



Land Use Strategies to Protect
Water Quality
City of Beaverton, Oregon
FINAL Next Steps Memorandum
July 31, 2013



Sustainable Communities Building Blocks

Land Use Strategies to Protect Water Quality

Next Steps

1. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) selected the Beaverton Urban Renewal Agency (BURA) in Beaverton, Oregon for a Building Blocks for Sustainable Communities technical assistance award—conducting a workshop on Land Use Strategies to Protect Water Quality. The city and the BURA have launched a major economic and sustainable development initiative to revitalize the Beaverton Urban Renewal District (hereafter referred to as the “District”). The District is braided by Beaverton Creek, Hall Creek, and Wessenger Creek. The District’s three-creek system is a tremendous urban amenity; however, it also has significant water quality challenges from the urban stormwater runoff in this heavily developed area. The BURA’s request for technical assistance focused on identifying streetscape and urban development approaches that incorporate green infrastructure into the community’s land use codes and policies, providing a guide for district development and creek protection.

This memorandum summarizes the key stormwater management and development issues the BURA sought to address along with the land use and water quality goals for the community (as articulated in the city’s and BURA’s existing plans and strategies for the Central City). Importantly, the memorandum also lays out the strategies and key actions the community identified as being high priority for implementation.

2. SITE VISIT

The Building Blocks technical assistance effort involves five major activities, as noted in Figure 1. The pre-workshop coordination calls with city staff and the community self- assessment helped set the agenda for the workshop and select the geographic area of focus (see Appendix for map of the BURA District).

During the pre-visit coordination calls and site tour, the technical assistance team and community representatives identified the challenges and opportunities related to upcoming development in the District. This information was incorporated into workshop presentations given on May 23. The workshop was divided into three sessions. A morning session was conducted for policy-makers and staff. An afternoon session was held for technical staff from the city and other key agencies. The workshop ended with a community meeting in the evening with interested citizens and staff. The workshop sessions included presentations, facilitated discussions and a group exercise focused on identifying land use strategies and best management practices (BMPs) for protecting water resources in the District.

Figure 1 – Key Elements of Building Blocks Technical Assistance



3. KEY ISSUES + STRATEGIES

Key Issues and Initiatives

Issues

City Developed Before Required Stormwater Controls. Much of downtown Beaverton developed prior to regulations requiring management of the volume and quality of stormwater runoff. Moreover, some of the downtown area was built along the floodplains of Beaverton Creek, Hall Creek, and Wessenger Creek and their marshland areas. This has resulted in widespread flooding problems, even during 2-year storm events, and water quality issues in the District's stream networks. The built-out nature of the city also causes uncertainty for developers about what is underground in terms of utilities, soil contamination, and other potential underground materials.

Stormwater Management Constraints. Many of the places targeted for development by the BURA and property owners are challenged by high water tables, floodplains, low permeability soils, and constrained lots. This makes stormwater management more challenging and costly.

Clean Water Service Stream Vegetated Corridor Requirements. The regional water resources management utility, Clean Water Services (CWS) requires vegetated corridors along streams and wetlands. The required width of the vegetation varies based on the type of water body, slope, and drainage area. For example, the required vegetated buffer along perennial streams can range from 50 feet on each side of the stream to 200 feet. The required vegetated corridor for intermittent streams and springs ranges from 15 feet to 200 feet, and for wetlands 25 feet to 200 feet. Uncertainty about the actual width required along a given stream segments in the BURA can pose barriers to redevelopment.

Physical Fragmentation. The BURA is fragmented into small parcels (which are difficult to develop without consolidation), and is also divided by regionally significant roadways, light rail and heavy rail lines, and the creek system. This creates mobility, parking, and safety issues within the District, particularly for pedestrians and cyclists.

Regulatory Barriers. The city and BURA's planning goals are not always embedded in existing state and local regulatory frameworks that the city and developers must follow. The current state building code and local development code have impediments to green practices. An example cited was an outdated state building code that does not allow local governments to offer incentives for solar panels and green roofs.

Initiatives

Sustainable Development Initiatives. The city and the BURA have developed and adopted a Community Vision Action Plan (2010, updated 2012), an Urban Renewal Plan (2011), and a Civic Plan: Central City Strategy (2011). The city is also developing the Beaverton Creekside District Master Plan which is set to be completed in 2015. In 2011, Beaverton received a Housing and Urban Development (HUD) Sustainable Communities Challenge Grant to integrate mixed-use development, complete streets, pedestrian paths and a bike network in the downtown areas around Beaverton Creek. The city is working to achieve regional planning density targets within the urban core.

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Revitalization Roundtable. In February, 2013 Beaverton hosted the first Presidential Roundtable in the country of federal, state, and local officials to discuss revitalization and brownfield development in the Beaverton downtown area. The roundtable brought different agency perspectives to focus on the interrelated issues of economic development, creekside district planning, community health center planning, transit, environmental justice and, importantly, needs for future funding.

Brownfields Grant. On May 10, 2013 the city was notified that it will receive two US EPA Brownfield Grants totaling \$400,000 for assessment of brownfield sites in the downtown area considered for redevelopment.

Prioritizing Green Infrastructure. The city and the BURA want to use green infrastructure to protect water quality within the downtown urban core as they concentrate new development in the sensitive area around the three creek system. The BURA and the city are working with CWS on a Natural Resources Master Plan that sets standards and goals to use green techniques to restore water quality in Beaverton Creek.

Regional Facilities. Within the BURA, there are opportunities to build stormwater management facilities that serve multiple parcels, also called regional facilities. Often, regional facilities can help address existing flooding and water quality problems more cost effectively than installing stormwater facilities on each individual site.

Community Goals

The City's Community Vision Action Plan and Central City Strategy and BURA's Urban Renewal Plan include a number of goals and policies related to linking land use and water quality. These goals, if achieved, would result in more compact development, infill, and mixed uses in the District that can reduce overall impervious area in the community; preservation of natural areas and creek corridors; and more sustainable, attractive design. These community goals that can positively affect water quality include but are not limited to:

Community Vision Action Plan Goals Related to Land Use and Water Quality

Create a vibrant downtown

- Stimulate downtown redevelopment
- Make downtown a destination
- Encourage sustainable design

Improve mobility

- Expand and encourage alternative transportation choices

Enhance livability

- Create civic plan to shape community development
- Build a sustainable community
- Protect and enhance natural areas, parks, and open space
- Promote city-wide beautification

Urban Renewal Plan Goals Related to Land Use and Water Quality

- Promote increased use, rehabilitation, and development of employment lands
- Encourage new investment in underused parcels
- Help private developers with plans to address uncertainty (e.g. resource buffer requirements)

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- Encourage mixed use development
- Increase parking options
- Leverage public transit investments to encourage higher intensity and mixed use development near transit stations
- Address insufficient infrastructure
- Improve walking, biking, and transit access
- Support preservation of natural, cultural, and historic resources
- Develop amenities that contribute to an identifiable central core and stimulate activity
- Improve attractiveness of the central core
- Create a creek corridor master plan to address issues that hinder development

Civic Plan: Central City Strategy Goals Related to Land Use and Water Quality

- Make the Central City an easier place for pedestrians, bicyclists, and motorists to get to and around
- Create a system of small parks, plazas, and open spaces; reorient people and development toward an improved creek system
- Encourage and incentivize new housing, employment, and other development
- Bring liveliness and activity through code adjustments, shared parking, and catalytic development

During the workshop, policy makers reaffirmed these goals and discussed strategies to help meet the city's land use, economic development, and water quality goals highlighted above.

Strategies

The technical assistance team presented ideas from other communities that the BURA and city policy-makers may consider pursuing. These ideas fall within five general topic areas:

- Protecting natural resources and open space to infiltrate and filter rainwater;
- Promoting compact development and infill to reduce imperviousness;
- Designing complete streets that reduce imperviousness;
- Designing efficient and greener parking that reduces imperviousness and stormwater runoff, and
- Incorporating green infrastructure BMPs into existing developments and new development sites

As a result of this discussion, the policy-makers participating in the morning workshop identified 13 new strategies as important for the BURA and the city to adopt and implement to help restore water quality in creek system and promote more sustainable land uses. All of the strategies below can be considered in the renewal and redevelopment of BURA. **However, the policy-makers and staff participating in the morning workshop voted for the following four as the highest priority strategies for future action** by the BURA and its partners (the city, Clean Water Services, and other agencies):

Top 4 Strategies Recommended by Policy-Makers and Staff

1. Work with CWS to develop a comprehensive stormwater management plan for the BURA.

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2. Form a local stormwater improvement district to support parcel-based and regional stormwater best management practices.
3. Create a package of incentives from the different topic areas/categories discussed. The incentives should be publicized as a package, rather than piecemeal, to strengthen support for green infrastructure practices. For example, the incentives package could include:
 - Create a clean water mitigation bank.
 - Provide open space credits for green practices. (Note: More research is needed regarding whether there are existing open space requirements in certain areas of the District and whether open space requirements are already part of any comprehensive plan updates.)
 - Allow credit for on-street parking to meet off-street parking requirements.
 - Implement a formal incentives program for green streets. For example the incentives program could include public-private cost sharing, reduction in street widths and parking requirements, and public assistance with maintenance.
 - Evaluate existing density bonuses to make them more attractive to developers. (The participants noted that development applicants currently do not take advantage of the existing density bonus formulae.)
 - Advertise existing green practice incentives for landowners and development applicants (e.g. existing incentives such as the landscaping credit for green BMPs and the reduced stormwater fees for use of green practices).
 - Explore changing rules to allow reduced transportation development tax for use of green practices.
4. Tailor development standards for the District (e.g. existing parking, stormwater, landscaping, and setback regulations) to remove unnecessary hurdles blocking the use of green practices.

Policy-makers and staff also recommended that the BURA and the city adopt the following strategies:

- Adopt a community urban canopy goal. (It was noted that there needs to be a citizen education campaign to accompany this program to ensure that the right types of trees are being planted in the right places to avoid structural damage to houses, streets, and other structures).
- Target Erickson Creek as a restored degraded wetland that could serve as credit in the proposed mitigation bank. Note: Erickson Creek has benefited from two enhancement projects at Farmington Road and 144th Avenue. The community and creek could benefit from additional enhancements along the remainder of the creek. The existing and any new enhancements could provide credit in a mitigation bank.
- Use future grants to make sure any re-engineering helps meet area-wide stormwater management.
- Develop a plan for how streets will play a part in managing stormwater in the District.
- Adopt safe routes to work program (e.g. last mile program).
- After development of a plan for consolidation of existing parking areas in the District, establish a formal parking district.
- Adopt a policy for green BMPs in update of the comprehensive plan.
- Rethink design standards for parking lots to better allow for green BMPs. Require green BMPs in District parking areas where feasible.
- Update/increase stormwater fees to help pay for needed stormwater flood mitigation and water quality improvements.

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4. ACTIONS/ TIMEFRAMES/ RESPONSIBILITIES

The afternoon workshop session included technical staff from the city and key agencies including the BURA staff; the city's Planning, Public Works, and Engineering Departments; Clean Water Services; the Oregon Department of Environmental Quality; the City of Tigard; and EPA Region 10. The technical assistance team summarized the recommendations from the morning session including new strategies identified as important for implementation in the BURA. The technical staff refined the recommendations, noting that a few of the recommendations were already being implemented. (Note: The list of recommended strategies above reflects the technical staff's refinements.)

The key to an effective workshop and EPA's Building Blocks program is to cultivate leaders and champions who will carry forward the knowledge gained from this technical assistance. The technical staff who participated in the afternoon workshops defined next step action items for the top four priority strategies. **These actions are listed in the table by the top four strategies as voted on by the workshop participants.** These actions reflect ideas generated from the workshop process (i.e. the actions that were voted on in the morning session by policy and staff participants, refined by technical staff in the afternoon session, and discussed during the evening community meeting.) **The pursuit of these actions is fully at the discretion of the BURA, the city, Clean Water Services, and other local participants.**

Action	Lead Entities	Start Time
Strategy #1: Develop a comprehensive stormwater management plan for BURA.		
Use Creekside District Master Plan to jump-start a full BURA comprehensive stormwater plan.	BURA staff and advisory committee in coordination with city staff and community	Ongoing, to be completed in 2 years
Prioritize cooperative Clean Water Services funding for subbasin plans. (Note: Need to consider how Beaverton's plan fits into the larger subbasin plan governed by Clean Water Services.)	Carrie Pak at Clean Water Services	Within 3 months (also contingent on the Creekside Master Plan under development)
Strategy #2: Form a local stormwater improvement district.		
Discuss idea with the BURA Board and attorney. (Note: Need to determine if the BURA can use this approach to	Tyler Ryerson/BURA staff	Within 2-3 months (after Next Steps memo is received by Board)

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Action	Lead Entities	Start Time
fill funding gaps for priority improvements.)		
Discuss idea with City Council and property owners to determine if there is interest in forming district.	Economic Development staff and BURA staff lead along with Advisory Committees and Clean Water Services	TBD based on BURA board discussion
Conduct education program on potential benefits of a stormwater improvement district. (Note: Emphasize how property owners can develop to meet stormwater requirements, and be part of a master plan making it ready for development and redevelopment.)	Economic Development staff and BURA staff lead along with Advisory Committees and Clean Water Services	TBD based on BURA board discussion
Strategy #3: Create a package of incentives.		
Create tracking system for existing City and BURA stormwater projects and associated credits that could form the basis for mitigation bank. (Note: This could provide credits for public and possibly private development projects.)	Public Works- CIP	Within 6 months
Incorporate policies and strategies into Comprehensive Plan	City Planning Department	Ongoing over the next 2 years.

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Action	Lead Entities	Start Time
update.		
Review and evaluate development code (top priority) and engineering design manual (lower priority).	City Planning, Engineering, and Public Works Departments	2-3 years (after Comprehensive Plan Update is completed)
Strategy #4: Tailor development standards for BURA (e.g. existing parking, stormwater, landscaping, and setbacks regulations) to remove unnecessary hurdles.		
Review and evaluate development code (top priority) and engineering design manual (lower priority).	City Planning, Engineering, and Public Works Departments	3 years

In summary, the workshop

- Discussed planning and water resources issues faced by the BURA and City of Beaverton and helped raise awareness of those issues;
- Assisted the community in identifying priority strategies that could help meet planning goals and address water resource issues; and
- Facilitated discussion on next steps that could be taken to implement the top four strategies recommended by the participants.

Several initiatives are already underway related to implementation of the BURA land use planning, redevelopment, and education regarding stormwater management. The group stressed the need to work with Clean Water Services in developing a comprehensive stormwater management plan for the BURA. Indeed, in pursuing many of the strategies, the policy-makers, staff, and citizens all stressed the need for stronger coordination with Clean Water Services, an agency that shares many of the City’s sustainability goals. The group recommended moving forward with a formal incentives program for green practices, which could be supported by a local code review and by tailoring development standards in the BURA. It was anticipated that action on all of the four priority strategies would begin within 2 years. Additional initiatives and projects stemming from this workshop may be implemented in the future.

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5. APPENDIX

- **Additional Resources**

- U.S. EPA Building Blocks for Sustainable Communities:
<http://www.epa.gov/dced/buildingblocks.htm>
- U.S. EPA Green Infrastructure Program: <http://water.epa.gov/infrastructure/greeninfrastructure/>

- **Workshop Morning Session Attendees**

Name/Title	Affiliation	E-mail Address	Telephone
Don Mazziotti	City of Beaverton Economic Development	don@mazziotti.com	503-9367974
Marc San Soule	Beaverton City Council		
Scott Winter	City of Beaverton Planning Commission	scott.winter@wncbyrne.com	503-704-5773
Jennifer Nye	City of Beaverton Planning Commission	jennifer.nye@otak.com	971-235-5277
Barbara Fryer	City of Beaverton Planning Dept.	bfryer@beavertonoregon.com	503-526-3718
Tyler Ryerson	Beaverton Urban Redevelopment Agency	tryerson@beavertonoregon.com	503-526-2520
Sarah Dale	USEPA Headquarters	dalesarah@epa.gov	202-5646998
Martina Frey	Tetra Tech	martina.frey@tetrattech.com	503-477-4937
Kimberly Brewer	Tetra Tech	kimberly.brewer@tetrattech.com	919-485-8276
Nicole Friedman	The Oregonian	nfriedman@oregonian	503-294-5349

- **Workshop Afternoon Session Attendees**

Name/Title	Affiliation	E-mail Address	Telephone
Bob Bumgartner	Clean Water Services	bumgartnerb@cleanwaterservices.org	
Sean Farrelly	City of Tigard	sean@tigard-or.gov	
Anthony Barber	EPA Region 10	Barber.anthony@epa.gov	
Avis Newell	Oregon DEQ	Newell.avis@deq.state.or.us	703-229-6018

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Name/Title	Affiliation	E-mail Address	Telephone
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Martina Frey	Tetra Tech	martina.frey@tetrattech.com	503-477-4937
Kimberly Brewer	Tetra Tech	kimberly.brewer@tetrattech.com	919-485-8276

- **Community Meeting Attendees**

Name/Title	Affiliation	E-mail Address	Telephone
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Ken Dale		specialo@aol.com	503-228-3427
Amy Mai	Mai Ecological	achmai@gmail.com	503-575-2879
Paul Conem	BDA		
April Olbrach	TRNC	trnc@twc.org	503-846-4810

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Tyler Ryerson	Beaverton Urban Redevelopment Agency	tryerson@beavertonoregon.com	503-526-2520
Sarah Dale	USEPA Headquarters	dalesarah@epa.gov	202-5646998
Martina Frey	Tetra Tech	martina.frey@tetrattech.com	503-477-4937
Kimberly Brewer	Tetra Tech	kimberly.brewer@tetrattech.com	919-48-.8276

- **Workshop Agenda for Each Session (next 3 pages)**

BUILDING BLOCKS TECHNICAL ASSISTANCE:

LINKING LAND USE AND WATER QUALITY

How development can improve water quality

Strategies for using the built environment as a stormwater management solution

Beaverton, OR

May 23, 2013

Workshop Leaders:

EPA Headquarters: Sarah Dale

Tetra Tech: Kimberly Brewer and Martina Frey

Morning Workshop Agenda

8:00 – 8:05 Welcome

8:05 – 8:10 What is the Building Blocks Program and Why are We Here?

8:10 – 8:20 Introductions

8:20 - 8:40 Overview: Relationships Between Land Use and Water Quality

8:40 – 9:00 Aligning the Community's Land Use and Water Quality Goals

9:00 – 10:30 Implementation Strategies

Overview of possible policies and strategies for reducing the amount of stormwater runoff and for sustainably managing stormwater runoff in the Beaverton Urban Renewal Area (BURA).

Discussion topics will include:

Natural Resources

Compact Development

Green Streets

Efficient Parking

Green Infrastructure On-Site

10:30 – 10:50 Prioritize Strategies

10:50 – 11:00 Wrap Up and Next Steps

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BUILDING BLOCKS TECHNICAL ASSISTANCE:

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How development can improve water quality

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Beaverton, OR

May 23, 2013

Workshop Leaders:

EPA Headquarters: Sarah Dale

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Afternoon Workshop Agenda

- | | |
|-------------|---|
| 1:00 – 1:05 | Welcome |
| 1:05 – 1:10 | What is the Building Blocks Program and Why are We Here? |
| 1:10 – 1:20 | Introductions |
| 1:20 - 1:40 | Overview: Relationships Between Land Use and Water Quality |
| 1:40 – 2:00 | Presentation of New Strategies Policy Makers Recommended Implementing for the Beaverton Urban Renewal Area (BURA) |
| 2:00 – 3:00 | Design Exercise Applying New Green Strategies |
| 3:00 – 3:45 | Implementation Next Steps: Facilitated Discussion on Actions and Timelines |
| 3:45 – 4:00 | Wrap Up and Adjourn |

**BUILDING BLOCKS TECHNICAL ASSISTANCE:
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How development can improve water quality

Strategies for using the built environment as a stormwater management solution

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May 23, 2013

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Community Meeting Agenda

Welcome

What is the Building Blocks Program and Why are We Here?

Introductions

Presentation of New Strategies Policy-Makers Recommended
Implementing for the Beaverton Urban Renewal Area (BURA)

Presentation of Design Ideas (from Afternoon Workshop)

Discussion of Strategy Recommendations and Design Ideas

- Other important strategies to consider?
- Other design ideas?

Wrap up and Adjourn

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Next Steps

- Land Use and Water Quality Workshop Presentations (see attachment)
- Map of Beaverton Urban Renewal District

