

Appendix C

Public Involvement and Participation

**City of Bend
Stormwater Public Advisory Group**

	Last name	First Name	Organization	Representing
1	Linville	Courtney	Chamber of Commerce	Business/Industry: Large
2	Low	John	Ewing Irrigation	Business/Industry: Small
3	Rich	Barbara	Citizen	Citizen At Large
4	Burgi	Jon	DEA	Consulting/Engineering
5	Headley	Tom	Century-West	Consulting/Engineering
7	Goss	Gregg	Jack Robinson & Sons, Inc.	Developers--Excavation
8	Chris	Hart-Henderson	Heart Spring Design	Developers--Landscape Architect
9	Riley	Mike	Central Oregon Environmental Center	Environmental Group-- Outreach/ Waste Reduction
10	Richter	Joanne	Upper Deschutes Watershed Council	Environmental Group--Watershed
11	Schneider	Chelsea	Bend Park and Recreation District	Intergovernmental Coordination
12	Cleveland	Todd	Environmental Health, Deschutes County	Intergovernmental Coordination
13	Olson	Leslie	Riverwest NA	Neighborhood Associations
14	Ratliff	Krista	Oregon Department of Environmental Quality	Regulatory Liaison
16	Edde	Wendy	Stormwater Program Manager City of Bend	Stormwater Staff
17	Buchanan	David	Stormwater Program Analyst	Stormwater Staff
Interested Parties				
18	Arnold	Chuck	Bend Downtowners Association	Businesses
15	Fender	Jeremiah	COID	Irrigation/Canals
	Howard	Cheryl	Volunteer Coordinator City of Bend	City Staff
19	Griffiths	Patrick	Water Resources Manager City of Bend	City Staff
20	Hanson	Hardy	Streets/Stormwater Ops Supervisor, City of Bend	Stormwater Staff

Last Updated: October 2012

Stormwater Quality

Public Advisory Group Meeting

October 24, 2012

1:15 PM – 2:30 PM

City of Bend, City Hall: Board Room



Proposed Agenda

- I. **Welcoming Remarks and Announcements**, City Staff, All, 5 minutes
Objectives: Provide introductions, announcements; review/approve previous meeting summary, discuss and make any changes to agenda. Review action item summary.
- II. **PAG Policies and Procedures**, City Staff, All, 10 minutes
Objectives: Review purpose and goals of PAG. Receive update on replacement procedures and policies for PAG. Select standard meeting time/day.
- III. **Updates**, City Staff, 15 minutes
 - a. Underground Injection Control Water Pollution Control Facility Permit Negotiations
 - b. NPDES Permit Reissuance Status
 - c. Integrated Stormwater Management Plan 2022/'23
 - d. Stormwater Master Plan Finalization
 - e. Title 16 Implementation/Outreach Update
- IV. **Draft Illicit Discharge Manual**, All, 20 minutes
Objectives: Provide comments on the draft Illicit Discharge Minimization BMP manual and discuss next steps.
- V. **Review: FY2011/12 Annual Report**, All, 10 minutes
Objectives: Receive overview of draft annual report and provide any final comments by Monday October 29, for submittal to DEQ by November 1.
- VI. **Receive for Review: LID Outreach "Bend's Better Site Design Walking Tour,"** All, 10 minutes
Objectives: Review draft outreach piece showcasing examples of low impact development, based on the stormwater tour given at the 2011 ODOT conference.
- VII. **Confirm Action Items/Adjourn**, All, 5 minutes
Objectives: Confirm understanding of next steps and decisions made.

**Stormwater Quality Public Advisory Group
Meeting Summary
Thursday October 24, 2012
2:00PM—3:30PM
City of Bend: Boyd Acres Facility—Eisenhower Training Room**



Attendees

Jon Burghi (DEA), Tom Headley (Century West Engineering); Todd Cleveland (Deschutes County Community Development Department, Environmental Health); Jon Low (Ewing Irrigation); Krista Ratliff (DEQ); Leslie Olson (RWNA); Joanne Richter (UDWC); Chris Hart-Henderson (Heart Springs Design LLC); Wendy Edde (City of Bend, Stormwater)

Key Discussion Items/Decisions Made

Public Advisory Group Role and Procedures

Attendees discussed in detail the history and role of the Stormwater Quality Public Advisory Group in light of other City Committees, and procedures for making changes to the membership. Attendees discussed whether the PAG should have terms, and it was decided at this time no.

Updates

Members were provided updates on the following:

Underground Injection Control Water Pollution Control Facility Permit negotiation—the City is expecting to receive a draft version of its permit for review in the next couple of months. Wendy will forward announcement of the public review draft to PAG members, once available. The City applied for this permit in 2003 and has worked to increase its understanding of its facilities and the impacts of stormwater during the negotiation period.

NPDES Permit Reissuance Status—the City is awaiting DEQ's review of its submittal packet (submitted July 2011) and the City's permit has been administratively extended in the meantime.

Integrated Stormwater Management Plan 2022/23 (ISWMP 2022)—this is the City's proposed plan to address stormwater quality within the City. The City is using one plan to meet the management plan requirements for both the UIC-WPCF (for our drywells and drill holes) and the NPDES permits (for drainage to the river), since the systems and actions to prevent pollution are interrelated. The City conducted a public review of the draft ISWMP 2022 between October 2011 and January 2012. The City is currently updating the plan based on those comments and an improved understanding of the WPCF-UIC permit requirements.

Stormwater Master Plan Finalization. With improved clarity regarding the UIC system permit requirements, the City is awaiting a rate forecast from the Finance Department before providing a revised public draft for review. This will likely take several months.

Title 16 Implementation/Outreach Update. Wendy provided an overview of outreach products completed to date and a summary of trainings and educational

presentations provided —internally and to the public—to assist with implementation of Title 16. PAG members feel additional outreach is needed in the following areas:

- Provide an example Drainage Submittal. (Wendy has received approval to use one but has not received the final version. She will check in with the consultant).
- Examine and provide guidance on acceptable sizing tools (e.g., look into Aquascape, etc.)
- Provide guidance on what documentation is needed to meet city performance standards for designs (e.g., calculations, photos, etc.).

Draft Illicit Discharge Manual

Attendees reviewed the Draft Illicit Discharge Manual and made the following comments. The BMP Directory is useful.

- Provide links on how to properly design BMPs. Under landscaping, keep “pesticide” but also add “herbicides and fertilizers.”
- A lot of required and recommended bullets—double check that they are in the right locations. (Krista will provide detailed input on this topic).
- Bolster references as to whether to and how to dispose of something as hazardous waste. Include quick links in text to contact list at back, and to waste disposal).
- Address food carts/mobile food carts as a specific section. Including how to deal with wash water.
- Improve education component. Consider comprehensive educational component for this manual from permit counter, online, educational mailouts, and in the field.
- Include a subname for the Manual that laypeople can understand. Example at top: “Simple Steps to Protect Your Drinking Water and Our Beautiful Deschutes River.”

PAG members will provide any additional comments by Friday November 1. Once changes have been review/approved internally, it will then be sent out for full public review.

Review FY2011/12 Annual Report

- Attendees received an overview of the draft FY2011/12 Annual Report and will provide any comments back by Monday October 28. The City will submit the report by the November 1, 2012 regulatory deadline.

Receive for Review: LID Outreach “Bend’s Better Site Design Walking Tour”

Attendees received draft versions of the “Bend’s Better Site Design Walking Tour” and will provide detailed comments by the next meeting. Initial comments included providing clearer directions (e.g., Walk left across the bridge and....”).

City of Bend
Stormwater Quality Public Advisory Group
Meeting Attendance Sheet
October 24, 2012



Name:	Organization:	Contact Changes:
1. <u>Ledie Olson</u>	<u>RWNA</u>	
2. <u>Jon Burgi</u>	<u>DEA</u>	
3. <u>Krista Rattiff</u>	<u>DEQ</u>	
4. <u>JOHN LOW</u>	<u>EWING</u>	
5. <u>Joanne Richter</u>	<u>UDWC</u>	<u>541-420-4861</u>
6. <u>Todd Cleveland</u>	<u>Deschutes Co.</u>	
7. <u>THOMAS HEALEY</u>	<u>CWEC</u>	
8. <u>Chris Hart-Henderson</u>	<u>♥Springs</u>	<u>541-280-3036</u>
9. <u>Wendy Eide</u>	<u>City of Bend</u>	<u>541-317-3018</u>
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Stormwater Quality

Public Advisory Group Meeting

January 15, 2013

1:00 PM – 2:30 PM

City of Bend, City Hall: Awbrey Butte Room (Upstairs and to the left)



Proposed Agenda

- I. **Welcoming Remarks and Announcements**, City Staff, All, 5 minutes
Objectives: Provide introductions, announcements; review/approve previous meeting summary, discuss and make any changes to agenda.

- II. **Updates**, City Staff, 15 min.
 - a. Underground Injection Control Water Pollution Control Facility Permit Negotiations
 - b. NPDES Permit Reissuance Status
 - c. Integrated Stormwater Management Plan 2022/23
 - d. Illicit Discharge Manual
 - e. FY2011/12 Annual Report
 - f. Drainage Submittal Example
 - g. Review of Existing Sizing Tools
 - h. Speaking Stormwater: Draft Glossary of Stormwater Terms

- III. **Comprehensive Education Strategy Brainstorming**, All, 30 min.
Objectives: To assist in development of effective comprehensive education strategy for public and City employees, and discuss incentive programs.

- IV. **Review Draft Outreach Pieces**: All, 25 min.
 - a. **LID Outreach "Bend's Better Site Design Walking Tour,"**
 - b. **Carpet Cleaning Brochure**
 - c. **Rain Garden Plant List (Revised)**Objectives: Provide comments on draft outreach pieces showcasing examples of low impact development, based on the stormwater tour given at the 2011 ODOT conference; a new draft brochure targeting carpet cleaners, and the revised plant list.

- V. **Roundtable Discussion**, All, 10 min.
Objectives: Open Discussion.

- VI. **Confirm Action Items/Adjourn**, All, 5 min.
Objectives: Confirm understanding of next steps and decisions made.

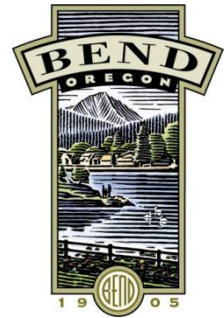
Stormwater Quality

Public Advisory Group Meeting Summary

January 15, 2013

1:00 PM – 2:30 PM

City of Bend, City Hall: Awbrey Butte Room



Attendees

Chelsea Schneider (BPRD); Thomas Headley (Century West); Todd Cleveland (Deschutes County Community Development Department); John Low (Ewing Irrigation); Chris Hart-Henderson (Heart Springs Landscape Design); Joanne Richter (UDWC); Jon Burgi (David Evans & Associates); Leslie Olson (RWNA); Wendy Edde & David Buchanan (City of Bend Stormwater)

Welcoming Remarks and Announcements,

Wendy provided the following updates.

-James Newkirk was recognized in the Bend Bulletin for his storm drain marking effort. The article included a positive stormwater message and highlighted the City's volunteer program.

-The 319 Grant application for improving landscaping and constructing a Low Impact Development (LID) demonstration project at City Hall was not selected for funding. This is the second time the project has not scored high enough to be selected. City staff will continue to look for other grant opportunities to fund this project.

-The City submitted support documentation to DEQ for the Underground Injection Control Water Pollution Control Facility Permit (WPCF). That documentation included the Systemwide Assessment and the revised draft Integrated Stormwater Management Plan 2022 (ISWMP 2022) that incorporated public comments. DEQ is now working to post the final permit online for public review and comment. Wendy will email out a link to the public draft permit when posted.

-No changes to NPDES Permit reissuance status since last meeting.

-DEQ Total Maximum Daily loads (TMDL) development is on hold pending federal litigation.

-Standard stormwater sizing tools, staff continue to review the links suggest by the PAG. Chris recommended adding guidance for calculating void space of drain rock in swales.

-Example Design Submittal is still in progress. Wendy has received a verbal approval to use a drainage submittal as an example but the engineer on the project may want to remove company names and logos prior to City use.

-David is working to develop a Glossary of stormwater terms. PAG members recommended looking at other organizations with standard definitions such as ASCE and IECA.

Comprehensive Education Strategy Brainstorming

Wendy provided a handout containing suggested Driving Forces, Goals and Objectives. In addition to the ideas provided separately in writing by Chris, the PAG provided the following comments:

- Consolidate permitting driving forces into one area.
- Add flooding to public health.
- Provide more information on what is included in the Bend 2030 vision for stormwater.
- Prioritize the goal list and make illicit discharge a higher priority.
- Use a matrix to evaluate other city outreach programs to identify efficiencies.
- Residential and non-profit car wash could be a source of nitrogen. Evaluate soaps and provide education.
- Focus illicit discharge outreach awareness on Lead and add a goal for lead removal.

Review Draft Outreach Pieces:

-Wendy handed out a response to comments sheet for PAG review of the draft Illicit Discharge Manual. The updated manual will now be posted for public review after final internal approval.

-The revised LID Outreach “Bend’s Better Site Design Walking Tour,” was distributed to the group. The PAG suggested creating a mobile smartphone app for the tour. BPRD is looking to create something similar; this may be a good opportunity for the City to partner with BPRD on the app development. The PAG also recommended improving text directions to make finding the points of interests more users friendly. Tom suggested changing the facility locations shading so that it stands out better against the aerial photo. The PAG recommended adding a stamp book or some other rewards program for people that complete the tour.

-Rain Garden Plant List Update: The group reviewed the revised list and discussed plants that could be considered invasive in some areas. The group settled on adding a note to all potentially invasive plants. It was also suggested that the plant table include placement locations within a swale.

-The Carpet Cleaning Brochure was distributed for PAG review. Krista recommended contacting Bob Baggett at DEQ for additional information on the requirements for disposal of carpet cleaning waste into a septic system.

Action Items:

- Chelsea will provide any additional comments on the “Better Site Design” draft and contact information for the Park District’s smart phone app coordinator, and guidance on plant placement locations within a swale.
- Wendy will post the draft Illicit Discharge manual for public review.
- Wendy will email out a link to the WPCF-UIC public draft permit when posted.
- Wendy will work with city staff to post ISWMP 2012 on web page
- David will contact Bob Baggett at DEQ to discuss carpet cleaning waste.

City of Bend
Stormwater Quality Public Advisory Group
Meeting Attendance Sheet
January 15, 2013



Name:

Organization:

Contact Changes:

1. CHELSEA SCHNEIDER BPRD chelsea@bendparksandrec.org
2. THOMAS HEADLEY CENTURY WEST ENGINEERING
3. Todd Cleveland Deschutes CDD
4. JOHN LOW EXIAng —
5. Christhart-Henderson Spring Landscape Design
6. Joanne Richter UDWC jrictler@bendbroadband.com
7. Jon Burgi DAVID EVANS & ASSOCIATES
8. Leslie Olson RW N/A
9. Paul U COB - storm
10. Wendy Elle COB - storm
11. _____
12. _____
13. _____
14. _____
15. _____

Stormwater Quality

Public Advisory Group Meeting

March 19, 2013

1:00 PM – 2:30 PM

City of Bend, City Hall: Awbrey Butte Room (Upstairs and to the left)



Proposed Agenda--REVISED

- I. **Welcoming Remarks and Announcements**, City Staff, All, 5 minutes
Objectives: Provide introductions, announcements; review/approve previous meeting summary and action items, discuss and make any changes to agenda.

- II. **Updates**, City Staff, 10-15 min.
 - a. Permits Status
 - b. Illicit Discharge Manual
 - c. LID Outreach "Bend's Better Site Design Walking Tour"
 - d. Rain Garden Plant List (Revised)
 - e. Third Street Underpass Project
 - f. Recent and Upcoming Trainings
 - g. Comprehensive Education Strategy Brainstorming

- III. **Review Draft Outreach Pieces**: All, 40 min.
 - a. **Carpet Cleaning Brochure**
 - b. **Stormwater Terms Glossary**
 - c. **ACWA Stormwater Construction Site Guide – Content Draft**
 - d. **Single family Residential Drainage Calculation Example**Objectives: Provide comments on the previously distributed draft carpet cleaners brochure and stormwater terms glossary, provide input on any local information for appendix to the ACWA Stormwater Construction Site Guide; discuss other outreach.

- IV. **Public Advisory Group –Volunteer Intern**, Chelsea, 15 min.
Objectives: Receive information regarding and provide input on the idea of a public advisory group volunteer intern to help provide education regarding illicit discharge prevention.

- V. **Demonstration and other Volunteer Projects**, Cheryl Howard, 10 minutes
Objectives: Receive status updates, provide ideas/input with regards to the garden at 9th and Franklin; Bear Creek swales monitoring; opportunities at Roosevelt and McKinley and City Hall; household hazardous waste disposal outreach and storm drain marking updates.

- VI. **Confirm Action Items/Adjourn**, All, 5 min.

Stormwater Quality

Public Advisory Group Meeting Summary

March 19, 2013

1:00 PM – 2:30 PM

City of Bend, City Hall: Awbrey Butte Room (Upstairs and to the left)



Attendees

Todd Cleveland (Deschutes County Community Development Department, Environmental Health); Joanne Richter (UDWC); Chris Hart- Henderson (Heart Springs Design LLC); Jon Burgi (DEA); Leslie Olson (RWNA) ; Thomas Headley (Century-West); Chelsea Schneider (Bend Park and Recreation District); Wendy Edde (City of Bend, Stormwater); David Buchanan (City of Bend, Stormwater), Cheryl Howard (City of Bend, Volunteer Coordinator)

Welcoming Remarks and Announcements

Wendy Edde walked through the agenda, previous meeting summary and action items. Jon Burgi recommended removing completed action items after one meeting. The group also discussed changing the action numbering format to make sorting quicker.

Updates

The draft City WPCF-UIC Permit is out for public review on DEQ`s website. Bend`s NPDES permit has been administratively extended while DEQ works on issuing new general permits for Phase II permittees.

The draft Illicit Discharge Manual is out for public review on the City`s web site. Joanne Richter said she noticed that a couple of her corrections had been missed. She will forward those comments to David Buchanan.

The LID outreach brochure "Bend`s Better Site Design Walking Tour" has been updated to include better directions.

The PAG recommended revisions to the Rain Garden Plant List to include adding suggested locations for placement within the swale. More expert information is needed for staff to be able make this change and it may need to be included in a future update if it is not readily available. Chris Hart-Henderson volunteered to assist staff on this task. Chelsea Schneider will provide some guidance and Wendy will send a revised plant list to Chris for her review and input.

The Third Street Underpass Project is going to be presented to City Council in April or May. The project will reduce spill risks for protection of the City groundwater, as well as reduce public safety flood risks.

The City has several upcoming trainings including a TMDL webinar and a training with an International Erosion Control Association (IECA) trainer to provide a hands-on erosion control class for contractors. Chris Hart-Henderson suggested looking into getting the class approved by the contractor`s board. Wendy will look into working with COBA and getting Professional Development Hours from IECA.

Review Draft Outreach Pieces

The draft Carpet Cleaning Brochure was provided to the group at the previous meeting. Leslie Olson found a typo in the County Code section. The group would like more information on how to properly dispose of carpet cleaning waste and less toxic alternative cleaning chemicals. Cheryl Howard recommends partnering with the Fire Free program. Another idea was to organize a household chemical pick up day or to better promote the County Drop-off program.

A copy of the Stormwater Glossary was provided to the group for review. Leslie Olson would like Silt Fence added to the glossary. The group will review and provide comments by the next meeting.

The ACWA Stormwater Construction Site Guide is ready for the graphic artist's final formatting. Wendy asked the group for recommendations on what Bend specific language should be added to the last page of the document, if any.

A draft example single family residential site plan was distributed for review. Chris Hart- Henderson had questions on rock volume and void space. David will work with the City Engineer to clarify the notes on rock volume. Any additional comments were requested by April 1, 2013.

Public Advisory Group –Volunteer Intern

Chelsea Schneider provided a summary on a meeting she, Cheryl and Wendy had with a potential OSU intern. The intern expressed interest in taking the lead in developing a stormwater public outreach internship program with OSU. Chelsea Schneider is going to work with the intern to develop a contract that outlines the program goals and measurable milestones should he decide to peruse the internship.

Demonstration and Other Volunteer Projects

Cheryl Howard provided an update on the City's volunteer program with regards to the community garden at 9th and Franklin, the Bear Creek swales monitoring, low impact development demonstration opportunities at Roosevelt and McKinley and City Hall; and household hazardous waste disposal outreach and storm drain marking updates.

Action Items

Wendy 1) Revise the Action Item list to include a simple numbering system and hide old completed action items. 2) Work with Chelsea and Chris on the revised plant list. 3) Contact COBA to get contractors education credit for the IECA training. 4) Provide speaking points to Cheryl Howard for household hazardous waste outreach.

David 1) Update the carpet cleaning brochure to address PAG comments; 2) Add silt fence to the glossary. 3) Work with City Engineer to clarify notes on rock volume and incorporate additional comments received. 4) Upon receipt, address Joanne Richter's comments to the Illicit Discharge Manual.

Group Review and provide comments on the Carpet Cleaning (by April 1, 2013), Stormwater Glossary (By next meeting) and Example Single Family site plan (by April 1, 2013). Provide input on items to include in an Appendix for the ACWA Construction Site Guide.

The next meeting is scheduled for ~~May 21~~ June 18, 2013 from 1- 2:30PM in the Awbrey Butte Room.

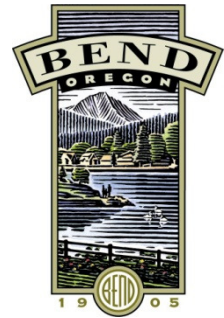
Stormwater Quality

Public Advisory Group Meeting

June 18, 2013

1:00 PM – 2:30 PM

City of Bend, City Hall: Awbrey Butte Room (Upstairs and to the left)



Proposed Agenda

- I. **Welcoming Remarks and Announcements**, City Staff, All, 5 minutes
Objectives: Provide introductions, announcements; review/approve previous meeting summary and action items, discuss and make any changes to agenda.

- II. **Updates**, City Staff, 10-15 min.
 - a. Permits Status
 - b. Third Street Underpass Project
 - c. International Erosion and Sediment Control Training and associated outreach
 - d. HOA Presentation
 - e. Public Works Day—Thursday May 23
 - f. Stormwater Master Plan status
 - g. Utility Service Charge Implementation Audit/Review
 - h. Other Action Items

- III. **Review Draft Public Outreach Strategy**: All, 40-45 min.
Objectives: Receive, discuss and prioritize initial draft, strategic outreach strategy options.

- IV. **Demonstration Projects Update**, Cheryl Howard, 10 minutes
Objectives: Receive status updates, provide ideas/input with regards to the garden at 9th and Franklin; Bear Creek swales monitoring; opportunities at Roosevelt and McKinley and City Hall; household hazardous waste disposal outreach and storm drain marking updates.

- V. **Confirm Action Items/Adjourn**, All, 5 min.

Stormwater Quality

Public Advisory Group Meeting Summary

June 18, 2013

1:00 PM – 2:30 PM

City of Bend, City Hall: Awbrey Butte Room (Upstairs and to the left)



Attendees

David Buchanan (City of Bend, Stormwater); Jon Burgi (DEA); Todd Cleveland (Deschutes County Community Development Department, Environmental Health); Wendy Edde (City of Bend, Stormwater); Chris Hart-Henderson (Heart Springs Design LLC); Thomas Headley (Century-West); Krista Ratliff (DEQ); Joanne Richter (UDWC)

Welcoming Remarks and Announcements

Wendy Edde walked through the agenda, previous meeting summary and action items.

Updates

The City received its WPCF-UIC Permit in mid-May. Bend's NPDES permit has been administratively extended while DEQ works on issuing new general permits for Phase II permittees, which DEQ is beginning. Now that the City has a better understanding of its regulatory requirements with the issuance of the WPCF-UIC permit, it will begin moving forward on the completion of the Stormwater Master Plan. Because of the regulatory changes, the City will not pursue the piped system proposed in the initial 2008 public draft. The plan at this point will be a high level strategy level, but there is a great deal of useful information in the Master Plan that it makes sense to complete it to establish a system knowledge baseline for future plans. The Third Street Underpass Project is under construction that will continue throughout the summer with the underpass closed from 7 PM to 7 AM nights.

The City hosted a live International Erosion and Sediment Control (IECA) training on construction site erosion and sediment controls and pollution prevention was well attended by approximately 30 attendees. Two sessions were held—one at the municipal courtroom in the morning that included a field display; and an afternoon classroom session at the training room of and in conjunction with the Central Oregon Builder's Association. The Illicit Discharge Manual has been finalized and is in the process of distribution, both on the website, at the IECA training; and to the high-risk sites as determined by the UIC Systemwide Assessment analysis. The revised Rain Garden Plant List, the single-family site plan with calculation tool and the ACWA Stormwater Construction Site Guide were also provided as part of the materials distributed at the IECA training. Education credits (professional development hours) were provided.

Wendy Edde also participated in a morning breakfast talk in May on stormwater to a conglomeration of Homeowner's Associations from throughout Central Oregon. The panel included David Cole from DEQ, and Dennis Collins from Stormwater Services. The talk focused on underground injection controls.

Attendees reviewed the revised action item list. The Carpet Cleaning brochure was distributed to all known carpet cleaning companies. The household hazardous waste information distributed by the County included stormwater talking points that Wendy had provided. The interested potential COCC

volunteer intern decided to take a paid position instead of pursuing the stormwater internship. Thomas Headley provided some additional comments on the glossary that David will address prior to posting on the website. Wendy shared two new "It's All Connected" outreach pieces: "Save the Fish so we can catch 'em later!" and "I'm Heron We Should Keep Our Waters Clean." As they were just text changes, the costs were minimal.

Review Draft Public Outreach Education Strategy

Attendees reviewed the draft public outreach strategy including several brainstormed ideas for future activities. Attendees used a dot exercise to prioritize the activities. Joanne indicated that she liked all the activities and encouraged the City to do as many as practical. Highest ranked activities included those with the objective to increase understanding of stormwater pollution and causes thereof, increase awareness about water quality problems and solutions to protect water quality; strengthen the linkage between land use activities and water quality and flooding issues; minimize illicit dumping and spills; and develop a series of fact sheets to support tail-gate or other trainings for both private and public staff. City staff will refine the plan based on the input.

Demonstration Projects Update

The community garden incorporating rain garden features at 9th and Franklin, dubbed "Franklin's Corner" is moving forward with volunteer assistance (<http://www.franklinscorner.org/>). A ribbon cutting was held for the Bear Creek swales that were installed as part of a Safe Streets to School effort. Those have recently been weeded.

Action Items

- Wendy will email both a copy of the historical Third Street underpass flooding picture from 1938 that Leslie Olson had sent over, along with a copy of the WPCF-UIC permit to Public Advisory Group members.
- City staff will refine the public education outreach strategy based on input from the meeting. (Wendy)
- City staff will post the stormwater glossary on the website and email Public Advisory Group members once the latest comments have been incorporated. (David)

The next meeting is scheduled for Tuesday September 17, 2013 from 1- 2:30PM in the Awbrey Butte Room.

City of Bend
Stormwater Quality Public Advisory Group
Meeting Attendance Sheet
June 18, 2013



Name:

Organization:

Contact Changes:

1. THOMAS HEADLEY CENTURY WEST ENGINEERING
2. Joanne Richter UDWC
3. Krista Rathff DEQ
4. Todd Cleveland Deschutes Co. CDD
5. Wendy Edde City of Bend
6. [Signature] DEA
7. [Signature] City of Bend
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Agenda
Infrastructure Advisory Committee Meeting
August 13, 2012; 3:00 pm to 5:00 pm
City of Bend – Boyd Acres Campus
62975 Boyd Acres Rd., Eisenhower Training Room



1. IAC Business (Chair Frank Turek, 3:00PM - 3:00PM)
 - a) Call to Order, Roll Call, Determine Quorum

2. Stormwater Master Plan (Wendy Edde, City of Bend Stormwater Program Manager 3:00PM – 3:45 PM)
 - a) Overview
 - b) Presentation
 - c) Next Step

3. Update - International Living Future Institute (ILFI). This is a non- governmental organization who partnerships with public and private entities to facilitate solutions that are “truly” sustainable. The city has accepted a grant from this organization. (Tom Hickmann P. E., City of Bend City Engineer / Assistant PW Director 3:45PM – 4:15 PM)

4. IAC Meeting Schedule – Tom Hickmann P. E., City of Bend City Engineer / Assistant PW Director 4:15PM – 4:30PM)

5. Other Matters (4:30PM)

6. Adjourn (4:30PM)

Stormwater Master Plan Update

Public Works Department



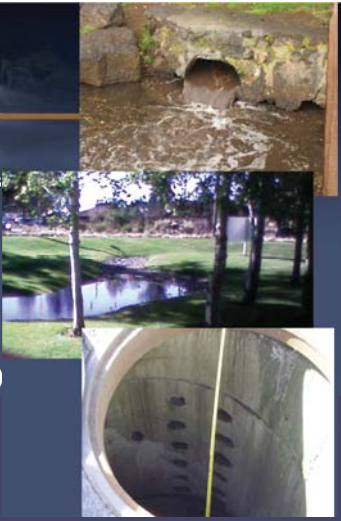
Outline

- Master Plan History
- Hurdles/Regulatory Overview
- Project Benefits
- Revised Draft Plan Overview
- Next Steps



What Is Stormwater/ Where Does It Go?

- Rain, Sleet, Snow, Runoff to storm drains
- Surface Water via Outfalls
- Infiltration through upper reaches of soil
- Underground via Underground Injection Control Devices (UICs)
 - Drill holes, dry wells
 - Deeper than width



Intense Storms



History



- First Formal Stormwater Master Plan
- Winter 2006-2010; 2012-Present
- Initial Public Review Draft (12/08-04/09)
- Phase I (Dec. 2006-June 2007)
 - Identification 30 flooding problem spots
 - Preliminary engineering for top 5 spots
 - Established Stormwater Utility
 - Established Stormwater Service Charge
 - Geotechnical Assessment

History (continued)

- Phase II (July 2007-May 2010)
 - Stormwater Infiltration Evaluation Report
 - Delineation of Drainage Areas
 - Public Draft Plan with Cost Estimate and Layout for a Piped System
 - Outreach – Open Houses
 - Response to Comments / Internal Revisions
 - Preliminary Engineering for 3rd Street Underpass
- Phase III (April 2012- Present)
 - Finalization

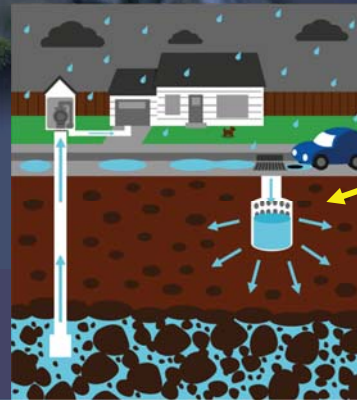
Stormwater Regulations



- Phase II National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit
 - Discharges to surface water
 - Permit Received February 2007
 - Integrated Stormwater Management Plan
 - Maximum Extent Practicable (mep)



Underground Injection Controls and Drinking Water



Graphic Courtesy of ACWA

Stormwater Regulations



- Underground Injection Control (UIC) Water Pollution Control Facility Permit
 - Discharges to the ground—dry wells, drill holes
 - Applied for permit in 2003
 - In Negotiation; Municipal Template
 - Anticipated by 2006... '07... '08... '09... '10... '11... '12...

2006-2010 DEQ UIC Interpretation

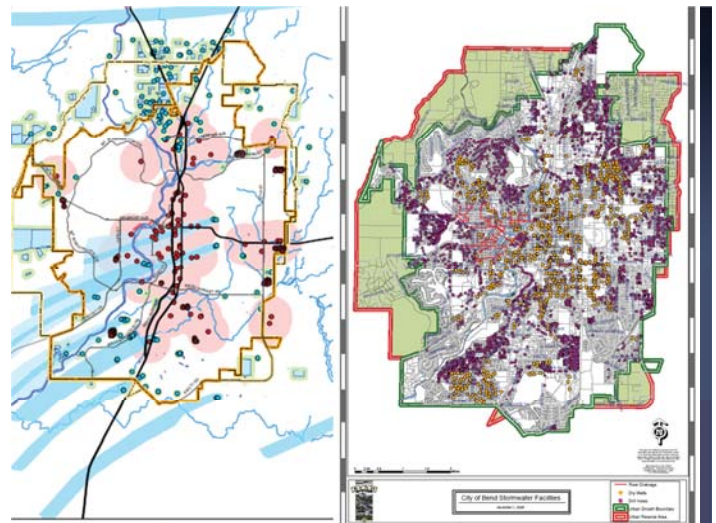
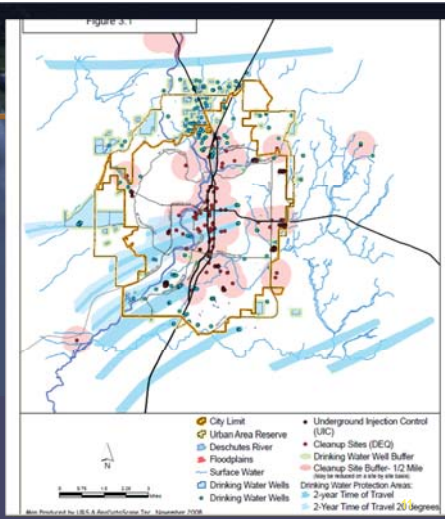


CBS Sports, 2012

- UICs are not good
- Not allowed in Wellhead Protection Areas or wellhead buffers without treatment at end of pipe to SDWA levels
- Wet feet Prohibited
- All Need Pretreatment
 - Perceived as surface or mechanical facility
 - DEQ – Jury out on sedimentation manholes
 - One business in Bend: \$200,000 for UIC stormwater treatment upgrades
- City was aware of nearly 5000 public UICs

Wellhead Protection Areas 2003

- Cost of DEQ-approved treatment control (manufactured): ~\$70,000 (Stormfilter)



Circa 2007-'09 Thought of the Day...



- "We're Toast"

13

Task Force Recommendations and Council Direction (2007)

Direct the initial program toward

- Maintenance
- Regulatory compliance
- Public information/input
- Additional money to be used for capital improvement projects



14

2007 Estimated Annual Revenue/Expenditures

Revenue	\$2.5 M
→ CIP Projects	\$0.5 M
→ City Wide Overhead	\$0.4 M
→ Operations/Maintenance	\$1.3 M
→ Water Quality/Regulatory Compliance	\$0.3 M

Utility Provided Funding for Our Next Steps....

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2008 Public Draft

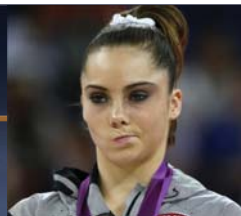
- Initial CIP / Hotpots
- Proposed piped system (mains)
- Costs: \$172-\$214 M (2009 presentation)
 - Regulatory: \$150M
- Economy: → Recession
- Other Infrastructure Needs



16

2008 Public Draft

- Response: Unpalatable
- Hold Until Improved Regulatory Clarity
- Continue Working Towards System Understanding
 - Pursue Draft Master Plan Recommendations Regarding Information Needs
 - Review Options based on results



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2008 Draft Recommendations

- Complete Stormwater Facility Inventory
- Improve Stormwater Quality Knowledge
- Update drinking water protection areas
- Conduct Groundwater Protectiveness Study
- Investigate UIC Infiltration Over Time
- Identify where UICs are prohibited
- Improve Local Requirements
 - 25 Year/ Safe Passage 100 year
 - Water Quality

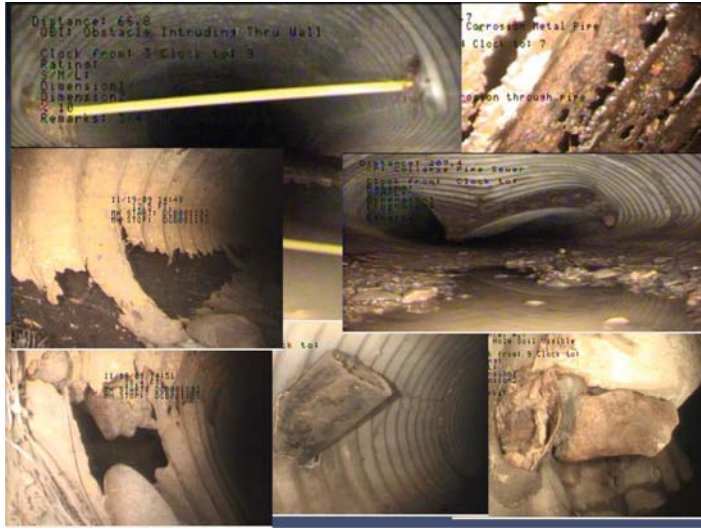
18

We Found Out Some Useful Information



Better Understanding Our Public Stormwater Facilities

- ~14 Miles of Stormwater Pipe to River
- 47 Miles Pipe Total
- 28 Outfalls to the River
- 97 Outfalls to Swales
- 4,564 Drywells
- 977 Drill Holes
- 9,452 Other Stormwater-related Facilities
 - ➔ Catch basins, distribution boxes, pipe inlets, vaults, storm filters, sediment manholes
- 1,520 UICs in >1000 ADT Streets



Kennedy-Jenks Stormwater Quality

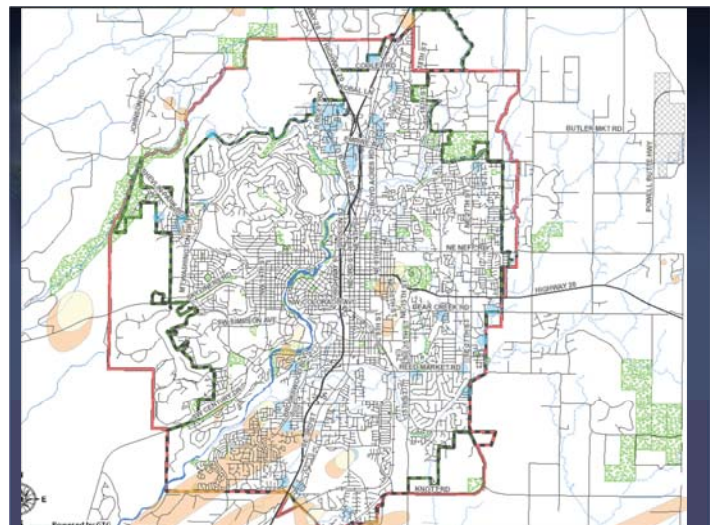
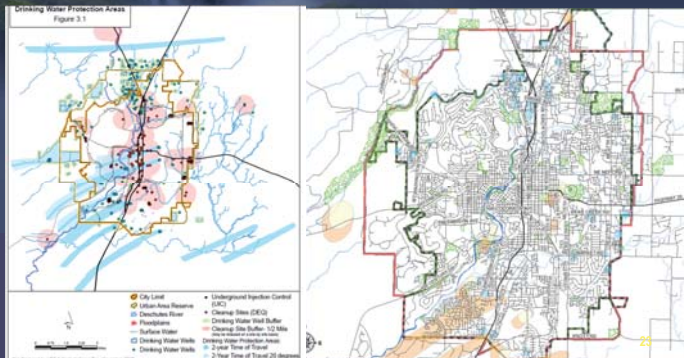
- Statewide: 25,247 samples, 15 public agencies, 1990-2008
 - ➔ 10 of 45 analytes above UIC screening levels, only 3 > 1% samples
 - Lead (12.7%); Pentachlorophenol (PCP)(11.7%); Di(2-ethylhexyl)phthalate (DEHP) (4.7%)
 - ➔ Higher concentrations > 1000 trips per day
- C.O.: 754 samples, 2 cities, '06-'10
 - ➔ 4 of 38 analytes above UIC screening levels
 - Lead (7%); cadmium, chromium, nitrate-nitrogen (NO3-N) (~1% each)
 - ➔ No significant difference > 1000 trips per day



Drinking Water Wellhead Protection Areas

2003 Delineation

2010 Delineation



Groundwater Protectiveness

- Demonstrated protectiveness for stormwater discharged from UICs in Wellhead Protections Areas
- Proposed effluent discharge limits (EDLs) to the City's UIC WPCF Permit
- *"The Fate and Transport Tool simulation results indicated that concentrations of lead, benzo(a)pyrene, PCP, and DEHP could be 1000, 1000, 527 and 1000 times higher than the EDL respectively, while still being protective of groundwater."*
- Conservatively proposed 10 times the EDL

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UIC Infiltration Study

- Cities of Bend and Redmond conducted infiltration tests at over 130 UICs vs. age
- Infiltration capacity of Bend Drywells declines on average 8 gpm/yr
 - Multiple Regression Analysis, took into account type, depth to water, soil type
- Bend drill holes inconclusive
- Redmond: UICs decline 7 gpm/yr

26

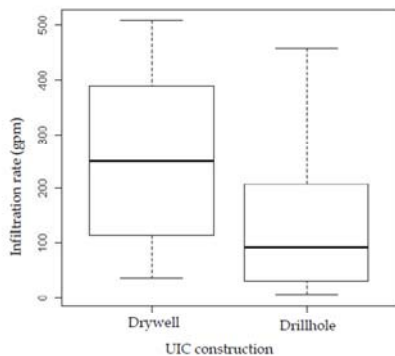


Figure 5. City of Bend - Box Plot Comparing Infiltration Rate Based on UIC Construction
Cities of Bend and Redmond, Oregon

GSI WATER SOLUTIONS

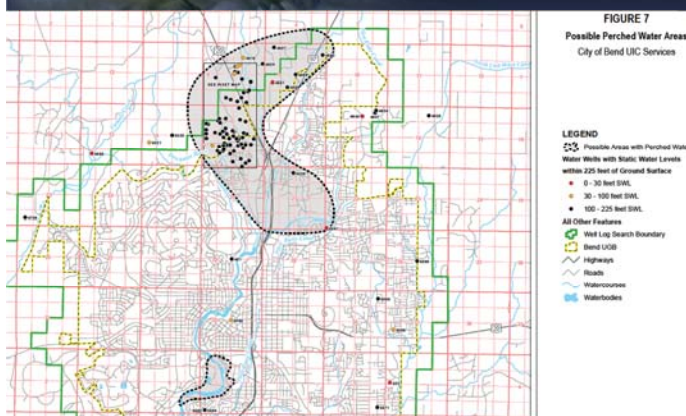
27

Wet Feet Analysis— Minimum UIC Vertical Setback Distance

- Identified Water Wells Within City
 - Confirmed or located 383 potential private wells
 - Weeded to 329; Need to field verify
- Examined Potentially Perched Aquifers
 - Well records
 - Regional Models (USGS)
 - DEQ Cleanup Program data
 - City Field Inspections
- Examined UICs within 300 feet of canals

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Potentially Perched Water Areas



We Educated DEQ Staff...

- Stormwater Quality / Monitoring
- Groundwater Protectiveness
- Standards Development
 - COSM (2010)—DEQ Reviewed (August 2010)
 - Standards and Specifications (July 2011)
 - Bend Code Title 16 (January 2012)
- Costs of What They Were Asking of Us
 - 2008 Draft
- Good Science → Good Policy

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Benefits/Cost Savings

- Utility Formation
 - Stable maintenance and water quality/compliance funding
- Improved System Understanding
 - Essential to Good Decision-making
 - Essential to UIC Permit Negotiations
- Initial CIP Prioritization Work



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2010: Initial Planning Level Capital Cost Comparison Estimates—Public System, Includes Treatment, Pre-Wellhead Protection Area Update

- Existing System (WQ Only) (2 year storm)
 - Installation \$15.8 Million (assumes Sed Manholes)
 - Annual O&M: \$ 1.3 Million
 - 10 Year Cost: \$29.4 Million
- Piped System (25 yr storm; 100 yr safe passage)
 - Installation: \$627.0 Million
 - Annual O&M: \$ 2.4 Million
 - 10 Year Cost: \$650.9 Million
- Hybrid System (25 yr./100 yr safe passage):
 - Installation: \$458.0 Million
 - Annual O&M: \$ 3.9 Million
 - 10 Year Cost: \$248.2 Million

32

UIC WPCF Permit Costs

- Not Yet Completely Clear
 - Level of Effort for Monitoring & Maintenance
- But...
 - \$15 M for capital projects is no longer needed.
 - Higher Action Levels means less follow-up monitoring will be likely
 - Fewer reporting requirements → lower administrative costs
 - Allows for continued use of UICs
 - More viable for piecemeal improvements
 - Assists meet surface water requirements (TMDL, NPDES, ESA)

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Changes in Water Quality Costs (UIC)

- Spring 2009: ~\$150 Million
- Spring 2010: \$29.4M/10 years
- Spring 2012: \$0.342M/10 years
- Future: Less

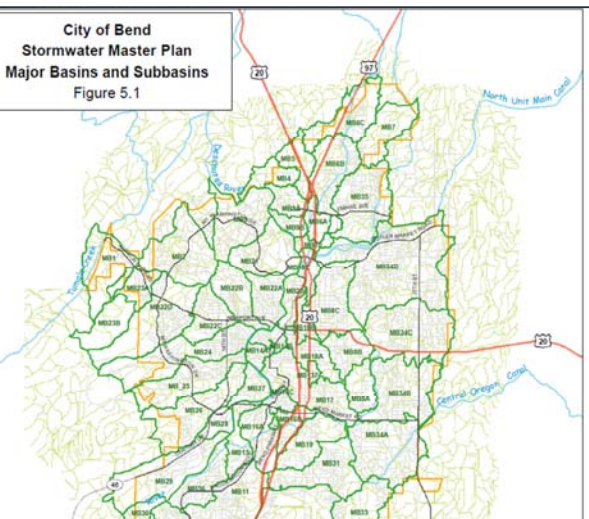
34

Revised Public Draft Plan Overview

- Baseline Inventory
- Provides geotechnical guidance
- High level Strategy
- Sets up Specific Plans and/or Future Master Plan Updates



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Recommended Strategies--General

- Meet regulatory requirements
- Refine New and Redevelopment standards
- Use Local Improvement Districts to speed timelines
- Develop subbasin specific plans
- Set up pipe rehabilitation program
- Implement projects to address flooding
- Address erosion of unpaved streets
- Encourage Low Impact Development

37

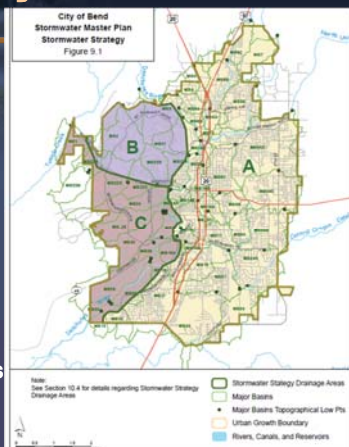
New and Redevelopment Strategy

- Address drainage with surface systems close to source
- If surface source control does not provide 25/100 year capacity, treat water quality storm in surface, and overflow to drywell or regional facility.
- If surface controls are inadequate, treat water quality storm prior to discharge to UIC, or regional facility.

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Outlines Strategies by Area

- A:
 - LID/ Pretreatment and Drywells
 - Regional Detention (>1 lot) an option
- B
 - LID, regional detention/retention
- C:
 - Examine Site Specific geotechnical conditions
 - LID, Pipe to regional



Addressing Problem Areas: Engineering Estimates

- Master Plan Process
 - Identified 35-110 problem areas
 - Prioritization has since been updated by separate CH2M Hill effort (2011)
- CIP Priority List
 - Third Street Underpass (underway)
 - Franklin Avenue Underpass



40

Current Costs

- | | |
|--|---|
| 2011-2012 Budget <ul style="list-style-type: none"> ■ O&M: \$956K ■ Eng/PM: \$225K (\$776K) ■ CIP: \$300K (\$1.5M) ■ Water Quality: \$430K ■ Utility Admin/Public Response: \$417K | Future <ul style="list-style-type: none"> ■ O&M: Same or higher ■ Eng/PM & CIP: No significant regulatory corrective action anticipated. CIP scalable to priorities/affordability. Specific plans. WQ upgrades via new/redevelopment. ■ WQ: Monitoring likely higher than present but less than anticipated... to \$100k/yr (Class V) |
|--|---|

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Schedule/ Next Steps

- September to mid-October: Review of Revised Public Draft Stormwater Master Plan (SMP)
- October 10, 2012: SMP Open House
- November 2012: IAC Formal Review/Recommendation
- November-December 2012: Council Review/Consideration for Approval
- High level strategy/inventory document
 - Revisit Once All Permits Are in Hand



(Photo credit: Kirby Lee, USA Today, 2012)

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Questions



43

Alternative Cost Comparison—Class V, '12\$ Worst Case (Full System Changes)

■ Minimum pretreatment	→ Const.: \$0.3M
	→ O&M (/yr): \$0.001M
■ Low Impact Development	→ Const.: \$242M
	→ O&M: \$1.9M
■ Regional Detention	→ Const.: \$605M
	→ O&M: \$0.2M
■ LID + Regional Detention	→ Const.: \$537M
	→ O&M: \$0.2M
■ UICs + Regional Detention	→ Const.: \$368M
	→ O&M: \$.4M
■ Piped System	→ Const.: \$668M
	→ O&M: \$.8M

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Agenda
Infrastructure Advisory Committee Meeting
April 8, 2013; 3:00 pm to 5:00 pm
City of Bend – Boyd Acres Campus
62975 Boyd Acres Rd., Eisenhower Training Room



1. IAC Business (Chair Frank Turek, 3:00PM - 3:05PM)
 - a) Call to Order, Roll Call, Determine Quorum

2. Stormwater (Program Manager, Wendy Edde, Assistant City Engineer, Jeff England PE)
 - a) Illicit Discharge Manual
 - b) Stormwater Update
 - c) 3rd Street Underpass

3. Update
 - a) CIP – IAC Budget Recommendation
 - b) SIAG Committee
 - c) Bridge Creek Improvement Project
 - i) Environmental Assessment

NEWS

3rd Street Underpass Project

Posted Date: 3/21/2013

Notice of Public Meeting:

The City of Bend is hosting a public open house to provide information regarding the construction schedule and sequencing required to complete the 3rd Street Underpass Stormwater Project. Project construction will impact area users due to lane and street closures as well as some night work.

3rd Street Underpass Open House

Date: April 22nd, 2013

Time: 5:30 p.m. – 7:00 p.m.

Location: Bend Senior High School, Commons Area
230 NE 6th Street

Project information is available at <http://bendoregon.gov/3rdstunderpass>

Accessible Meeting Information

This meeting event/location is accessible. Sign language, interpreter service, assistive listening devices, materials in alternate format, such as Braille, large print, electronic formats, or any other accommodations are available upon advance request. Please contact Edie Birindelli at (541) 317-3000, ebirindelli@ci.bend.or.us and/or fax (541) 389-2245. Providing at least 3 day's notice prior to the event will help ensure availability.

[More News »](#)





Bend partners for community garden

By KTVZ.COM news source

POSTED: 4:52 PM PST February 12, 2013

BEND, Ore. -

The City of Bend has partnered with the non-profit organization Celebrate Bend to win one of 10 grants from the Fiskars Corporation for construction of a community garden.

The Franklin's Corner Garden project will receive \$3500 for materials and a \$1500 Fiskars tool kit. The garden will be built on city-owned property located on the southeast corner of 8th Street and Franklin Avenue.

Plans for the project include creating a demonstration stormwater rain garden, making the entire project ADA accessible, enhancing water conservation, and engaging students in the benefits of gardening.

The project will be built and maintained by volunteers. Local businesses are also donating materials for the garden.

The grant is part of Fiskars Project Orange Thumb. The project has provided over \$1.3 million to 140 community groups and helped to complete fourteen garden makeovers in the U.S. and Canada.

For more information, or to make a donation, contact City of Bend Volunteer Coordinator Cheryl Howard at 541-388-5579.

© 2013 © 2012

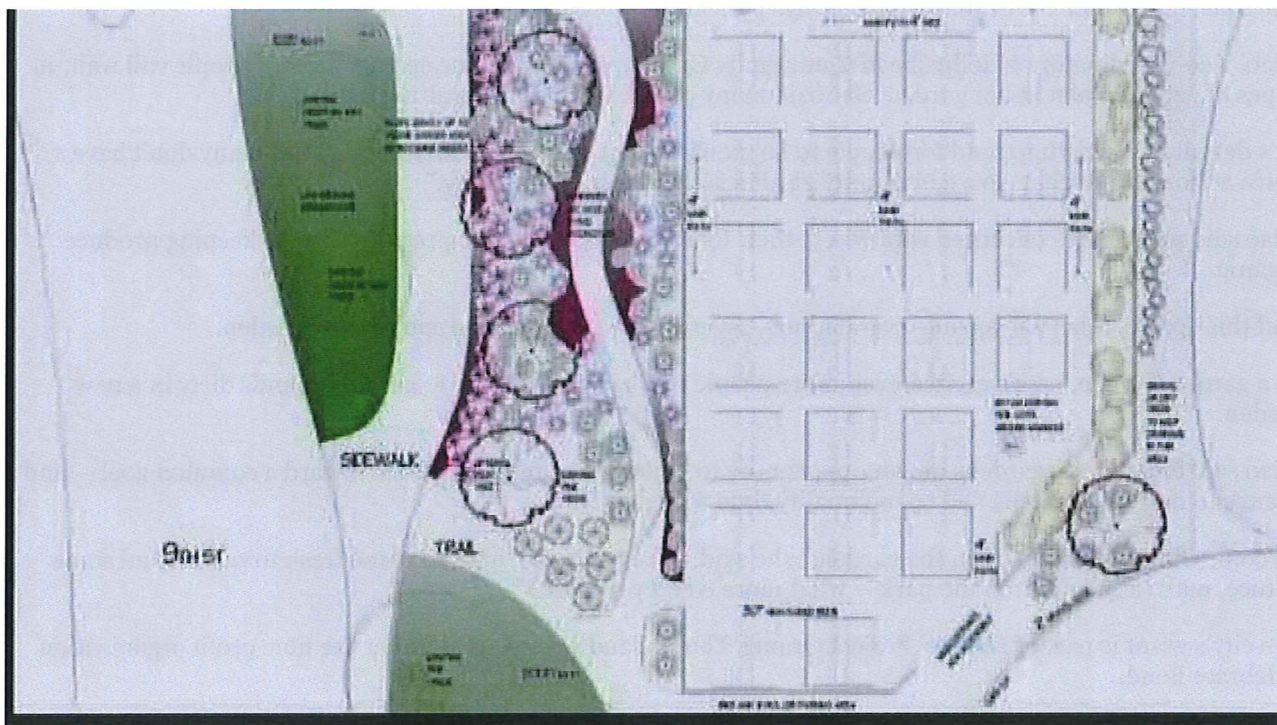


New community garden sprouts in NE Bend

NE Eighth-Franklin plots set to open in May

By [Kandra Kent](#)

POSTED: 7:18 PM PDT March 12, 2013 UPDATED: 7:18 PM PDT March 12, 2013



BEND, Ore. -

It's not much to look at now: bare dirt, rocks and a couple trees -- but Bend city officials and community members have big plans for a chunk of land in northeast Bend.

Bend recently secured a \$5,000 grant to build the community garden at the corner of Franklin Avenue and Eighth Street.

"We have the plots that will be going in the center perimeter, but we're going to be surrounding that with an edible food forest, so it will be fruit trees, edible shrubs, edible plants," city Volunteer Coordinator Cheryl Howard said Tuesday.

Community members and groups will help build the garden, and about 100 plots will be available to rent for a season.

Howard says she hopes they will break ground in April and the garden will open in May.

The garden will be on a plot of land roughly the size of three city lots. A patch of land that the city had to maintain.

Howard said it's a win-win situation, giving residents access to growing their own food while reducing maintenance costs for the city.

She said the garden will take less water than the previous turf, which also had to be mowed.

It will also help alleviate the city's issues with storm runoff in the area.

"We also had a maintenance issue with storm water in the neighborhood," Howard said. "So with this particular maintenance project, we were able to build a storm water infiltration system, and now we're topdressing it with a community garden."

The garden will be maintained by volunteers, meaning less work for city employees. Howard said many partners, including local schools and clubs, have expressed interest in getting involved in the garden.

And Master Gardener Chris Miao's ears always perk at the word garden.

Miao, a co-coordinator of Hollinshead Community Garden, said that come spring, lines of people will wait, in hopes of getting a plot at her garden. She said many people end up on a waiting list.

"It's definitely a growing trend for people to be growing their own food," Miao said. "And many don't have a space at home to do that, so a community garden is their only opportunity."

Miao said people are concerned with where their food comes from and express interest in keeping produce organic.

And this spring, Miao will spend several hours, several days a week at the community garden.

As a garden "junkie," she's excited even more people will have the chance to get their hands dirty in a new garden.

Miao said community gardens are an opportunity to build community and work toward a common goal -- and a chance to meet new people and spend quality time with family.

"(People) have a picnic here in the garden," she said. "They come in, harvest some fresh tomatoes and some lettuce, make a salad, eat in the park -- what more could you want?"

The city's grant is part of Fiskars' Project Orange Thumb, and was secured under the non-profit organization Celebrate Bend.

Franklin's Corner Garden will receive \$3,500 for materials and a \$1,500 Fiskars tool kit.

Community members who wish to grow produce in the garden will have to pay a plot fee.

Howard said prices haven't been set, and they will likely fall in line with other community garden's fees, such as Hollinshead.

Each plot will be 4-by-4 feet, and Howard said fees will help offset water bills.

If you would like to learn more about the garden project, volunteer, or donate gardening supplies, call Howard, the volunteer coordinator, at 541.388.5579.

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bendbulletin.com

One decal at a time

By Hillary Borrud / *The Bulletin*

Published: December 30, 2012 4:00AM PST

For nearly a year, volunteer James Newkirk has been walking the streets of Bend, marking the thousands of storm drains that empty into the aquifer and the Deschutes River.

"I usually like to do one map a day, when I go out," said Newkirk, 71, and a resident of Bend for 35 years. It takes a couple of hours for Newkirk to walk the route on each city map and install all of the decals to mark storm drains in that area, he said. In good weather, he does this several days per week.

Recently, city workers added up all of the storm drains Newkirk had marked: 1,800. That means Newkirk is responsible for more than half of the 2,900 city stormwater drains marked with decals that say: "Don't Pollute — Flows to Waterways."

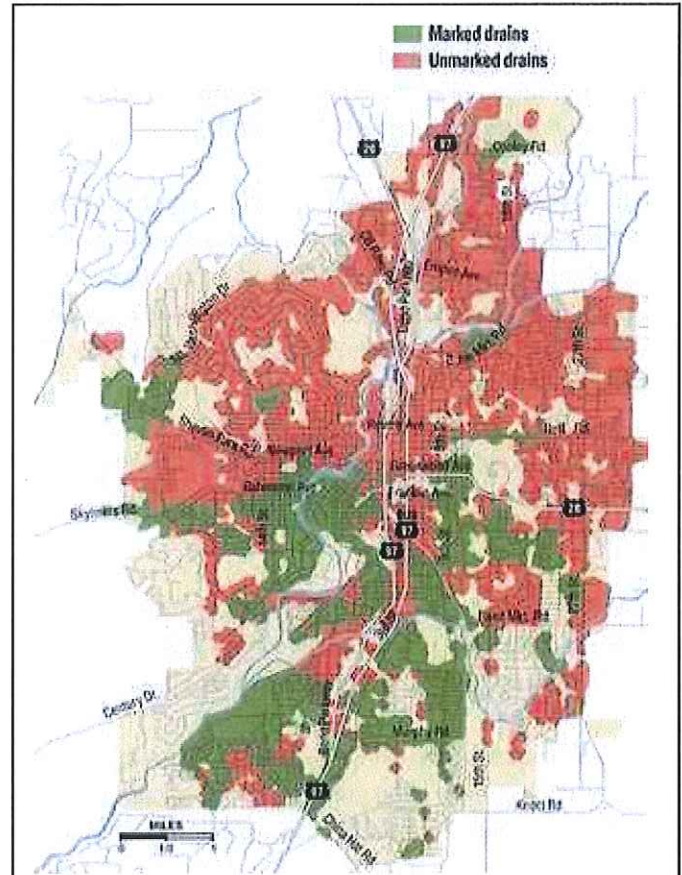
The feat surprised even Newkirk. "I had no idea I'd put down 1,800 of those things," he said recently.

Of course, much work remains to be done. The city has more than 9,000 stormwater drains, Bend Stormwater Program Manager Wendy Edde wrote in an email.

January will mark Newkirk's one-year anniversary as a volunteer for the city, said Bend volunteer coordinator Cheryl Howard, and the City Council recently recognized Newkirk for his hard work. Snow and freezing temperatures have prevented Newkirk from doing the work recently, and he usually spends part of the winter visiting his son and grandchildren in Southern California.

Newkirk, who is retired, has also volunteered for a decade for the Deschutes Public Library system. Howard recruited him to volunteer for the city during one of Newkirk's trips to drop off library posters at City Hall.

Newkirk also installed decals in downtown Bend that alert bicyclists that it is illegal to ride on the sidewalks.



Andy Zeigert / The Bulletin

Source: City of Bend

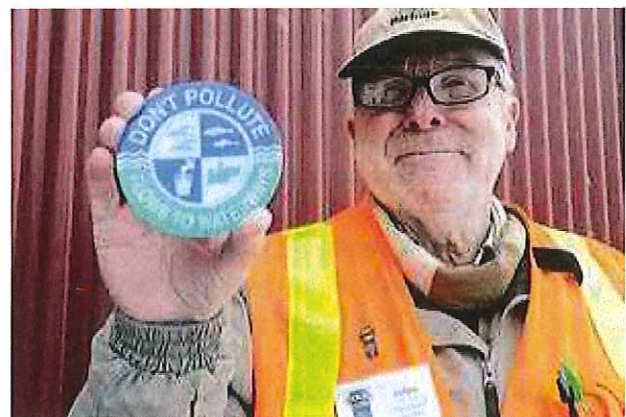


Photo by Ryan Brennecke / The Bulletin

"We had that ordinance on the books for 40 years, but we never did anything until this year," Howard said. An increase in conflicts between pedestrians downtown and bicyclists riding on the sidewalks prompted the city to begin enforcing the ordinance.

Howard said Newkirk is a motivated volunteer. "He's kind of a workhorse, so he just ... goes out and does this thing. He's just a machine."

When Howard asked Newkirk to volunteer with the city, "he was very particular," Howard said. "He doesn't want to be indoors or anything, sitting behind a desk."

On his walks, Newkirk also stumbled upon problems that he reported to the city. Construction companies sometimes stage their equipment in the street and debris from the projects ends up in storm drains. "He's spotted a couple storm drains a couple times that were completely filled with fill dirt and stuff," Howard said. "That was important because if they'd gotten a major storm, the water would have backed up in the neighborhood."

Without help from volunteers, the city would not be able to mark and maintain its storm drains, Howard said. The city budget has been tight since the real estate downturn, and Howard said the city had no program to mark the drains until volunteers got involved.

The storm drain program also includes an education component, in which Howard uses a diorama to demonstrate to school children how pesticides and other pollutants go into the storm drains and then into the aquifer and Deschutes River. Students and other groups, such as a Girl Scout troop, have also volunteered to mark storm drains, Howard said.

"Chemicals that might be in the street, fertilizers on lawns, all those have the potential to affect our water quality," Howard said. "We have really good groundwater here currently, but in the long run, unless we start making some big shifts in how we treat our water ... we could have a big impact with our groundwater and pollutants we don't want to see."

For Newkirk, the volunteer gig has a variety of benefits. "Before he bought his house, he was just walking neighborhoods getting a feel for them," Howard said.

Now, Newkirk said the volunteer job gives him an opportunity to observe how other people landscaped their yards and get ideas for how to spruce up his own yard.

Newkirk lived in many places before settling in Bend in the 1970s. Newkirk was born outside De Kalb, Texas, where his family grew crops including tomatoes. He spent four years in the Marines, then had a varied career in manufacturing, sales and as a small business owner that led him to California, Colorado and Oregon.

Among his many jobs, he owned an office supply store called Office Value in Bend. Before he retired, Newkirk was a truck driver, traveling through much of the United States. That ended more than a decade ago, after Newkirk was involved in an accident on a mountain pass in Southern California.

He briefly moved away from Bend in the early 2000s, after he became fed up with the fast pace of growth in the city. However, Newkirk only lasted eight months in Silver City, N.M., before selling his home and returning to Bend.



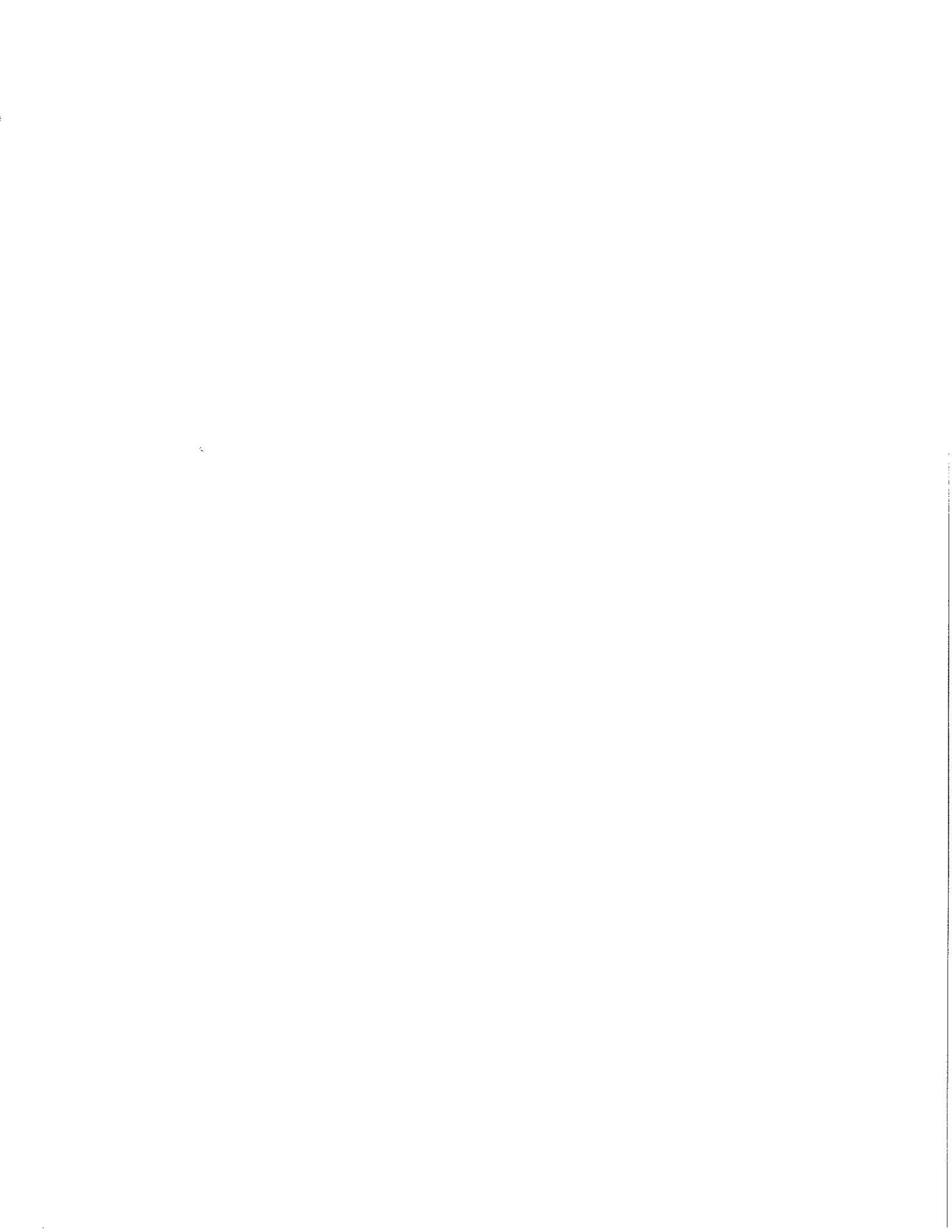
Photo by Ryan Brennecke / The Bulletin

"Every city has its problems," Newkirk said. "(Bend's) still a great place to live."

— Reporter: 541-617-7829, hborrud@bendbulletin.com

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UPPER DESCHUTES
WATERSHED COUNCIL

Stream Stewardship Day



What: Stream Stewardship Day

Who: The Upper Deschutes Watershed Council, the City of Bend, REI, the Old Mill District, Central Oregon Divers, Tumalo Creek Kayak and Canoe, Bend Park and Recreation District, and Bend Paddle Trail Alliance

When: 10am to 1pm on July 11, 2013

Where: Volunteers will meet at Riverbend Park. River clean-up activities will take place in the Deschutes River and its riparian areas between Riverbend Park and Tumalo Creek Kayak and Canoe.

Why: A special day for watershed stewards of all ages to get their hands dirty and feet wet. Come join the Upper Deschutes Watershed Council and our partners to help steward the Deschutes River and our beautiful parks! The Park District and the Watershed Council have worked closely together on the riparian and instream restoration projects at Farewell Bend Park and Riverbend Park and Stream Stewardship Day is an opportunity for us to come together to steward the Deschutes River and its riparian areas. Recreation in and around the Deschutes River has led to instream debris and significant impacts to river health. In order to keep our river beautiful and protect water quality for fish and wildlife, the Watershed Council coordinates Stream Stewardship Day every year.

Sponsors: The title sponsor for Stream Stewardship Day is the City of Bend. Additional sponsors are REI, Bend Park and Recreation District, and the Old Mill District. Thank you to our sponsors for making Stream Stewardship Day possible!!

Event Timeline:

9:00 to 10:00 - Event set-up at Riverbend Park shelter. There will be no canopies or tents. Park shelter will be used primarily for a brief convening area for divers, paddlers, and volunteers to meet and receive directions for river clean-up activities.

10:00 to 10:30 - Volunteers arrive at Riverbend Park. The Watershed Council will introduce volunteers to the stewardship goals and objectives for the day. Volunteers sign-in at Watershed Council registration table. The Watershed Council will give a short presentation about river health and will distribute educational materials and stewardship supplies for stream stewards. REI will meet and greet volunteers and provide give-away treats. The City of Bend will have a table for educational activities about stormwater run-off and water conservation.

10:30- 1:00 - Central Oregon Divers, Bend Paddle Trail Alliance, and Tumalo Kayak and Canoe will work together throughout the day to remove instream debris from the river. The Watershed Council and REI will guide community volunteers to remove debris and invasive weeds from the riparian areas in the Old Mill District.

1:00 to 1:30 - Full group wrap-up activity at the Old Mill Casting Course. REI and the Old Mill District will give away prizes to volunteers.

1:30 to 2:30 - Final event clean-up and removal of debris and weeds by the City of Bend. Debris will be picked up at the downstream end of the Old Mill District (on the right side of the river near the bike rentals).

The Upper Deschutes Watershed Council will coordinate Stream Stewardship Day to:

- Engage partners, river users, and community members in hands-on stewardship activities on the Deschutes River;
- Enhance the health of the Deschutes River and its streambanks by coordinating volunteers to remove invasive weeds, clean-up litter, and remove instream debris;
- Facilitate activities to educate participants about water quality, fish habitat, vegetation, and good stewardship practices on and along the river;
- Help volunteers to develop a sense of stewardship as they learn about and contribute to the health of our watershed; and
- Provide local businesses, recreation organizations, river users, and sponsors with an opportunity to help restore, protect, and support the health of the Deschutes River.

Stream Stewardship Day seeks to bring together community members from around Central Oregon to actively steward the Deschutes River and its riparian areas. Volunteers of all ages are invited to join the Upper Deschutes Watershed Council, REI, Central Oregon Divers, Bend Paddle Trail Alliance, the City of Bend, Tumalo Creek Kayak and Canoe, and the Old Mill District in a day of active, hands-on stream stewardship activities.

Contact Kolleen Yake at (541) 382-6103 #33 or kyake@restorethedeschutes.org for more information about how you can get involved and support Stream Stewardship Day!