Green Development Survey

Summary:
Between February 30, 2009 and January 15, 2010, Thurston County conducted a 21 question survey to solicit input from people involved within the building industry of Thurston County. The intent of the survey was to identify any barriers to building green within Thurston County development codes and to find ways to increase building site recycling. The questions focused on types of green programs and techniques the participants were familiar with, how they educated themselves in using green techniques, and what incentives they believed would promote more green building and job site recycling. The findings within the survey are somewhat skewed as a result of some participants skipping questions.

A total of 63 participants took the survey with 46% being builders and 17% being developers. Forty-nine percent had not designed, built, or remodeled a residence that was marketed as green during the last two years; while 72% of the people believed that a minimum standard of performance should be set by the County before a home can be marketed as green. Seventy-two percent of the survey participants stated they obtain their green building education through a green building program, presumably these classes are offered from the local Eco Building Guild and Olympia Master Builders Built Green Program.

Energy efficient windows were used by 85% of the people, while 91% used energy efficient appliances and 78% had used air sealing packages. Forty-one percent had been involved in the construction of a residence with a geothermal system, 46% had used solar panels; 72% had used tankless water heaters within the last two years. Thirty-one percent of the participants stated they had been involved with the re-use of gray water within a project, but it is not understood to what extent and how the water was reused.

The survey indicated that cost, the building code, and inadequate appraising as the largest barriers to the builder in constructing a green building. Energy efficiency was identified as the most important green building technique. The survey also indicated that the International Building Code 2006 and the Washington State Energy Codes as the most important codes that need to be amended to promote more green building.

The information obtained through the survey will be used by a stakeholder group to prioritize and establish short-term and long-term recommendations to reduce and eliminate said barriers of green development.
Survey Results

1. Please mark which profession most closely resembles your service.
   - Builder 46%  20 Results
   - Architect 9%  4 Results
   - Developer 17%  7 Results
   - Project Representative 7%  3 Results
   - Realtor 5%  2 Results
   - Engineer 16%  7 Results
   - Utility Provider 2%  1 Results
   - Other Material Manufacture 4 Results

2. What general region of Thurston County do you generally build or develop?
   - Lacey Urban Growth Area 15%
   - Tumwater Urban Growth Area 8%
   - Olympia Urban Growth Area 16%
   - Within Incorporated Cities 16%
   - North Rural County 5%
   - South Rural County 5%
   - Throughout Thurston County 74%
   - Outside Thurston County 21%

3. How many residential structures have you engineered, designed, built, or remodeled that have been marketed as green during the last 2 years?
   - None 49%  30 Results
   - Less than 10 20%  12 Results
   - More than 10 31%  19 Results

4. How many of the homes described above that were marketed as green, were certified green through LEED, Built Green, or other green program?
   - None 59%  34 Results
   - Less than 50 percent 9%  5 Results
   - More than 50 percent 8%  14 Results
   - 100 percent 19%  11 Results

5. How many commercial buildings have you engineered, designed, built, or remodeled that have been marketed as green during the last 2 years?
   - None 73%  44 Results
   - Less than 10 22%  13 Results
   - More than 10 5%  3 Results

6. How many of the commercial buildings described above that were marketed as green, were certified green through LEED, Built Green, or other green program.
   - None 70%  40 Results
   - Less than 50 percent 7%  4 Results
   - More than 50 percent 9%  5 Results
   - 100 percent 15%  8 Results
7. How important are green features to you when selecting building products?
   - Extremely Important 53% 31 Results
   - Somewhat Important 41% 24 Results
   - Not very Important 5% 3 Results

8. Please rate your ease of use of the following green certification programs.
   **Very Easy, Easy, Difficult, Not Familiar**

<table>
<thead>
<tr>
<th>Program</th>
<th>Very Easy</th>
<th>Easy</th>
<th>Difficult</th>
<th>Not Familiar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership in Energy and Environmental Design (LEED)</td>
<td>8% (4)</td>
<td>13% (7)</td>
<td>51% (26)</td>
<td>29% (15)</td>
</tr>
<tr>
<td>NAHB Green Building Program</td>
<td>4% (2)</td>
<td>27% (13)</td>
<td>20% (10)</td>
<td>49% (24)</td>
</tr>
<tr>
<td>Built Green</td>
<td>12% (6)</td>
<td>50% (26)</td>
<td>10% (5)</td>
<td>29% (14)</td>
</tr>
<tr>
<td>Earth Advantage</td>
<td>0.0% (0)</td>
<td>6% (3)</td>
<td>6% (3)</td>
<td>88% (44)</td>
</tr>
</tbody>
</table>

9. Should there be a minimum standard of performance set by the local government before a home can be marketed as green?
   - Yes 72% 44 Results
   - No 28% 17 Results

10. How do you educate yourself about green building techniques?
    - Green Building Programs 72% 43 Results
    - Green Suppliers 50% 30 Results
    - On-Line Classes/Webinars 33% 20 Results
    - Clients/Customers 36% 22 Results
    - Other Builders 36% 20 Results
    - Seminars/Conferences 61% 34 Results
    - Magazines 72% 43 Results
    - Have Received No Training 13% 8 Results

11. In the last 2 years, what percentage of projects you have worked on included the following features.
<table>
<thead>
<tr>
<th>Feature</th>
<th>100% - 75%</th>
<th>74% - 50%</th>
<th>49% - 25%</th>
<th>Less than 25%</th>
<th>Zero</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Efficient Windows</td>
<td>67% (35)</td>
<td>8% (4)</td>
<td>4% (2)</td>
<td>6% (3)</td>
<td>15% (8)</td>
</tr>
<tr>
<td>High Efficiency HVAC</td>
<td>40% (20)</td>
<td>22% (11)</td>
<td>8% (4)</td>
<td>12% (6)</td>
<td>18% (8)</td>
</tr>
<tr>
<td>Energy Efficient Appliances</td>
<td>54% (27)</td>
<td>16% (8)</td>
<td>6% (3)</td>
<td>6% (3)</td>
<td>18% (9)</td>
</tr>
<tr>
<td>Air Sealing Packages</td>
<td>42% (21)</td>
<td>20% (10)</td>
<td>12% (6)</td>
<td>4% (2)</td>
<td>22% (11)</td>
</tr>
<tr>
<td>Tankless Water Heaters</td>
<td>14% (7)</td>
<td>20% (10)</td>
<td>18% (9)</td>
<td>20% (10)</td>
<td>28% (14)</td>
</tr>
<tr>
<td>Rain Water Harvesting</td>
<td>8% (4)</td>
<td>6% (3)</td>
<td>15% (8)</td>
<td>23% (12)</td>
<td>48% (25)</td>
</tr>
<tr>
<td>Geothermal Heating/Cooling Systems</td>
<td>2% (1)</td>
<td>6% (3)</td>
<td>8% (4)</td>
<td>25% (12)</td>
<td>59% (29)</td>
</tr>
<tr>
<td>Solar Panels</td>
<td>6% (3)</td>
<td>4% (2)</td>
<td>2% (1)</td>
<td>34% (17)</td>
<td>54% (27)</td>
</tr>
<tr>
<td>Wind Energy System</td>
<td>2% (1)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>11% (5)</td>
<td>87% (40)</td>
</tr>
<tr>
<td>Gray Water Reuse</td>
<td>6% (3)</td>
<td>2% (1)</td>
<td>2% (1)</td>
<td>22% (11)</td>
<td>69% (35)</td>
</tr>
<tr>
<td>Green (Vegetated) Roofs</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>2% (1)</td>
<td>23% (11)</td>
<td>75% (35)</td>
</tr>
<tr>
<td>Pervious Pavement</td>
<td>6% (3)</td>
<td>4.0% (2)</td>
<td>24% (13)</td>
<td>33% (18)</td>
<td>33% (18)</td>
</tr>
<tr>
<td>Landscape/Tree Retention</td>
<td>27% (15)</td>
<td>20% (11)</td>
<td>20% (11)</td>
<td>20% (11)</td>
<td>13% (7)</td>
</tr>
</tbody>
</table>
12. In numerical order provide what you think the largest barrier is to the builder in constructing a green building? One meaning most difficult and eight meaning easiest to overcome. A different number should be assigned to each barrier. Example: Cost 1, Market 2, Building Code 3, etc.

<table>
<thead>
<tr>
<th>Potential Barriers</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Code</td>
<td>20% (11)</td>
<td>7% (4)</td>
<td>9% (5)</td>
<td>16% (9)</td>
<td>4% (2)</td>
<td>16% (9)</td>
<td>11% (6)</td>
<td>16% (9)</td>
</tr>
<tr>
<td>Market</td>
<td>6% (3)</td>
<td>17% (9)</td>
<td>9% (5)</td>
<td>18% (10)</td>
<td>11% (6)</td>
<td>11% (6)</td>
<td>9% (5)</td>
<td>19% (10)</td>
</tr>
<tr>
<td>Appraising</td>
<td>19% (10)</td>
<td>21% (11)</td>
<td>15% (8)</td>
<td>7% (3)</td>
<td>13% (7)</td>
<td>15% (8)</td>
<td>6% (3)</td>
<td>9% (5)</td>
</tr>
<tr>
<td>Different green building standards</td>
<td>10% (5)</td>
<td>24% (13)</td>
<td>17% (9)</td>
<td>10% (5)</td>
<td>17% (9)</td>
<td>6% (3)</td>
<td>14% (7)</td>
<td>6% (3)</td>
</tr>
<tr>
<td>Cost</td>
<td>35% (19)</td>
<td>24% (13)</td>
<td>9% (5)</td>
<td>13% (7)</td>
<td>9% (5)</td>
<td>2% (1)</td>
<td>6% (3)</td>
<td>4% (2)</td>
</tr>
<tr>
<td>Building Permit Review</td>
<td>9% (5)</td>
<td>15% (8)</td>
<td>13% (7)</td>
<td>17% (9)</td>
<td>9% (5)</td>
<td>11% (6)</td>
<td><strong>19% (10)</strong></td>
<td>6% (3)</td>
</tr>
<tr>
<td>Longer to spec products</td>
<td>4% (2)</td>
<td>10% (5)</td>
<td><strong>23% (12)</strong></td>
<td>16% (8)</td>
<td>16% (8)</td>
<td>10% (5)</td>
<td>13% (6)</td>
<td>10% (5)</td>
</tr>
<tr>
<td>Green Certification Programs</td>
<td>13% (6)</td>
<td>14% (7)</td>
<td>10% (5)</td>
<td>12% (6)</td>
<td>6% (3)</td>
<td>18% (9)</td>
<td>8% (4)</td>
<td><strong>22% (11)</strong></td>
</tr>
</tbody>
</table>
13. **Assign a numerical order of importance to the following aspects of green building.** One meaning most important and eight being the least important. A different number should be assigned to each choice similar to question number 12 above.

<table>
<thead>
<tr>
<th>Aspects</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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</thead>
<tbody>
<tr>
<td>Efficient Land Use and Environmental Code</td>
<td>39%</td>
<td>7%</td>
<td>11%</td>
<td>16%</td>
<td>7%</td>
<td>9%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>(22)</td>
<td>(4)</td>
<td>(6)</td>
<td>(9)</td>
<td>(4)</td>
<td>(5)</td>
<td>(3)</td>
<td>(3)</td>
</tr>
<tr>
<td>Flexible Building Code</td>
<td>22%</td>
<td>16%</td>
<td>17.6%</td>
<td>15%</td>
<td>11%</td>
<td>13%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>(12)</td>
<td>(9)</td>
<td>(9)</td>
<td>(8)</td>
<td>(6)</td>
<td>(7)</td>
<td>(2)</td>
<td>(2)</td>
</tr>
<tr>
<td>Education to the Builder</td>
<td>26%</td>
<td>16%</td>
<td>7.8%</td>
<td>7%</td>
<td>15%</td>
<td>11%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>(14)</td>
<td>(9)</td>
<td>(4)</td>
<td>(4)</td>
<td>(8)</td>
<td>(6)</td>
<td>(5)</td>
<td>(5)</td>
</tr>
<tr>
<td>Education to the Building Permit Reviewer</td>
<td>18%</td>
<td>16%</td>
<td>17.3%</td>
<td>14%</td>
<td>14%</td>
<td>9%</td>
<td>11%</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>(10)</td>
<td>(9)</td>
<td>(9)</td>
<td>(8)</td>
<td>(8)</td>
<td>(5)</td>
<td>(6)</td>
<td>(0)</td>
</tr>
<tr>
<td>Incentive of Fast Track Permit Review</td>
<td>17%</td>
<td>15%</td>
<td>16.3%</td>
<td>12%</td>
<td>10%</td>
<td>4%</td>
<td>17%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>(9)</td>
<td>(8)</td>
<td>(8)</td>
<td>(6)</td>
<td>(5)</td>
<td>(2)</td>
<td>(9)</td>
<td>(5)</td>
</tr>
<tr>
<td>Pre-Submission Conference Between Designer, Builder, Reviewer and Inspector</td>
<td>15%</td>
<td>6%</td>
<td>12.2%</td>
<td>10%</td>
<td>12%</td>
<td>17%</td>
<td>13%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>(8)</td>
<td>(3)</td>
<td>(6)</td>
<td>(5)</td>
<td>(6)</td>
<td>(9)</td>
<td>(7)</td>
<td>(8)</td>
</tr>
<tr>
<td>Expanded options to meet Health Codes</td>
<td>7%</td>
<td>15%</td>
<td>14.0%</td>
<td>19%</td>
<td>6%</td>
<td>9%</td>
<td>9%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>(4)</td>
<td>(8)</td>
<td>(7)</td>
<td>(10)</td>
<td>(3)</td>
<td>(5)</td>
<td>(5)</td>
<td>(10)</td>
</tr>
<tr>
<td>Expanded options to stormwater management practices</td>
<td>20%</td>
<td>22%</td>
<td>8.0%</td>
<td>15%</td>
<td>9%</td>
<td>4%</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>(11)</td>
<td>(12)</td>
<td>(4)</td>
<td>(7)</td>
<td>(5)</td>
<td>(2)</td>
<td>(7)</td>
<td>(5)</td>
</tr>
</tbody>
</table>
14. Assign a **numerical order** of importance to the following green building techniques. One meaning most important and seven being the least important. A different number should be assigned to each technique. similar to question number 12 above.

<table>
<thead>
<tr>
<th>Technique</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Site Planning</td>
<td>20% (11)</td>
<td><strong>22% (12)</strong></td>
<td>15% (8)</td>
<td>9% (5)</td>
<td>13% (7)</td>
<td>6% (3)</td>
<td>16% (9)</td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td><strong>55% (31)</strong></td>
<td>16% (9)</td>
<td>13% (7)</td>
<td>7% (4)</td>
<td>2% (1)</td>
<td>4% (2)</td>
<td>4% (2)</td>
</tr>
<tr>
<td>Water Conservation</td>
<td>15% (8)</td>
<td><strong>27% (15)</strong></td>
<td>22% (12)</td>
<td>15% (8)</td>
<td>7% (4)</td>
<td>11% (6)</td>
<td>4% (2)</td>
</tr>
<tr>
<td>Waste Minimization</td>
<td>9% (5)</td>
<td>15% (8)</td>
<td><strong>28% (15)</strong></td>
<td>13% (7)</td>
<td>22% (12)</td>
<td>11% (6)</td>
<td>2% (1)</td>
</tr>
<tr>
<td>Pollution Prevention</td>
<td>9% (5)</td>
<td>13% (7)</td>
<td><strong>21% (12)</strong></td>
<td>16% (9)</td>
<td>7% (4)</td>
<td>20% (11)</td>
<td>14% (8)</td>
</tr>
<tr>
<td>Using Resource-Efficient Materials</td>
<td>18% (10)</td>
<td>11% (6)</td>
<td>11% (6)</td>
<td>7% (4)</td>
<td><strong>24% (13)</strong></td>
<td>15% (8)</td>
<td>14% (8)</td>
</tr>
<tr>
<td>Providing Enhanced Indoor Environmental Quality for Occupants</td>
<td>22% (12)</td>
<td>13% (7)</td>
<td>7% (4)</td>
<td>13% (7)</td>
<td>4% (2)</td>
<td><strong>24% (13)</strong></td>
<td>17% (9)</td>
</tr>
</tbody>
</table>
15. Assign a numerical order of importance to what Thurston County codes should be amended to promote more green building. One meaning most important and nine being the least important. A different number should be assigned to each code similar to question number 12 above.

<table>
<thead>
<tr>
<th>Codes</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoning Ordinances (Titles 20, 21, 22, and 23)</td>
<td>21% (9)</td>
<td>16% (7)</td>
<td>16% (7)</td>
<td>2% (1)</td>
<td>18% (8)</td>
<td>9% (4)</td>
<td>2% (1)</td>
<td>7% (3)</td>
<td>9% (4)</td>
</tr>
<tr>
<td>Platting and Subdivisions (Title 18)</td>
<td>19% (8)</td>
<td>19% (8)</td>
<td>14% (6)</td>
<td>14% (6)</td>
<td>9% (4)</td>
<td>0.0% (0)</td>
<td>5% (2)</td>
<td>7% (3)</td>
<td>14% (6)</td>
</tr>
<tr>
<td>State Environmental Policy Act (Title 17.09)</td>
<td>8% (3)</td>
<td>10% (4)</td>
<td>20% (8)</td>
<td>15% (6)</td>
<td>15% (6)</td>
<td>3% (1)</td>
<td>5% (2)</td>
<td>5% (2)</td>
<td>20% (8)</td>
</tr>
<tr>
<td>Critical Areas Ordinance (Title 17.15)</td>
<td>9% (4)</td>
<td>20% (9)</td>
<td>5% (2)</td>
<td>21% (9)</td>
<td>9% (4)</td>
<td>14% (6)</td>
<td>7% (3)</td>
<td>7% (3)</td>
<td>9% (4)</td>
</tr>
<tr>
<td>Buildings and Construction (Title 14)</td>
<td>32% (14)</td>
<td>9% (4)</td>
<td>7% (3)</td>
<td>14% (6)</td>
<td>11% (5)</td>
<td>7% (3)</td>
<td>0.0% (0)</td>
<td>2% (1)</td>
<td>18% (8)</td>
</tr>
<tr>
<td>Shoreline Master Program (Title 19)</td>
<td>0.0% (0)</td>
<td>10% (4)</td>
<td>3% (1)</td>
<td>13% (5)</td>
<td>15% (6)</td>
<td>8% (3)</td>
<td>8% (3)</td>
<td>23% (9)</td>
<td>21% (8)</td>
</tr>
<tr>
<td>Health &amp; Sanitation (Title 8)</td>
<td>7% (2)</td>
<td>15% (6)</td>
<td>15% (6)</td>
<td>15% (6)</td>
<td>12% (5)</td>
<td>5% (2)</td>
<td>12% (5)</td>
<td>12% (5)</td>
<td>7% (3)</td>
</tr>
<tr>
<td>Road standards (Title 13)</td>
<td>22% (9)</td>
<td>5% (2)</td>
<td>5% (2)</td>
<td>5% (2)</td>
<td>12% (5)</td>
<td>10% (4)</td>
<td>22% (9)</td>
<td>7% (3)</td>
<td>12% (5)</td>
</tr>
<tr>
<td>Thurston County Forestlands Conversion Ordinance (Title 17.25)</td>
<td>5% (2)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>5% (2)</td>
<td>21% (8)</td>
<td>5% (2)</td>
<td>21% (8)</td>
<td>18% (7)</td>
<td>26% (10)</td>
</tr>
<tr>
<td>Not familiar with any of the above mentioned codes.</td>
<td>64% (9)</td>
<td>7% (1)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>7% (1)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>7% (1)</td>
<td>14% (2)</td>
</tr>
</tbody>
</table>
16. Assign a numerical order of importance to what Washington State codes should be amended to promote more green building? One meaning most important and ten being the least important. A different number should be assigned to each code similar to question number 12 above.

<table>
<thead>
<tr>
<th>Codes</th>
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<td>Large On-Site Sewage Systems (WAC 246-290)</td>
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</table>
17. What incentives could Thurston County provide that would cause you to be more inclined to use more green building approaches?

**Quoted Results:**
- More understanding and flexibility with reviewer and inspectors to different systems. Trusting suppliers test data. (4 Responses)
- Fast track permitting (14 Responses)
- Reduce permit fees (9 Responses)
- Increase energy efficient standards in code (6 Responses)
- We don’t need anymore building codes on anything (1 Response)
- Cost conscious decisions (1 Response)
- Code Changes (1 Response)
- Standards for allowing grey water recycling & catchment including the use of rain gardens and cisterns with infiltration to mitigate stormwater runoff issues and water conservation (1 Response)
- Land taxes lowered for lower impact development (1 Response)
- I don’t think county code incentives are necessary (1 Response)
- Incentives for home owners to seal their exterior envelope, insulate, and upgrade their HVAC to include fresh air supply & efficient, low maintenance filtration like electronic filters (1 Response)
- Reduce impact fees because this kind of development actually has less impact on utilities and land use (1 Response)
- Solar tax incentives that are actually meaning full as they are in CA and Germany (1 Response)
- There are programs currently in place to assist home owners to build green. Why should Thurston County be involved – it seems like another barrier. (1 Response)
- Counting stormwater treatment, reclamation and infiltration/detention as open space. Provide a predictable review path with prescriptive approach. Provide flexibility within PW or road standards, every green component costs money, there should be some opportunity to recapture some costs (1 Response)
- Cash incentives and rebates (1 Response)
- Reduction in fees with a third party certification (1 Response)
• Give an incentive to the builder and customer. At this time, the customer has no incentive to build green except if they have a personal ideal that they should build green. (1 Response)
• Different tax rate weighted to take into account the specific impact of home on county services such as stormwater runoff, sewer/septic/water supply, environmental pollution (i.e. fertilizer intense landscaping). Documentation must be legally binding and provided by a certified 3rd party (1 Response)
• Cost is usually the issue, we figure out how to get it done. Incentives for photovoltaics are nice, anything the county could do to promote (1 Response)
• Zoning, permit processes and public works standards are outdated and thwart progress toward this while raising costs (1 Response)
• Free Education (1 Response)
• Our company has a green building focus. Any incentives you could provide to the homeowner to encourage them to choose a green project would be helpful
• If a standardized Built Green Certification program were used then all would be playing on the same field. Eliminate levels of Built Green certification that are meaningless such as OMB’s Level 1 and 2 (1 Response)
• Tax credit for structures meeting certain energy thresholds, say via HERS rating system (1 Response)

18. Provide any additional information you feel Thurston County should consider in removing barriers to promote more green development.

Quoted Results:
• Minimize "green washing" so consumers know how "green" a house is. allow for rain water retention and grey water recycling without costly "purifiers"
• Codes that include a wider variety of building systems, i.e. SIP's and natural building systems.
• Inspire, don't require
• Allow purple pipe (reclaimed water for all non-potable water uses, and make purple pipe available to more projects.
• Codes should be eased
• Thurston County should not make any green building mandatory. Thurston County should not make any changes to building codes or any law that requires green building. The cost of housing in Thurston County is already high. More regulation will increase the cost of housing for families already struggling to keep their homes.
• I think Thurston County does a good job and has a good understanding of both green building objectives and code objectives. If builders or green building advocates feel there are any code related barriers to any specific green building practice they have the right and opportunity to join the code adoption process and voice their argument.
• Provide incentives, not mandates! We need to foster innovation & experimentation at this stage
• Make building codes more friendly to graywater systems and waterless toilets. Revisit the newer septic requirements, and simplify them for graywater systems and waterless toilets.
• Energy efficiency and water use management practices should be the only issues for TC to account for at this point in time and they need to listen carefully to building professionals who have experience and a successful track record building and designing green projects
• Promote Built Green program
• Stay out of the way.
• Must be a clear, prescriptive path from submittal to approval. Too many new programs come with complex regulations and lengthy review cycles. It must be clear, easy to understood and ease to regulate.
• There wasn't a place for comments on some of the above questions. So, here are my comments: Question #15. Zoning is huge! If we can provide neighborhood stores and schools people would be able to walk and bike ride and reduce miles in their cars. Platting is huge too - we could create much nicer
neighborhoods and building lots that are designed to encourage natural daylighting and sun
tempered/passive solar homes. Regarding Roads - I think we should reduce the required road widths.
One thing that would make a big difference is if the existing codes were consistently enforced. Finally,
let's not allow spot zoning - this wreaks havoc on all the hard work the planners did in the first place!
Question #16. I believe that the Wash. State Energy Code needs to continue to become stronger! I also
think we need to develop a good Grey Water code. Beyond those issues, I don't know enough about the
rest of the question.

- I am a certified passive house consultant (PHIUS) and many of the plan reviewers and code
interpretations make doing a Passive House very difficult. From very alternative construction tech. that
eliminate thermal bridging to reduced mechanical systems, this approach has been HUGELY successful
in Germany and Western Europe. It could be a great solution here to, if we could have less resistance to
new ideas.
- The building science is not there and the green standard have changed so much over the last 5 yrs. with
all green programs, there is no consistancy from one to the other. It changes so fast with new
technology how could the county even think they could create rules and regulate? We need to stick to
the IBC and green must be voluntary.
- We recently went through a large lot subdivision process in an effort towards a small "green
development." Much more flexibility is needed on the part of county staff to facilitate this type of
progressive development. Some of our experiences:
  1. The requirements in the roads manual are far too stringent, requiring much wider roads and more
     clearing of vegetation than is desirable. 2. The requirements for clustering homes are much more
     expensive and cumbersome than they need to be. 3. The septic system and well requirements can be too
     inflexible and therefore unnecessarily costly, failing to take into account differing settings and
     situations in which hazards to the environment are minimal.
- For the most part, new homes are very energy efficient. More emphasis should be placed on energy
efficiency of existing homes.

Reality check

- Faster approval process and reductions in permit fees
- Financial incentives for 3 and 4 star built green projects!
- What are the barriers?
- Promote education/training for builders wanting to build to higher green standards
- Do not provide incentives for locating homes further from services and transit. Total square footage and
  energy use is also important - not just the efficiency per square foot. Small is good.

19. What percentage of your job site waste stream do you recycle?

Quoted Results:

- 50% (6 Results)
- 80% (4 Results)
- 85% (2 Results)
- 25% (2 Results)
- 65% (1 Result)
- 75-85% (1 Result)
- 70-90% (1 Result)
- 90%+ (1 Result)
- 30% (1 Result)
- 98% (1 Result)
- 5% (1 Result)

- As much as economically possible about 30%
- We use the Thurston County land fill. Most of our waste is dumped in the area that is sorted and the
  material is recycled.
- Wood products
- 75% But I understand that some of the material we painstakingly separate eventually ends up in the
  landfill because the county has no means of recycling the materials
• Being a remodeler we reuse and recycle everything we can.
• Less than 10%, usually cabinets & cardboard
• As much as possible
• 10%...we would like to do more.
• We customer fabricate virtually all materials in the factory and recycle approximately 95% of our cut-offs.
• Up to contractor. I work with builders committed to green building practices.

20. What barriers do you see that prevent job site waste recycling?
Quoted Results:
• Lack of incentives
• A local co-mingled recycling center
• Lack of education. Lack of access to resources
• Cannot recycle everything
• Where to take it
• Throwing out clean wood, styrofoam
• Stupidity.
• Knowledge of how to recycle, and cost.
• Collection/transport
• More remote drop off locations
• Cost of disposal (5 Result)
• Hazardous Waste Contamination
• Access to resources and transportation
• The need for labeled containers for job sites

• It would be nice if there was one central location for all
• too much non-recyclable packaging
• too many different subs and suppliers to manage. Has to be something everyone wants to do.
• Lack of place to take waste, esp. for reclaiming materials.
• Too many different subs and suppliers to manage. Has to be something everyone wants to do.
• The cost of taking separate loads to dump facilities is prohibitive. It also waste a huge amount of time and fuel.
• Recycle at landfill not always open. bins for building material drop off would be most helpful.
• Lack of education on how and where and the unknown cost of implimenting a successful job site recycling program.
• Time and money- this is not what the builder should have to be responsible for- it should be part of the Waste Management Dept
• A place to bring the materials, distance to that place, needing multiple bins for different materials on site (taking up space on the job site), time it takes to separate products (removing drywall from studs on a remodel project), educating the subs and making it important enough to them so they will do it (or making it mandatory, with a fine if they don't) - people are lazy!
• Multiple subs and not the right facilities to take the items too!
• The new "Lead" rules that are coming down from the national level. makes it very difficult to recycle any salvaged painted products older than 1977
• A company or government sponsored recycling facility that accepts and sorts ALL construction debris at a minimal fee the client can see value in, i.e. less going into land fill coupled with recycle value which the client can afford due to offsets of smaller land fills and recycle value. Also, charging contractors HAZMAT fees for paint, etc. when the public is not charged. The fees eventually are passed back to the public via higher construction costs.

21. What do you think can be done locally that would increase job site recycling?
Quoted Results:
• Recycle more materials
• Education
• One location for all types of recycling
• More remote drop off locations
- Incentives
- Provide discounts
- Nothing. It is a cost and market issue.
- Local recycling options
- Local receiving facilities that ACTUALLY recycle them
- Free service
- Less costly recycle fees

- Put a container on site for all garbage, then have a company sort through the container to recycle what can be recycled.
- Smarter building for less waste; build around the lumber dimensions 8, 10, 12, 16, 20 same with plywood, 4x8, 5x10 and so on
- Encourage a subcontacting industry to serve the General Contractors and make it an automatic, easy and no hassle operation for the Generals.
- It would make it easier to recycle if we could dump all material that could be recycled in one place. This would be a similar concept to the comingled recycle bins that are provided to residential customers. We often have enough total recycling to fill a load, but would need to sort it at the dump facility. Unloading by hand is vary time consuming.
- Hands on consulting and written resources distributed to interested parties on how to effectively implement a jobsite recycling program. A greater understanding of the cost effectiveness of job site waste recycling.
- Make dumping more expensive; provide financial incentives for recycling
- Increase awareness, contacts. Incentives to recycle coupled with a knowledge of how to get it done.
- Single stream system making Waste Management Dept responsible for any sorting and recovery- the builder would put all recyclables in one single container for pick up
- Increase the recyclable materials station at the Land fill. I have no place I can recycle drywall local that is cost effective. In a remodel you normally have a lot less waste than say Marks drywall. Add up all the remodelers, and small drywallers...if we could take it to a bin at the landfill it would be used. I've been remodeling for over 16yrs is T.C. and thrown away tons of scrap drywall...one small project at a time. That adds up...and driving to Tacoma to do that is not a resonable or cost effective option for any contractor in T.C.
- Building permit to require the recycling and the inspector to inforce it.
- Job site pick up of wood scraps / debris for chipping. Same for metal, plastics, and card boards
- Sorting stations that all materials can be taken to then sorted effectively such as Recycle One in Tacoma
- There are many materials that can be fabricated at the factory, rather than the job site. This would minimize job site waste. Perhaps making removal of waste from job sites would motivate builders to be more cognizant of what they create in terms of waste.