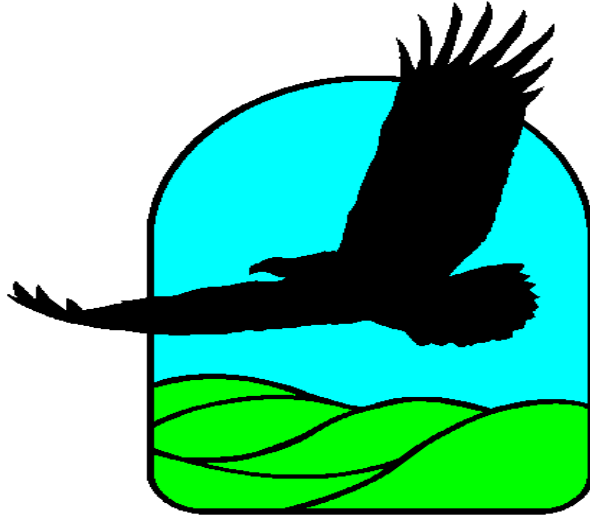


APPENDIX B



APPLICATION #: _____
ADDRESS: _____

CITY OF WATSONVILLE GREEN BUILDING PROGRAM

Ordinance 1231-07 (CM) codified in Chapter 15 of Title 8 of the Watsonville Municipal Code

GREEN POINTS
CHECK LIST
FOR

RESIDENTIAL BUILDINGS

January 2008

NEW HOME GREEN POINTS CHECK LIST

Instructions for Completing Check List



Use this check list to design your project and to account for the points being claimed.

Unless exempted from the Green Building Program by, your project must comply with the minimum number of points to obtain a building permit for your new or remodeled building or addition. For accelerated processing or eligibility for a Green Building Award, the appropriate number of points must be attained as outlined.

In the "Total" column is the maximum number of points that can be obtained for each particular object. Where points are allowed for cumulative objects such as the "Site" category, you may take all of the points allowed for lesser degrees of compliance than your design. (For example, if you divert 80% or more of your construction and demolition waste you may also claim the points for 50% and 65% diversion for a total of 3 points.)

All compliance measures must also be indicated clearly on the plan sets. A separate table should be included on either the title sheet or on the index sheet detailing what compliance measures are being taken.

RESIDENTIAL COMPLIANCE SUMMARY

Project Address: _____ Square Footage _____ (Include attached garage)

Type of Project: (Check one) _____ NEW _____ ADDITION _____ REMODEL

POINTS REQUIRED FOR (Check which one you are applying for):

PERMIT ISSUANCE _____ ACCELERATED PLAN CHECK: _____ GREEN BUILDING WARD: _____

A. Base Points required from (Table 2 or 3): = _____

B. Additional points required per 100 sq. ft.: Sq. Ft. /100 X additional points factor (Table 2 or 3): = _____

C. Total points required for permit issuance (= A + B): = _____

POINTS BY CATEGORY:

A: Community Design Issues	_____	B: Site:	_____
C: Foundation:	_____	D: Structural Frame	_____
E: Exterior Finish :	_____	F: Plumbing:	_____
G: Electrical:	_____	H: Appliances:	_____
I: Insulation:	_____	J: Windows:	_____
K: Heating, Ventilation & Air Conditioning:		L: Renewable Energy and Roofing	
M: Natural Heating and Cooling:		N: Indoor Air Quality & Finishes:	
O: Flooring:	_____	P: Other:	

TOTAL POINTS FOR THIS PROJECT: _____ Verified By: _____

NEW HOME GREEN POINTS CHECK LIST



Points available for Building Department Incentives

A. Community Design Issues		New Homes	Additions & Remodels	Notes:
1	Orient Homes on E/W Axis for Solar Access	0	0	
2	Orient Living Rooms and Porches to Streets and Public	0	0	
3	Build Mixed Use, Residential/Commercial	0	0	
4	Design for Diverse Family Sizes	0	0	
5	Provide 'granny flats" Above Garages	0	0	
6	Build within 1/4 Mile of Public Transit Stop	0	0	
7	Minimize Street Widths	0	0	
8	Locate Buildings to Preserve Open Space and Wildlife Habitat	0	0	
		0	0	

Available Points

B. Site		New Homes	Additions & Remodels	Notes:
1	Recycle Job Site Construction & Demolition Waste. 50% Recycling Rate is Required 65% Recycling Rate = 1 point 75% Recycling Rate = 2 points 80% Recycling Rate = 4 points	4	4	
2	Donate Unused Materials	4	4	
3	Protect Native Soil	2	0	
3	Protect Native Soil	1	1	
4	Minimize Disruption of Existing Plants/Trees	2	2	
5	Implement Construction Site Stormwater Practices	2	0	
6	Protect Water Quality with Landscape Design	2	2	
7	Design Resource and Water-Efficient Landscapes	2	2	
8	Reuse Materials/ Use Recycled Content Materials for Landscape Areas	2	2	
9	Install High Efficiency Irrigation System	2	2	
10	Provide for On-Site Water Catchment/ Retention	2	2	
11	Utilize Permeable Paving for 50% of Non-structural Site Paved Area	2	2	
		27	23	

Available Points

NEW HOME GREEN POINTS CHECK LIST



Points available for Building Department Incentives

C. Foundation

- 1 Incorporate Recycled Flyash in Concrete up to 15% = 2 points; Add 1 point for every 10% increase in flyash, up to 5 points
- 2 Reuse Form Boards
- 3 Re-usable Metal Forms
- 4 Use Recycled Content Aggregate
- 5 Insulate Foundation/Slab Before Backfill
- 6 Install Rigid foam, Insulated Concrete Forms (ICF's)
- 7 Rammed Earth Foundation (must meet engineering requirements for Seismic Zone 4)
- 8 Use Non-Toxic Release Agents on Concrete Forms

New Homes	Additions & Remodels	Notes:
5	5	
1	1	
3	3	
2	2	
3	3	
3	3	
5	5	
1	1	
23	23	

Available Points

D. Structural Frame

1. Substitute Solid Sawn Lumber with Engineered Lumber
 - A. Floors
 - B. Headers (non-structural)
 - C. Structural Beams and Headers
2. Use FSC Certified Wood for Framing (For every 10% of FSC lumber used = 2 points, up to 10.
3. Use Wood I-Joists for Floor and Ceilings
4. Use Steel Interior Web Trusses
5. Design Energy Heels on Trusses
6. Use OSB
 - A. Sub-floors
 - B. Sheathing
7. Use Finger-Jointed Studs for Non-Structural Vertical Applications
8. Use Engineered Studs for Vertical Applications

1	1	
1	1	
1	1	
10	10	
2	2	
2	2	
2	2	
1	1	
1	1	
2	2	
2	2	

NEW HOME GREEN POINTS CHECK LIST



Points Available for Building Department Incentives

D. Structural Frame (continued)

9. Use Recycled Content Steel Studs for Interior Framing
10. Reduce Lumber Framing and Improve Thermal Performance* with Alternative Wall Construction Such As:
 - Insulated concrete forms—including Rastra **
 - Rammed-earth and pressed earthen block**
 - Straw bale**
 - Structural bamboo**
 points for every 10% reduction in framing compared to standard framing.

**Steel framing is not eligible for this point due to thermal performance.*
*** Must meet code requirements for Seismic Zone 4*
11. Design with 8 foot high plate: 2 points for each floor where used
12. Apply Advanced Framing Techniques
13. Use Reclaimed Lumber for Non-Structural Applications

Available Points

New Homes	Additions & Remodels	Notes:
2	2	
20	20	
6	6	
4	4	
3	3	
60	60	

E. Exterior Finish

1. Use Sustainable Decking Materials
 - A. Recycled Content
 - B. FSC Certified Wood
2. Use Non-CCA Treated Wood
3. Install House Wrap Under Siding
4. Use Alternative Siding Materials
 - A. Recycled Content
 - B. Fiber-Cement
 - C. Earth and/or Plaster
5. Use Low/No VOC Exterior Paint Such As Silicate

3	3	
3	3	
1	1	
1	1	
1	1	
3	3	
3	3	
2	2	
17	17	

Available Points



NEW HOME GREEN POINTS CHECK LIST

**Points available for Building
Department Incentives**

F. Plumbing

- 1 Insulate All Hot Water Pipes
2. Install Flow Reducers to Reduce Flow To Less Than Code Requirement
 - A. Faucets (1 point each, up to 2 points)
 - B. Showerheads (1 point each, up to 2 points)
3. Install dual Flush Toilets (1 point each, up to 4 points)
4. Install Chlorine Filter on Showerhead
5. Install Tankless Water Heater
6. Pre-Plumb for Graywater Conversion
7. Install Graywater System (per Appendix G of the CPC)
8. Install Water Filtration Units at Faucets (2 points each, up to 4 points)
9. Install On-Demand Hot Water Circulation Pump
10. Install Zero-Water Urinals (1 point each to a max. of 2)
11. Install Rainwater Collection and Storage
 - A. 2500 gallon capacity
 - B. 5000 gallon capacity
12. Install Drain Water Heat Recovery Fixtures

New Homes	Additions & Remodels	Notes:
2	2	
2	2	
2	2	
4	4	
4	4	
2	2	
4	4	
8	8	
4	4	
4	4	
2	2	
5	5	
10	10	
3	3	
56	56	

Available Points

G. Electrical

- 1 Install Compact Fluorescent Light Bulbs— CFLs. (6 bulbs = 2 points, 12 bulbs = 4 points, up to a max of 4 points)
- 2 Install Air-tight Insulation-Compatable Recessed Fixtures for CFL's (1 point each, up to 5 points, T-24 required)
- 3 Install Lighting Controls (1 point per fixture, up to 4 points)
- 4 Install High Efficiency Ceiling Fans with CFLs (1 point each, up to 4 points)

4	4	
0	5	
4	4	
4	4	
12	17	

Available Points
NEW HOME GREEN POINTS CHECK LIST



**Points Available for Building
Department Incentives**

H. Appliances

- 1 Offer ENERGY STAR® Dishwasher
- 2 Offer Horizontal Axis Washing Machine
- 3 Offer ENERGY STAR® Refrigerator
- 4 Install Built-In Recycling Center

New Homes	Additions & Remodels	Notes:
1	1	
1	1	
1	1	
1	1	
4	4	

Available Points

I. Insulation

- 1. Upgrade Insulation to Exceed Title 24 Requirements by 20%.
 - A. Walls
 - B. Ceilings
- 2. Install Recycled-Content, Formaldehyde-Free Fiberglass Insulation
- 3. Use Advanced Infiltration Reduction Practices
- 4. Use Environmentally Preferable Insulation Materials. (Cellulose, Recycled Cotton, Wool, Foamed Concrete, Soy-Based Polyurethane)
 - A. Walls
 - B. Ceilings
- 5. Install Straw Bale Insulation at Least 18” Thick

2	2	
2	2	
3	3	
2	2	
4	4	
4	4	
6	6	
23	23	

Available Points

J. Windows

- 1. Install Energy-Efficient Windows
 - A. Double-paned
 - B. Triple-paned
 - C. Low-emissivity (Low-E)
 - D. Low conductivity frames

0	1	
1	1	
2	2	
2	2	
5	6	

Available Points

NEW HOME GREEN POINTS CHECK LIST



Points available for Building Department Incentives

K. Heating Ventilation and Air Conditioning

- 1 Use Duct Mastic on All Duct Joints
- 2 Install Ductwork Within Conditioned Space
- 3 Vent Range Hood to the Outside
- 4 Clean All Ducts Before Occupancy
- 5 Install Attic Ventilation Systems
- 6 Install Whole House Fan
7. Install Sealed Combustion Units
 - A. Furnaces
 - B. Water Heaters
8. Install 13 SEER/11 EER or Higher AC with a TXV
9. Install AC with Non-HCFC Refrigerants
10. Install 90% Annual Fuel Utilization Efficiency (AFUE) Furnace
11. Eliminate Wood Burning Fireplaces
12. Install Zoned, Hydronic Radiant Heating
13. Install High Efficiency Particulate Air (HEPA) Filter
14. Install Heat Recovery Ventilation Unit (HRV)
15. Install Separate Garage Exhaust Fan

New Homes	Additions & Remodels	Notes:
0	1	
3	3	
0	1	
2	2	
1	1	
4	4	
3	3	
3	3	
3	3	
2	2	
2	2	
1	1	
3	3	
4	4	
5	5	
3	3	
39	41	

Available Points

NEW HOME GREEN POINTS CHECK LIST



Points available for Building Department Incentives

L. Renewable Energy and Roofing

	New Homes	Additions & Remodels	Notes:
1 Pre-Plumb for Solar Water Heating	4	4	
2 Install Solar Water Heating System	10	10	
3. Pre-Wire for Future Photovoltaic (PV) Installation	4	4	
4. Install Photovoltaic (PV) Panels (1.2kw = 6 points, 2.4 kw =12 points, 3.6 kw = 18 points)	18	18	
5. Install Solar (PV) Walkway Lights	4	4	
6. Select Safe And Durable Roofing Materials	3	3	
7. Install Radiant Barrier Roof Sheathing	3	3	
8. Select EPA ENERGY STAR® Cool Roofing Material	3	3	
9. Use Roofing Materials with at Least 33% Recycled Content	3	3	
10. Install a Green Roof (Sod or other living roof)	12	12	
Available Points	64	64	

NEW HOME GREEN POINTS CHECK LIST



Points Available for Building Department Incentives

M. Natural Heating and Cooling

1. Incorporate Passive Solar Heating
2. Overhangs or Awnings on South Facing Walls
3. Plant Deciduous Trees on the West and South Sides

Available Points

New Homes	Additions & Remodels	Notes:
5	5	
3	3	
3	3	
11	11	

N. Indoor Air Quality and Finishes

1. Install Whole House Vacuum System
2. Use Low/No-VOC Paint
3. Use Low VOC, Water-Based Wood Finishes
4. Use Solvent-Free Adhesives
5. Formaldehyde-Free Particleboard
6. Use Exterior Grade Plywood for Interior Uses
7. Use Formaldehyde-Free MDF and Materials
8. Seal All Exposed Particleboard or MDF
9. Use FSC Certified Materials for Interior Finish
10. Use Finger-Jointed or Recycled Content Trim

Available Points

3	3	
1	1	
2	2	
3	3	
6	6	
1	1	
4	4	
4	4	
4	4	
1	1	
29	29	

NEW HOME GREEN POINTS CHECK LIST



Points available for Building Department Incentives

O. Flooring

1. Select FSC Certified Wood Flooring
2. Use Rapidly Renewable Flooring Materials
3. Use Salvaged or at Least 20% Recycled Content Ceramic Tiles
4. Install Natural Linoleum In Place of Vinyl
5. Use Exposed Concrete as Finished Floor
6. Install Recycled Content Carpet with Low VOCs.
7. Use Finished Concrete for 50% or More of the Floor Area on the Ground Floor
8. Use Earthen Flooring for 50% of Floor Area on the Ground Floor

Available Points

New Homes	Additions & Remodels	Notes:
8	8	
4	4	
4	4	
5	5	
4	4	
4	4	
8	8	
10	10	
47	47	

P. Other

- 1 Incorporate Listing of Green Features into Cover of Blueprints
- 2 Develop Homeowner Manual of Green Features/Benefits
- 3 Offer Coupons for Compost Bins to Homeowners
- 4 Energy Ratings: Every % Reduction in Whole House Energy Beyond title 24 Code—1 point (up to 30 points)
Use Energy Software Such as EnergyPro or MicroPas to Show Improvement over California Residential Energy Standards (Title 24)
- 5 Innovation Points—These points are given for innovative approaches, including model zero net energy homes, new materials and methodologies, currently not identified above. These approaches must meet environmental goals identified in the Residential Green Building Guidelines.

Available Points

1	1	
1	1	
1	1	
30	30	
10	10	
43	43	

Total Points Available	460	464
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NEW HOME GREEN POINTS CHECK LIST



TABLE 2: RESIDENTIAL NEW CONSTRUCTION ACTIONS AND POINT REQUIREMENTS

Total Points Available	460	
<i>Action</i>	<i>Points required to receive action:</i>	
	<i>First 350 Square Feet</i>	<i>Each Additional 100 Square Feet or fraction thereof</i>
R-N-1. Receipt of building permit	10	1.5
R-N-2. Accelerated building permit processing	35	2.5
R-N-3. Green Building Award	60	3.5

TABLE 3: RESIDENTIAL REMODEL AND ADDITION ACTION POINT REQUIREMENTS

Total Points Available	464	
<i>Action</i>	<i>Points required to receive action:</i>	
	<i>First 350 Square Feet</i>	<i>Each Additional 100 Square Feet or fraction thereof</i>
R-A/R-1. Receipt of building permit*	5	1.1
R-A/R -2. Accelerated building permit processing	25	1.9
R-A/R -3. Green Building Award	35	2.5

*Exception: These points are not required for additions and/or remodels of less than 350 square feet.