

Chapter Three:

New Home Green Points

The Green Points checklist offers builders, homeowners and municipalities a tool to assess how environmentally friendly or green a home is. Green Points was developed with the cooperation of local builders, city planners and building officials. Each green measure has been assigned a Green Points value based on its benefits to the homeowners and the environment, as well as its ease of implementation. In the future, the checklist may be adjusted to reflect current best practices as well as new products and technologies.

“Centex Homes continues to pursue sustainable building methods and practices in all our Northern California neighborhoods. The Green Points Checklist provides a meaningful way to gauge our progress.”

—Jeff Jacobs, Centex Homes

New Home Green Points 2005 EDITION

The Green Points checklist is based on the various green features incorporated into the home. A home can be considered green if it earns 50 points or more, and meets the following minimum points per category:

Energy (11), Indoor Air Quality/Health (5), Resources (6), and Water (3). Additional points can be achieved from any category to add up to a total of 50.

POINTS PER CATEGORY	Community	Energy	IAQ/Health	Resources	Water
A. Site					
1. Protect Native Soil and Minimize Disruption of Existing Plants & Trees					
a. Protect Native Topsoil from Erosion and Reuse after Construction	1				1
b. Limit and Delineate Construction Footprint for Maximum Protection					1
2. Deconstruct Instead of Demolishing Existing Buildings On Site				3	
3. Recycle Job Site Construction Waste (Including Green Waste)				Pre	
a. Minimum 50% Waste Diversion by Weight (Recycling or Reuse)				2	
b. Minimum 65% Waste Diversion by Weight (Recycling or Reuse) (total 2 points)				2	
c. Minimum 80% Waste Diversion by Weight (Recycling or Reuse) (total 4 points)				2	
4. Use Recycled Content Aggregate (Minimum 25%)					
a. Walkway and Driveway				1	
b. Roadway Base				1	
Site=Total 12	1			9	2
B. Landscaping					
1. Construct Resource-Efficient Landscapes					
a. No Invasive Species listed by Cal-IPC are Planted					1
b. No Species Will Require Shearing				1	
c. 75% of Plants are California Natives or Mediterranean Species					1
2. Use Fire Safe Landscaping Techniques	1				
3. Minimize Turf Areas in Landscape Installed by Builder					
a. All Turf Will Have a Water Requirement Less than or Equal to Tall Fescue					2
b. Turf Not Installed on Slopes Exceeding 10% or in Areas Less than 8 Feet Wide					2
c. Turf is <33% of Landscaped Area					2
d. Turf is <10% of Landscaped Area (total 4 pts)					2
4. Plant Shade Trees		1			1
5. Implement Hydrozoning: Group Plants by Water Needs					1
6. Install High-Efficiency Irrigation Systems					
a. System Uses Only Low-Flow Drip, Bubblers, or Low-flow Sprinklers					1
b. System Has Smart (Weather Based) Controllers					2
7. Apply 2 inches Compost into the Top 6 to 12 inches of Soil					2
8. Mulch All Planting Beds to greater of 2" or Local Water Ordinance					1
9. Use Salvaged or Recycled-Content Materials for Non-Plant Landscape Elements (50% of elements use 50% or more recycled/salvaged material)				1	
10. Reduce Light Pollution from Site Lighting by Shielding Fixtures and/or Directing Light Downward	1				
Landscape=Total 23	2	1		2	18
C. Foundation					
1. Incorporate Recycled Flyash in Concrete					
a. 20% Flyash (total 1 points)				1	
b. 25% Flyash (total 2 points)				1	
2. Use Frost-Protected Shallow Foundation in Cold Areas (Climate Zone 16)				3	
3. Use Radon Resistant Construction (In At-Risk Locations Only)			1		
Foundation=Total 6			1	5	

POINTS PER CATEGORY	Community	Energy	IAQ/Health	Resources	Water
D. Structural Frame and Building Envelope					
1. Apply Optimal Value Engineering (Advanced Framing)					
a. 2x4 Studs at 24-Inch On Center Framing				1	
b. Door and Window Headers Sized for Load				1	
c. Use only Jack and Cripple Studs Required for Load				1	
2. Use Engineered Lumber					
a. Beams and Headers				1	
b. Insulated Engineered Headers		1			
c. Wood I-Joists or Web Trusses for Floors				1	
d. Wood I-Joists for Ceilings				1	
e. Engineered or Finger-Jointed Studs for Vertical Applications				1	
3. Use FSC Certified Wood					
a. Dimensional Studs (Minimum 40% - 2 pts; Min. 75% - 4 pts)				4	
b. Panel Products (Min. 40% - 1 pt; Min. 70% - 2 pts)				2	
4. Design Energy Heels on Trusses (75% of Attic Insulation Height at Outside Edge of Exterior Wall)		1			
5. Design Trusses to Accommodate Ductwork		1			
6. Use Oriented Strand Board (OSB)					
a. Subfloor				1	
b. Sheathing				1	
7. Use Recycled-Content Steel Studs for 90% of Interior Wall Framing				1	
8. Use Solid Wall Systems (Includes SIPs, ICFs, and Any Non-Stick Frame Assembly)					
a. Floors		2		2	
b. Walls		2		2	
c. Roofs		2		2	
9. Thermal Mass Walls: 5/8-Inch Drywall on All Interior Walls Weigh More than 40 lb/ft ³		1			
10. Design and Build Structural Pest Controls					
a. Install Termite Shields and Separate All Exterior Wood-to-Concrete Connections by Metal or Plastic Fasteners/Dividers				1	
b. All New Plants Have Trunk, Base, or Stem Located At Least 36" from Foundation				1	
11. Reduce Pollution Entering the Home from the Garage					
a. Tightly Seal the Air Barrier between Garage and Living Area			1		
b. Install Separate Garage Exhaust Fan			1		
12. Install Overhangs and Gutters					
a. Install 16-Inch Overhangs and Gutters (total 1 points)				1	
b. Install 24-Inch Overhangs and Gutters (total 2 points)		1			
Structural Frame and Building Envelope=Total 38		11	2	25	
E. Exterior Finish					
1. Use Recycled-Content (No Virgin Plastic) or FSC-Certified Wood Decking				2	
2. Install a Rain Screen Wall System				2	
3. Use Durable and Non-Combustible Siding Materials				1	
4. Select Durable and Non-Combustible Roofing Materials				2	
Exterior Finish=Total 7				7	
F. Plumbing					
1. Distribute Domestic Hot Water Efficiently					
a. Insulate Hot Water Pipes from Water Heater to Kitchen					1
b. Insulate All Hot Water Pipes or Install On-Demand Hot Water Circulation System in Conjunction with F.I.a.		1			1
c. Locate the Water Heater within 25 Feet of All Fixtures					1
d. Use Engineered Parallel Piping		1			
2. Install Only High Efficiency Toilets (Dual-Flush or <=1.3 gpf)					3
Plumbing=Total 8		2			6

POINTS PER CATEGORY		Community	Energy	IAQ/Health	Resources	Water
G. Appliances						
1.	Install ENERGY STAR® Dishwasher					
	a. ENERGY STAR®		1			
	b. Dishwasher Uses No More than 6.5 Gallons/Cycle		1			1
2.	Install ENERGY STAR® Clothes Washing Machine with Water Factor of 6 or Less		1			3
3.	Install ENERGY STAR® Refrigerator					
	a. ENERGY STAR®: 15% above Federal Minimum		1			
	b. Super Efficient Home Appliance (SEHA) Tier 2: 25% above Federal Minimum		1			
4.	Install Built-In Recycling Center				2	
Appliances=Total 11			5		2	4
H. Insulation						
1.	Install Insulation with 75% Recycled Content					
	a. Walls and/or Floors				1	
	b. Ceilings				1	
2.	Install Insulation that is Low-Emitting (Certified Section 01350)					
	a. Walls and/or Floors			1		
	b. Ceilings			1		
3.	Pre-Drywall Inspection Shows Quality Installation of Insulation		1			
Insulation=Total 5			1	2	2	
I. Heating, Ventilation & Air Conditioning						
1.	Design and Install HVAC System to ACCA Manual J, D, and S Recommendations		4			
2.	Install Sealed Combustion (Direct Vent) Units in Conditioned Space					
	a. Furnaces			2		
	b. Water Heaters			2		
3.	No Fireplace or Sealed Gas Fireplace with Efficiency Rating not less than 60%			1		
4.	Install ENERGY STAR® Ceiling Fans with CFLs in Living Areas and Bedrooms		1			
5.	Install Ventilation System for Nighttime Cooling					
	a. Whole House Fan		1			
	b. Automatically Controlled Integrated System		2			
	c. Integrated System with Variable Speed Control		3			
6.	Install Air Conditioning with Non-HCFC Refrigerants	1				
7.	Design and Install Effective Ductwork					
	a. Install HVAC Unit and Ductwork within Conditioned Space		3			
	b. Use Duct Mastic on All Duct Joints and Seams		1			
	c. Install Ductwork under Attic Insulation (Buried Ducts)		1			
	d. Pressure Balance the Ductwork System for Master Bedroom		1			
	e. Protect Ducts during Construction and Clean all Ducts before Occupancy			1		
8.	Install High Efficiency HVAC Filter (MERV 6+)			1		
9.	Install Zoned, Hydronic Radiant Heating with Slab Edge Insulation		1	1		
10.	Install Mechanical Ventilation System					
	a. Any Whole House Ventilation System That Meets ASHRAE 62.2		1	2		
	b. Install ENERGY STAR® Bathroom Fan			1		
	c. All Bathroom Fans Are on Timer or Humidistat			1		
11.	Use Low-Sone Range Hood Vented to the Outside			1		
12.	Install Carbon Monoxide Alarm(s)			1		
HVAC=Total 34		1	19	14		
J. Building Performance						
1.	Design and Build High Performance Homes (2 pts each 1% energy efficiency above T-24)		30			
2.	House Obtains ENERGY STAR® with Indoor Air Package Certification			5	2	
3.	Inspection and Diagnostic Evaluations					
	a. Third Party Energy and Green Building Review of Home Plans		1	1	1	
	b. Blower Door Test Performed		1			
	c. House Passes Combustion Safety Backdraft Test			1		
Building Performance=Total 42			32	7	3	

POINTS PER CATEGORY		Community	Energy	IAQ/Health	Resources	Water
K. Renewable Energy						
1.	Pre-Plumb for Solar Hot Water Heating		4			
2.	Install Solar Water Heating System		10			
3.	Install Wiring Conduit for Future Photovoltaic (PV) Installation and Provide 200 square feet of South-facing Roof		2			
4.	Install Photovoltaic (PV) Panels (1.2kw - 6 pts; 2.4kw - 12 pts; 3.6kw - 18 pts)		18			
Renewable Energy=Total 34			34			
L. Finishes						
1.	Provide Permanent Walk-Off Mats and Shoe Storage at Home Entrances			1		
2.	Use Low/No-VOC Paint					
	a. Low-VOC Interior Wall/Ceiling Paints (<50gpl VOCs - Flat; <150gpl VOCs - Non-Flat)			1		
	b. Zero-VOC Interior Wall/Ceiling Paints (<5gpl VOCs - Flat)			3		
3.	Use Low VOC, Water-Based Wood Finishes (<150gpl VOCs)			2		
4.	Use Low-VOC Construction Adhesives (<70gpl VOCs) for All Adhesives			2		
5.	Use Recycled-Content Paint				1	
6.	Use Environmentally Preferable Materials for Interior Finish:					
	A) FSC-Certified Wood, B) Reclaimed Lumber, C) Rapidly Renewable					
	D) Recycled-Content or E) Finger-Jointed					
	a. Cabinets (50% Minimum)				1	
	b. Interior Trim (50% Minimum)				1	
	c. Shelving (50% Minimum)				1	
	d. Doors (50% Minimum)				1	
	e. Countertops (50% Minimum)				1	
7.	Reduce Formaldehyde in Interior Finish (Section 01350)					
	a. Subfloor (50% Minimum)			1		
	b. Cabinets (50% Minimum)			1		
	c. Interior Trim (50% Minimum)			1		
	d. Shelving (50% Minimum)			1		
8.	After Installation of Finishes, Test of Indoor Air Shows Formaldehyde Level <27ppb			3		
Finishes=Total 22			16	6		
M. Flooring						
1.	Use Environmentally Preferable Flooring: A) FSC-Certified or Reclaimed Wood, B) Rapidly Renewable Flooring Materials (Cork, Linoleum, Bamboo, Natural Fiber Carpet), C) Recycled-Content Ceramic Tiles, D) Exposed Concrete as Finished Floor or E) Recycled-Content Carpet					
	15% of Floor Area				1	
	30% of Floor Area				1	
	50% of Floor Area				1	
	75% of Floor Area				1	
2.	Floors Provide Thermal Mass: Use Tile or Concrete for Floors		1			
3.	Flooring Meets Section 01350 or CRI Green Label Plus requirements (50% Min.)			2		
Flooring=Total 7			1	2	4	
N. Other						
These points are given for innovative approaches or local priorities not listed above. Points will be evaluated and awarded by the municipality where project is located						
1.	Incorporate Green Points Checklist in Blueprints	Pre				
2.	Develop Homeowner Manual of Green Features/Benefits		1	1		1
3.	Community Design Measures and Local Priorities: Maximum of 20 points.	20				
4.	Innovation: List innovative measures that meet the green building objectives of the Guidelines. Maximum of 20 points total.	20				
Other=Total 43		20	1	1		1
		Community	Energy	IAQ/Health	Resources	Water
Total Available Points		24	107	45	64	31
Points Required from Specific Categories		-	11	5	6	3
Additional Points from Any Category						25
MINIMUM POINTS REQUIRED						50