Stormwater Master Plan
Revised Draft Update

Public Meeting

Wendy Edde,
Stormwater Program Manager
April 9-10, 2014
Outline

• Introduction to Stormwater Master Plan Process

• Infrastructure Approaches

• Next Steps
Underground Injection Controls and Drinking Water

- Discharges into the ground—
  - dry wells, drill holes
- Applied for permit in 2003
- Anticipated receipt: 2006/07...
Why Manage Stormwater?

- Meet regulations
- Protect economy and vitality of Bend
- Plan for responsible development
- Provide solutions that require regional analysis
History

• First Formal Stormwater Master Plan

• 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
2007 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....
History (continued)

• Phase II (July 2007-May 2010)
  – Stormwater Infiltration Evaluation Report
  – Piped System evaluation
  – Draft Plan
  – Outreach – Open Houses & Public Review
  – Preliminary Engineering for 3rd Street Underpass
Stormwater Master Plan - Phase II
2008 Public Draft Summary

- Initial CIP / Hotpots
- Proposed piped system (mains)
- Costs: $172-$214 M
- Economy: → Recession
- Other Infrastructure Needs
- Response: Unpalatable
- Hold Until Improved Regulatory Clarity
- Continue Working Towards System Understanding
Stormwater Master Plan - Phase II

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
Proposed Strategy: Hybrid Dispersed System

- Maximizes Flexibility, type and timing
- Protective of Water Quality/Drinking Water
- Address Replacement of Failed Facilities Through Prioritization List
- Instill Pipe Line Replacement Program
- Instill UIC Upgrade Program (Spill Protections)
Strategies by Area

A:
- LID/ Pretreatment and Drywells
- Regional Detention (>1 lot)

B:
- LID, regional detention/retention

C:
- Examine Site Specific geotechnical conditions
- LID, Pipe to regional facility
Stormwater Master Plan - Phase III

Revised Public Draft Plan Overview

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

• NEXT STEPS
  – Infrastructure Improvement Project Approach
  – Finalization
UIC Upgrades

• Spill Risk Management
• Prioritized
• Protect Drinking Water Sources
• Drill Holes
• Dry Wells
Prioritizing Projects--Ranking

- Customer Satisfaction
- Environmental Impacts
- Future Growth
- Operation and Maintenance Efficiency/ Cost Savings
- Public Health and Safety Issues
- Regulatory Compliance
- System Reliability
Phase III
Capital Improvement Project Approach 1
Phase III

Capital Improvement Project Approach 2
Phase III

Capital Improvement Project Approach 3

Gradual Rate Increase (Approach 3)

Accelerated Rate Increase (Approach 3)
# Cost Summary

## Table 1. Infrastructure Improvement Approach Summary Table

<table>
<thead>
<tr>
<th>Infrastructure Improvement Approach</th>
<th>Immediate Proposed Utility Rate Range ($/ERU)</th>
<th>Fiscal Year 2032-33 Proposed Utility Rate Range ($/ERU)</th>
<th>Twenty-year Capital Improvement Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gradual</td>
<td>Accelerated</td>
<td>Gradual</td>
</tr>
<tr>
<td>1</td>
<td>$4.20</td>
<td>$4.80</td>
<td>$6.37</td>
</tr>
<tr>
<td>2</td>
<td>$4.36</td>
<td>$5.40</td>
<td>$6.11</td>
</tr>
<tr>
<td>3</td>
<td>$4.36</td>
<td>$5.80</td>
<td>$6.80</td>
</tr>
</tbody>
</table>

![Infrastructure Cost Range](chart.png)
Stormwater Master Plan - Phase III

Capital Improvement Project Approach Options (FY 13/14 – FY 32/33)
<table>
<thead>
<tr>
<th>Cities &gt; 20,000 Population</th>
<th>Water Charge (using 800ccf or 6000 gallons)</th>
<th>Sewer Charge (using 800 ccf or 6000 gallons)</th>
<th>Stormwater Charge</th>
<th>TUF/Public Safety UT Fee</th>
<th>Total Monthly Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland</td>
<td>37.57</td>
<td>69.60</td>
<td>24.54</td>
<td>0.52</td>
<td>132.23</td>
</tr>
<tr>
<td>Lake Oswego</td>
<td>41.49</td>
<td>62.55</td>
<td>10.99</td>
<td>8.01</td>
<td>123.04</td>
</tr>
<tr>
<td>Newberg</td>
<td>36.46</td>
<td>74.98</td>
<td>6.22</td>
<td>4.50</td>
<td>122.16</td>
</tr>
<tr>
<td>Wilsonville</td>
<td>36.59</td>
<td>66.33</td>
<td>5.10</td>
<td>7.05</td>
<td>115.07</td>
</tr>
<tr>
<td>Tigard</td>
<td>50.73</td>
<td>38.46</td>
<td>8.25</td>
<td>5.56</td>
<td>103.00</td>
</tr>
<tr>
<td>Milwaukie</td>
<td>27.96</td>
<td>53.43</td>
<td>11.44</td>
<td>3.35</td>
<td>96.18</td>
</tr>
<tr>
<td>Albany</td>
<td>44.69</td>
<td>51.06</td>
<td>-</td>
<td>-</td>
<td>95.75</td>
</tr>
<tr>
<td>Oregon City</td>
<td>32.41</td>
<td>38.45</td>
<td>8.55</td>
<td>11.56</td>
<td>90.97</td>
</tr>
<tr>
<td>Woodburn</td>
<td>25.66</td>
<td>64.47</td>
<td>4.29</td>
<td>8.17</td>
<td>86.49</td>
</tr>
<tr>
<td>Ashland</td>
<td>37.85</td>
<td>36.18</td>
<td>12.62</td>
<td>-</td>
<td>84.96</td>
</tr>
<tr>
<td>Springfield</td>
<td>22.08</td>
<td>50.26</td>
<td>8.25</td>
<td>-</td>
<td>81.87</td>
</tr>
<tr>
<td>McMinnville</td>
<td>25.06</td>
<td>56.77</td>
<td>(1)</td>
<td>7.00</td>
<td>81.83</td>
</tr>
<tr>
<td>Gresham</td>
<td>37.63</td>
<td>26.30</td>
<td>9.84</td>
<td>7.50</td>
<td>81.27</td>
</tr>
<tr>
<td>West Linn</td>
<td>19.70</td>
<td>32.84</td>
<td>5.31</td>
<td>22.11</td>
<td>79.96</td>
</tr>
<tr>
<td>Forest Grove</td>
<td>29.19</td>
<td>42.20</td>
<td>7.00</td>
<td>-</td>
<td>78.39</td>
</tr>
<tr>
<td>Klamath Falls</td>
<td>16.50</td>
<td>61.84</td>
<td>-</td>
<td>-</td>
<td>78.34</td>
</tr>
<tr>
<td>*Eugene</td>
<td>28.55</td>
<td>37.39</td>
<td>11.39</td>
<td>-</td>
<td>77.33</td>
</tr>
<tr>
<td>Salem</td>
<td>24.75</td>
<td>46.49</td>
<td>3.72</td>
<td>1.25</td>
<td>76.21</td>
</tr>
<tr>
<td><strong>Bend (w/o franchise fee)</strong></td>
<td><strong>27.69</strong></td>
<td><strong>44.37</strong></td>
<td><strong>4.00</strong></td>
<td><strong>76.06</strong></td>
<td></td>
</tr>
<tr>
<td>Tualatin</td>
<td>26.02</td>
<td>39.73</td>
<td>(1)</td>
<td>5.86</td>
<td>75.33</td>
</tr>
<tr>
<td>Corvallis</td>
<td>25.37</td>
<td>36.14</td>
<td>5.86</td>
<td>6.63</td>
<td>74.00</td>
</tr>
<tr>
<td>Hillsboro</td>
<td>24.12</td>
<td>38.46</td>
<td>(1)</td>
<td>6.25</td>
<td>72.01</td>
</tr>
<tr>
<td>Redmond</td>
<td>26.62</td>
<td>35.60</td>
<td>7.06</td>
<td>0.83</td>
<td>70.11</td>
</tr>
<tr>
<td>Keizer</td>
<td>14.20</td>
<td>39.44</td>
<td>4.44</td>
<td>-</td>
<td>58.08</td>
</tr>
<tr>
<td>Roseburg</td>
<td>26.54</td>
<td>25.00</td>
<td>5.00</td>
<td>-</td>
<td>56.54</td>
</tr>
<tr>
<td>Grants Pass</td>
<td>19.98</td>
<td>29.33</td>
<td>-</td>
<td>3.37</td>
<td>52.68</td>
</tr>
<tr>
<td>*Medford</td>
<td>11.80</td>
<td>16.92</td>
<td>6.85</td>
<td>13.80</td>
<td>49.37</td>
</tr>
</tbody>
</table>

Notes:

(1) Served by Clean Water Services

Bill $/1,000 gal
Schedule/ Next Steps

• Open House Workshops: April 9, 10

• Through April 14: Collect public comments on approach preferences

• April 16: Council Worksesson—Preferred Approach

• April-May 2014: Public Review of Revised Draft Master Plan (SMP)

• June 2014: Council Decision