

Making it easy to be green . . .

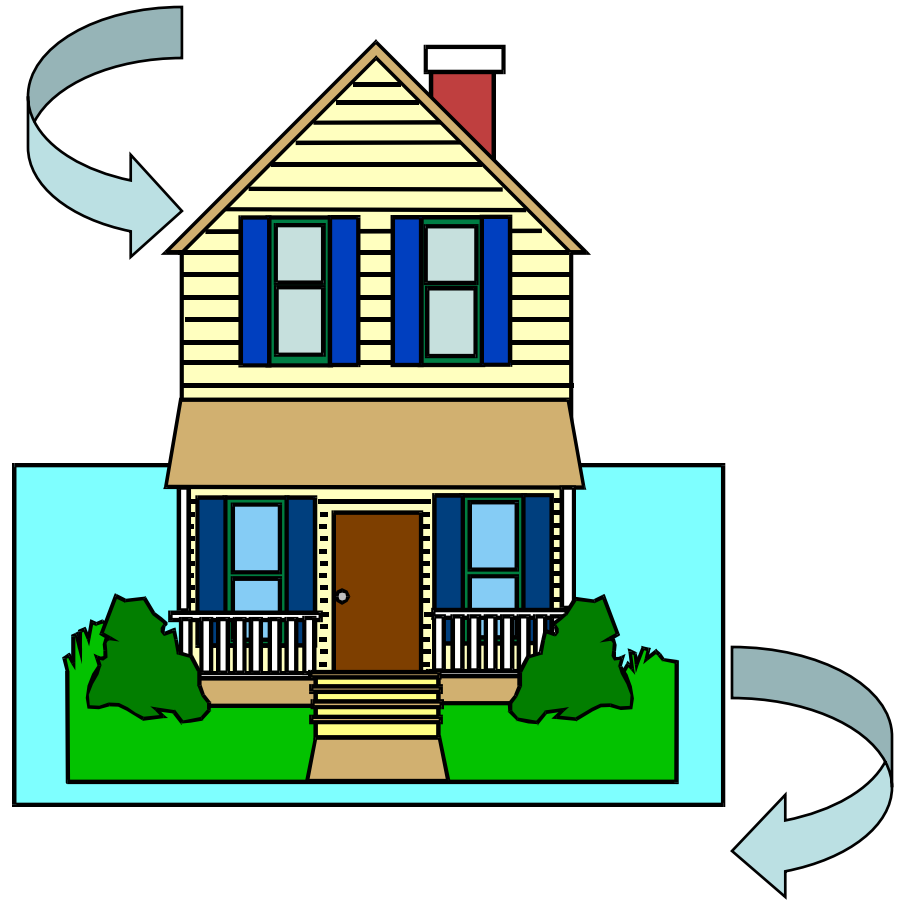


Tacoma-Pierce County Built
Green™ Program

What does it Mean to Build Green?

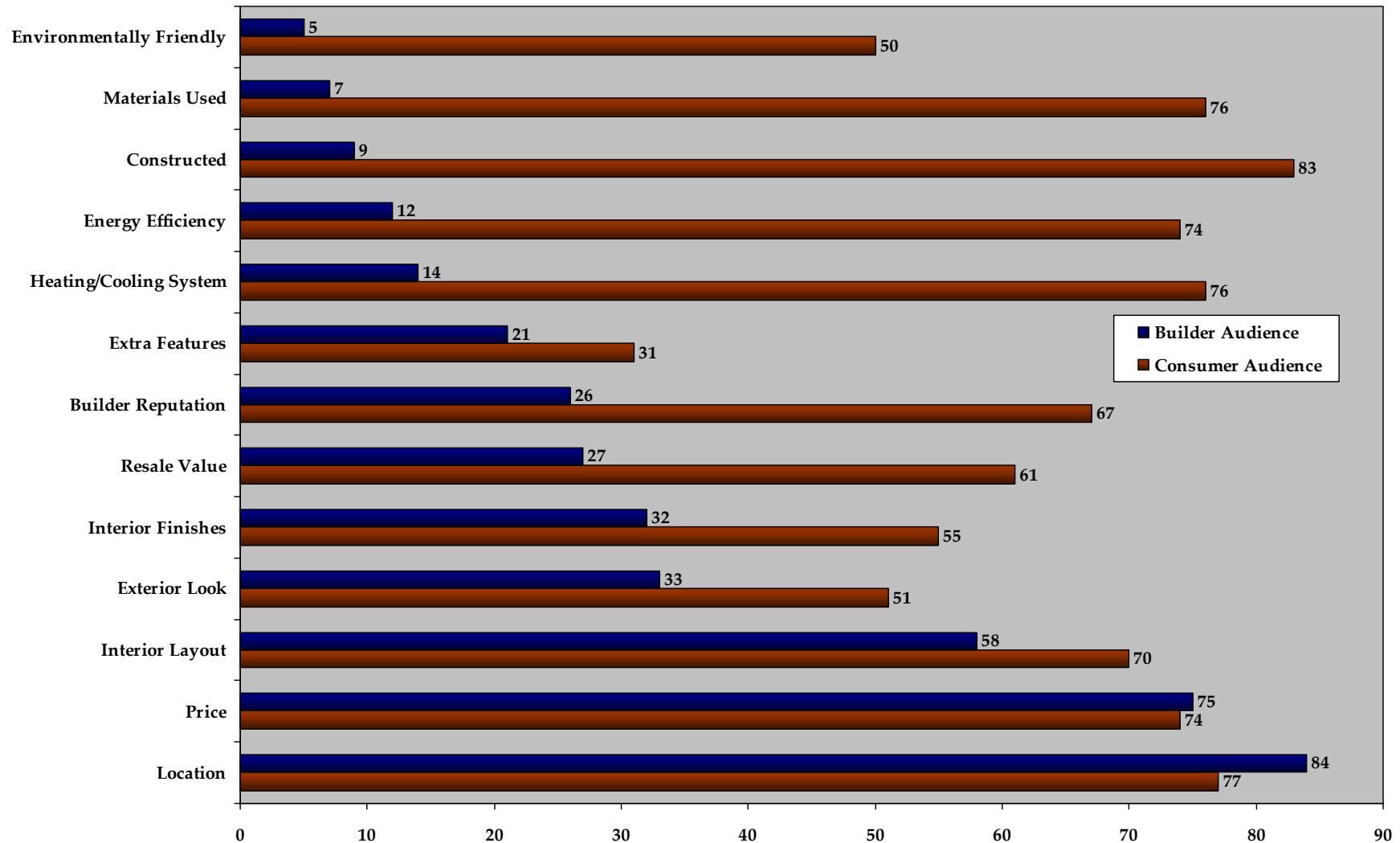
Green Building is a comprehensive approach to addressing the environmental impacts of building. It takes into account the impact of building from a life-cycle perspective, going beyond the moment of construction, and beyond the immediate site of the building.

Green Building incorporates principles, techniques, and materials that conserve natural resources and protect the environment.



2006 Survey by Green Building Institute

Question = If you were buying a house, how much importance would you put on each of the following factors? Answer = A great deal.



What is a Market-Driven Green Home Building Program?

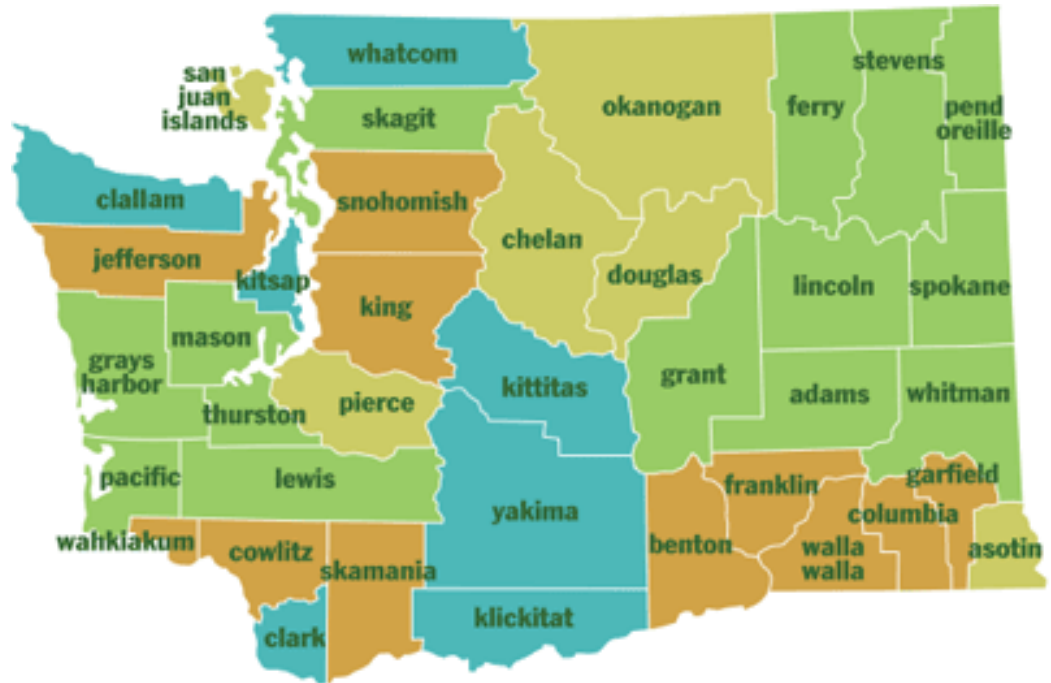
- A green home building program defines “green” for both the professional using the program and the consumer wanting a green home.
- The basis of that definition is:
 - a set of technical criteria that is generally presented in the form of a checklist of action items; and,
 - thresholds that must be met to for the program’s “brand” name to apply.

Most common green building practices, materials, & methods include:

- Energy efficiency: windows, seams/joints, energy efficient appliances, and fans
- Building materials: OSB and engineered woods
- Preservation of open space: minimizing disruption to existing vegetation and preserving natural water drainage
- Air filtration: high efficiency HVAC equipment and overhangs.

Built Green™ Washington

- Built Green™ Washington is a cooperative of Washington's regional green home building programs. We're here to help home builders and home buyers get the information needed to build and buy green!



- 12 local Built Green™ programs in place or under development.

www.builtgreenwashington.org

Tacoma-Pierce County Built Green™ Program

Working in Partnership for a
Sustainable Built Environment in
Tacoma and Pierce County.

Established 2003.



The technical criteria included in the Tacoma-Pierce County Built Green™ Program, and the thresholds set for achieving Star Ratings, have been selected to reflect the unique environmental and economic conditions in this community. The program includes modules for:

- Home Builders
- Remodelers
- Land Developers
- Multi-Family Builders

How was the program developed?

To ensure the program reflected community needs and market conditions, local stakeholders were included at every stage of development, including:

- Builders, Remodelers, Developers, Associates
- Master Builders Association
- City of Tacoma Solid Waste Division (including DOE grant)
- Puget Sound Energy and Tacoma Power
- WSU Co-operative Extension
- Other Service Providers and financial supporters



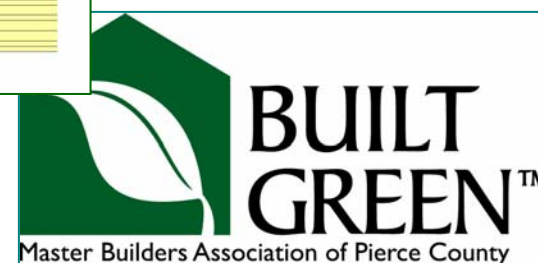
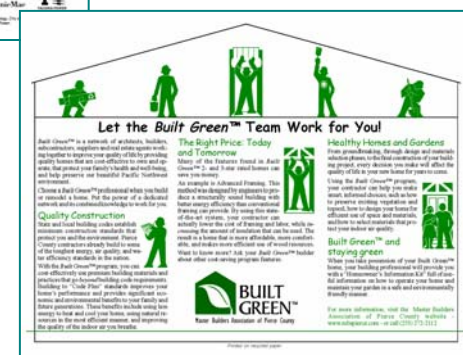
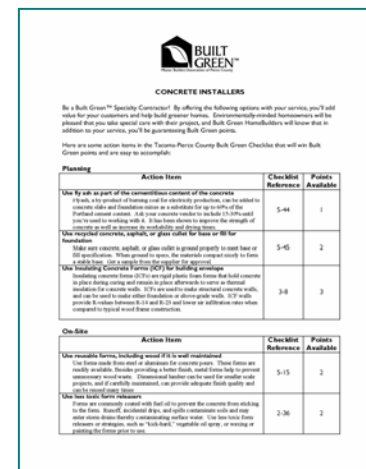
Tacoma-Pierce County Built Green™ Program

Program Includes:

- “Roomy” menu of technical criteria – the Checklists – reviewed and approved by practitioners
- Self-certification of projects using tiered approach (3rd party verification optional)
- Technical & Marketing Resources
- General marketing of the program & concept
- Education
 - Professional
 - Consumer

Tacoma-Pierce County Built Green™ Program Materials

- Checklists
- Handbooks
- Trade Tip Sheets
 - Identifies actions items specifically related to identified subtrade
- Customized Checklists
 - Allows easier reference for employees and subs
 - Provide list to homeowner of exactly what is green about their home
 - Include company information on checklist
- Marketing Resources
 - Brochures, Decals, Signs, and more



Built Green™ Checklist Categories

- Builder/Remodeler**

- Build to “Green” Codes and Regulations
- Site and Water
- Energy Efficiency
- Health and Indoor Air Quality (IAQ)
- Materials Efficiency
- Promoting Environmentally Friendly Operations & Maintenance (O&M)

HOME BUILDER
Self-Certification Checklist

STEP 1: Complete Checklist
Check Action Items completed in the project to qualify for a Built Green™ star rating.

How to Use the Checklist:
 (1) 3-4★ Provide a four-point rating.
 (2) 2-3★ Provide a three-point rating.
 (3) 1-2★ Provide a two-point rating.
 (4) 0★ Provide a one-point rating.
 (5) 0★ Provide a zero-point rating.

Basic Requirements

- Complete Program Orientation (one time only)
- Complete all required WA items for each project
- Section 1: Building "Green" Codes & Regulations
- Points for ENERGY STAR® compact Fluorescent (CFE) bulbs by means of required LED lighting system (CFE) (Action Item 3-4)
- Provide waste reduction resources about to-go-able, prepackaged and sub-contractors (Action Item 3-2)
- Provide plastic recycling plan and post on site (Action Item 3-10)
- Provide owner with Homeowner's Information Kit (Action Item 3-5)

Section One: Build to Green Codes/Regulations

- (1) 1-6. New Washington State Water Use Efficiency Standard
- (1) 1-2. New Spokane-Summer-Gar-Development-Standard
- (1) 1-3. New Washington State Energy Code
- (1) 1-4. New Washington State Resilient 90 Code

Section Two: Site and Water

Site Protection

- (1) 2-1. Build on an old lot to take advantage of existing infrastructure and reduce development of virgin site
- (1) 2-2. Build on a low-impact development

TACOMA-PERCE COUNTY BUILT GREEN™ HOME BUILDER August 2003

REMODELER
Self-Certification Checklist

STEP 1: Select Project Category
Definition - What category is your project?
 Whole House Remodel:
 • Full range of structural, electrical, water, waste, and other systems
 • Structural and load-bearing to meet the 30% of total square footage (square foot) range of room added, i.e.
 • No addition greater in size than 30% of the square footage of existing home.
 Addition:
 • No project that involves the addition of a new room or wing of a home.
 Remodel:
 • To repair major damage to the structural, electrical, water, waste, and other systems.
 • Not to be used for a room that is the 30% of total square footage of existing home (square foot range of room added).
 Small Remodel:
 • To repair or major damage to the structural, electrical, water, waste, and other systems.
 • Not to be used for a room that is:
 • Classified as a bathroom or kitchen remodel or a basement finish.

Step 2: Complete Checklist
How to Use the Checklist:
 (1) 3-4★ Provide a four-point rating.
 (2) 2-3★ Provide a three-point rating.
 (3) 1-2★ Provide a two-point rating.
 (4) 0★ Provide a one-point rating.
 (5) 0★ Provide a zero-point rating.

Check items you will be including in this project to qualify for a Built Green™ star rating.

Minimum Points by Section

Section	1	2	3
Section 1	0	0	0
Section 2	5	5	5
Section 3	5	10	15
Section 4	5	10	15
Section 5	5	10	15
Section 6	0	0	0

Minimum Point Totals by Project Category

Section	1	2	3
Whole House Remodel	20	110	220
Addition	20	110	160
Remodel	20	110	160
Small Remodel	20	110	160

TACOMA-PERCE COUNTY BUILT GREEN™ REMODELER - Self-Certification Checklist August 2003 Checklist 1

Built Green™ Checklist Categories

- **Developer**

- Site Selection & Design
 - Land Use, Community Enhancement and Housing Affordability, Landscaping – Common Areas, Transportation
- Planning & Education
 - Covenants & Builder Guidelines, Education, Operations & Maintenance
- Construction Operations
 - Erosion & Sedimentation Controls, Vegetation Management, Pollution Prevention, Heritage & Deconstruction

The image shows a form titled "BUILT GREEN™ Green Communities Project Enrollment Form and Self-Certification Checklist". It is a document from the Tacoma-Pierce County Built Green program. The form includes fields for Company, Contact Name & Phone Number, Project Address, Lot Number, Tax Number, or Location, and a Brief Project Description. It contains a disclaimer and a certification statement from the developer. At the bottom, there is a section for "Total Points for Project" with a scale from 1-Star to 3-Star, and a section for "Please enclose payment" with checkboxes for MHA Member (\$50 per unit) and Non-Member (\$100 per unit). The footer indicates it is page 1 of 1, dated December 2004.

Built Green™ Star Rating Thresholds

Home Builder

1-Star Level ☐	2-Star Level ☐☐	3-Star Level ☐☐☐
<p>Basic Requirements:</p> <ul style="list-style-type: none"> ★ Program Orientation ★ Section One: Build to “Green” Codes and Regulations ★ Waste Reduction Resource Sheet to site staff & subs. ★ Post jobsite recycling plan. ★ Homeowner Info. Kit. ★ If installing screw-in CFLs, provide four (4) replacement lamps. <p>Earn 30 points from Sections Two through Five, with at least five (5) points from each of these sections</p>	<p>Basic Requirements (See 1-Star level)</p> <p>Earn 110 points from Sections Two through Five, with at least 10 points from each Section.</p> <p>Attend a Built Green™ workshop in the 12 months prior to certification.</p>	<p>Basic Requirements (See 1-Star level)</p> <p>Earn 220 points from Sections Two through Five, with at least 15 points from each Section.</p> <p>Attend a Built Green™ workshop in the 12 months prior to certification.</p>

Built Green™ Star Rating Thresholds

Multi-Family Builder

STEP 1: Complete Checklist

Check Action Items completed in the project to qualify for a Built Green™ star rating.

How to Use the Checklist

Basic Requirements

- Complete Program Orientation (one time only)
- Complete all required (R) items for each project
- Section 1: Build to “Green” Codes & Regulations
- 2-15 Preserve and protect wetlands, shorelines, bluffs, and other critical areas during construction
- 2-20 Install temporary erosion control devices beyond code and optimally maintain them
- 2-35 Prohibit burying construction waste
- 2-36 Recycle antifreeze, oil, and oil filters at appropriate outlets, where available
- 2-37 Dispose of non-recyclable hazardous waste at legally permitted facilities
- 3-58 Furnish four ENERGY STAR® compact fluorescent light (CFL) bulbs to owners
- 4-78 Install kitchen range hood, bath, laundry or ceiling exhaust fan vented to the outside to remove excess moisture and odors
- 5-82 Provide and post job site waste reduction & recycling plan and resource sheet to on-site personnel and subcontractors
- 6-1 Provide owner with O&M Manual
- 6-2 Provide occupants with information kit

STEP 2: Determine Rating

Requirements for 1-Star Level

- Comply with Basic Requirements
- Earn 60 points from Sections 2 through 5, with at least 5 points from each Section

Requirements to Qualify at 2-Star Level

- Comply with Basic Requirements
- Earn 160 points from Sections 2 through 5, with at least 10 points from each Section
- Attend a BUILT GREEN™ approved workshop within past 12 months prior to certification

Requirements to Qualify at 3-Star Level

- Comply with Basic Requirements
- Earn 260 points from Sections 2 through 5, with at least 15 points from each Section
- Attend a BUILT GREEN™ approved workshop within past 12 months prior to certification

Recommendation: Review the checklist for Action Items you already do, then note others that seem easy to incorporate and those that interest you, but require further investigation (see Handbook). Make a preliminary tally to judge what rating you might achieve.

Built Green™ Star Rating Thresholds

Developer

1-Star Level ★	2-Star Level ★★ (200 Points Minimum)	3-Star Level ★★★ (350 Points Minimum)
<ul style="list-style-type: none"> ●Attend a Program Orientation (one time only) ●Attend a Built Green™ approved workshop anytime in the past 12 months prior to project certification ●Earn 100 points from Sections One through Three, with at least 15 points from each section 	<ul style="list-style-type: none"> ●Meet 1-Star level requirements ●Earn an additional 100 points (total of 200 points) from Sections One through Three, with at least twenty (20) points from each Section 	<ul style="list-style-type: none"> ●Meet 2-Star level requirements ●Earn an additional 150 points from Sections One through Three (350 points total), any items
<p>Required Action Items for All Levels</p> <ul style="list-style-type: none"> ●Require new home starts in the development to meet Built Green™ Home Builder 1-Star Level requirements (Action Item 1-61) ●Orient & promote Built Green™ to builders in the development (Action Item 1-62) ●Do Not Dispose of Topsoil in Lowlands or Wetlands (Action Item 3-1) ●Optimally Maintain all Temporary Erosion Control Practices (Action Item 3-2) ●Properly Dispose of Hazardous Wastes (Action Item 3-16) 		

How to Use the Handbooks

Action Item 3-41: Upgrade Electric Water Heater Efficiency to EF of 0.93 or Higher (or Use 3-44 Below) (From Remodeler) 3 Points

Current code requires domestic hot water systems meet the requirements of the 1987 National Appliance Energy Conservation Act (NAECA). Upgrading electric water heater efficiency from an Energy Factor (EF) of .88 to .93 will save 225 kWh per year. Household operational savings will support an additional cost of about \$50. Be careful to avoid heat loss (through heat traps) when you have a hot water tank on lower floors feeding upper stories.

- GAMA (Gas Appliance Manufacturers Association) guide, The best source for efficiency information for water heaters. GAMA will answer questions on residential gas appliances and equipment, and electric and oil-fired water heaters. 703-525-7060, www.gamanet.org.
- *How to Buy an Energy - Efficient Electric Water Heater*, US Department of Energy, FEMP. Available online www.eren.doe.gov/femp/procurement/ewh.pdf. A publication of the Federal Emergency Management Program, this two-page fact sheet is primarily for federal agencies, but provides good general information for residential builders as well.

How Can You Participate in the Tacoma-Pierce County Built Green™ Program?

- Join the program
 - Builder or Associate Member
 - Non-Profit Entities Join for Free!
- Enroll your projects
- Complete and submit your checklists
 - Non-Profit Entities Certify for Free!
- Lead the Program
 - Steering Committee Membership



“As contractors, our responsibility is to introduce ‘green’ techniques or products in the homes we build...WE are the environmentalists.”

John Kurowski, Kurowski Development

