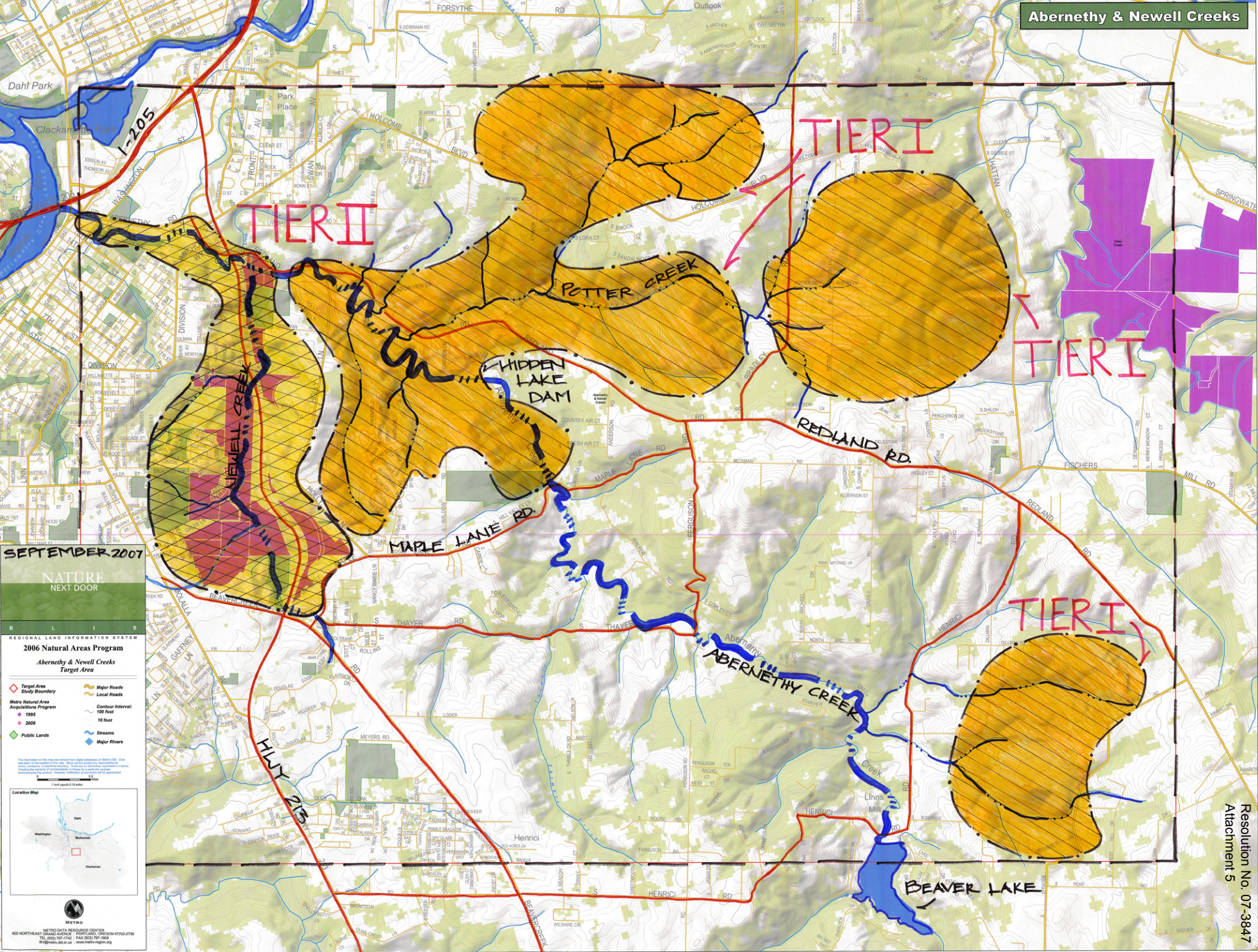
Acquiring open spaces in the Park Place Village concept plan.
Providing park lands in the floodplains that are flat and usable for athletic sports.
Some signage along Hwy 213 to identify for people what Metro is doing there.
Work to fix the gigantic Abernathy Creek culvert that runs under McLoughlin and I-205!!! It is over 700 feet long!! Coho have been seen above the culvert, but I would assume this could potentially be a factor in why so few fish make it up to Abernethy creek. I have heard secondhand stories of old-timers catching many salmon in this drainage years ago.
Try to make open spaces where development is most likely to occur (i.e Oak woodlands/savannah) since current zoning rules (hopefully) will prohibit rampant development in the steep Abernethy canyons - where most of target areas are located.
Being asked to rank these protection goals did not reflect my true feelings. I chose trails in first place, because the more people have access to nature the more they will want to restore more. Also a regional trail system in this area will help reduce carbon releases and global warming. Any work you do will ultimately benefit wildlife and salmon.
With the proposed Park Place Village development as a result of the Park Place Concept Plan and The Rivers (landslide development at 205/213), there is a need to acquire riparian areas and wetlands on Redland Road from Abernethy to Holly Lane. This would allow protection of water quality and wildlife habitat while at the same time provide a natural areas corridor and a possible future trail connection.
Need a trail connecting to Oregon City, other areas and trails.

4. Do you have suggestions about partnerships Metro should pursue or other innovative ways to leverage regional funding and enhance this natural area?

Work with landowners who have major portions of their property in floodplains.
Is the new watershed council there ready to help?
Greater Oregon City Watershed Council.
Since area is prone to landslides, is there a federal agency (or other entity) that pays out not to develop slide prone areas?
The Hamlet of Beaver Creek and Oregon Equestrian Trails are two organizations that have expressed interest in developing trails in this area. I understand that in other areas local landowners feel more positive if their concerns about security are addressed up front.
The Clackamas County Soil and Water Conservation District is looking/seeking conservation easements on farm and forest land - working with them might benefit all parties!

5. Do you have any other comments about this target area? If so, please specify.

With the regional commercial centers going at I-205 and Hwy 213, it's important people in the Park Place area can walk/bike to centers.
Important to have trails and bike access on Redland Road and floodplains.
Don't expand the UGB in this area :)
The Abernathy Creek may be navigable by canoe. We have an interested donor of property by a resident within a mile or two of this site. He wants a trail.
Oregon City is planning a shopping center along Abernathy Road (both sides including Rossmans Landfill and the old county buildings. They are in the planning process now - this is the area we are attempting to create a trail from the end of the Oregon Trail and Clackamas Community College. This area is a CRUCIAL link, which could completely disappear if planning does not get involved (this is the proposed trail through Newell Creek Canyon).



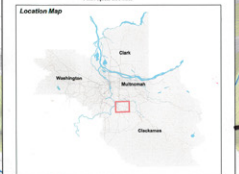
SEPTEMBER 2007

NATURE NEXT DOOR

REGIONAL LAND INFORMATION SYSTEM

2006 Natural Areas Program
Abernethy & Newell Creeks
Target Area

- ◆ Target Area Study Boundary
- Major Roads
- Local Roads
- Contour Interval: 100 Foot
- 10 Foot
- Streams
- Major Rivers
- ◆ Public Lands



METRO
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