

# LEED for Homes

May 7, 08'



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Sonoran LEED for Homes

[www.USGBC.org/LEED/Homes](http://www.USGBC.org/LEED/Homes)



# Overview

1. Intro to USGBC and LEED
2. LEED for Homes Rating System
3. Delivery System
4. Cost of LEED Homes
5. Recent Projects



# Intro to USGBC and LEED



# LEED Rating Systems

## Consensus-Based Standards

**COMMERCIAL INTERIORS**

**CORE AND SHELL**

**NEW CONSTRUCTION**

**SCHOOLS**

**EXISTING BUILDINGS**



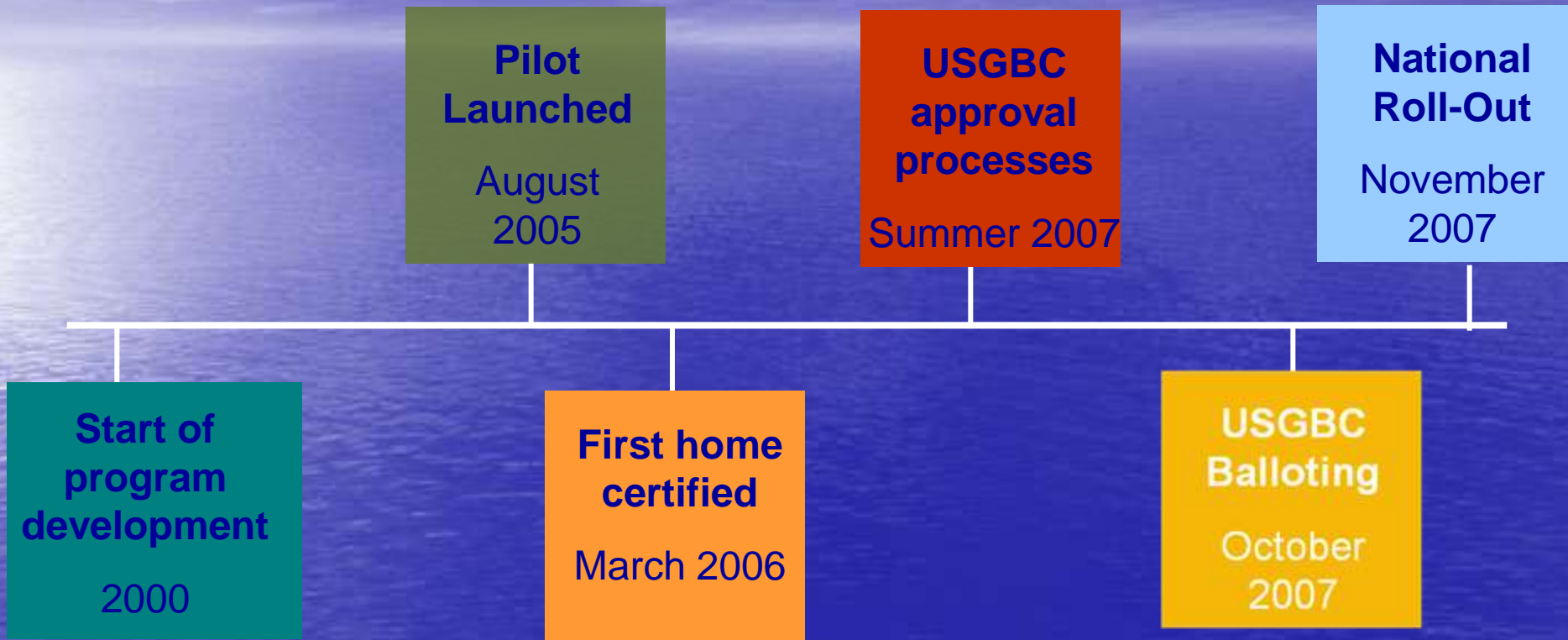
BUILDING LIFECYCLE

DESIGN

CONSTRUCTION

OPERATIONS

# LEED for Homes Timeline



# Program Status

**30** Certification Providers

**490** Registered Builders

**12,000** Registered Homes

**600** Certified Homes



# Rating System



# Rating System

[www.usgbc.org/leed/homes](http://www.usgbc.org/leed/homes)

Project Checklist		LEED for Homes	
		Builder Name: _____	
		Home Address (Street/City/State): _____	
<b>Input Values:</b>		<b>Minimum No. of Points Required:</b>	
No of Bedrooms: <input type="text" value="4"/>	Floor Area (SF): <input type="text" value="2400"/>	Certified: <input type="text" value="45"/>	Silver: <input type="text" value="60"/>
		Gold: <input type="text" value="75"/>	Platinum: <input type="text" value="90"/>
Detailed information on the measures below are provided in the companion document "LEED for Homes Rating System"			
			<b>Max Points Available</b>
<b>Innovation and Design Process (ID)</b> (Minimum of 0 ID Points Required)			<b>9</b>
1.1	Integrated Project Planning	Preliminary Rating Integrated Project Team Design Charrette	Prerequisite 1 1
1.2			4
1.3			2
2.1	Quality Management for Durability	Durability Planning: (Pre-Construction) Wet Room Measures Quality Management	Prerequisite Prerequisite Prerequisite
2.2			4
2.3			2
2.4			2
3.1	Innovative / Regio		5
3.2			
3.3			
3.4			
Sub-Total			0
<b>Location and Links</b>			
1	LEED-ND Neighbc		
2	Site Selection		
3.1	Preferred Location		
3.2			
3.3			
4	Infrastructure		
5.1	Community Resou		
5.2	& Public Transit		
5.3			
6	Access to Open S		
Sub-Total			0
<b>Sustainable Sites</b>			
1.1	Site Stewardship		
1.2			
2.1	Landscaping		
2.2			
2.3			
2.4			
3	Shading of Hardscapes	Locate and Plant Trees to Shade Hardscapes	1
4.1	Surface Water Management	Design Permeable Site	4
4.2		Design and Install Permanent Erosion Controls	2
5	Non-Toxic Pest Control	Select Insect and Pest Control Alternatives from List	2
6.1	Compact Development	Average Housing Density ≥ Units / Acre	LL1 2
6.2		OR Average Housing Density ≥ 10 Units / Acre	LL1 3
6.3		OR Average Housing Density ≥ 20 Units / Acre	LL1 4
Sub-Total			4
<b>Water Efficiency (WE)</b> (Minimum of 3 WE Points Required)			<b>15</b>
1.1	Water Reuse	Rainwater Harvesting System	4
1.2		Grey Water Re-Use System	1
2.1	Irrigation System	Select High Efficiency Measures from List	3
2.2		Third Party Verification	1
2.3		OR Install Landscape Designed by Licensed or Certified Professional	WE 2.2 4
3.1	Indoor Water Use	High Efficiency Fixtures (Toilets, Showers, and Faucets)	3
3.2		OR Very High Efficiency Fixtures (Toilets, Showers, and Faucets)	WE 3.1 6
Sub-Total			108

## Simple

- ❖ 2 pages
- ❖ 136 points
- ❖ Entry level = 45 pts.



# Applicable Building Types

Single Family



Market Rate &  
Affordable

Multi-Family



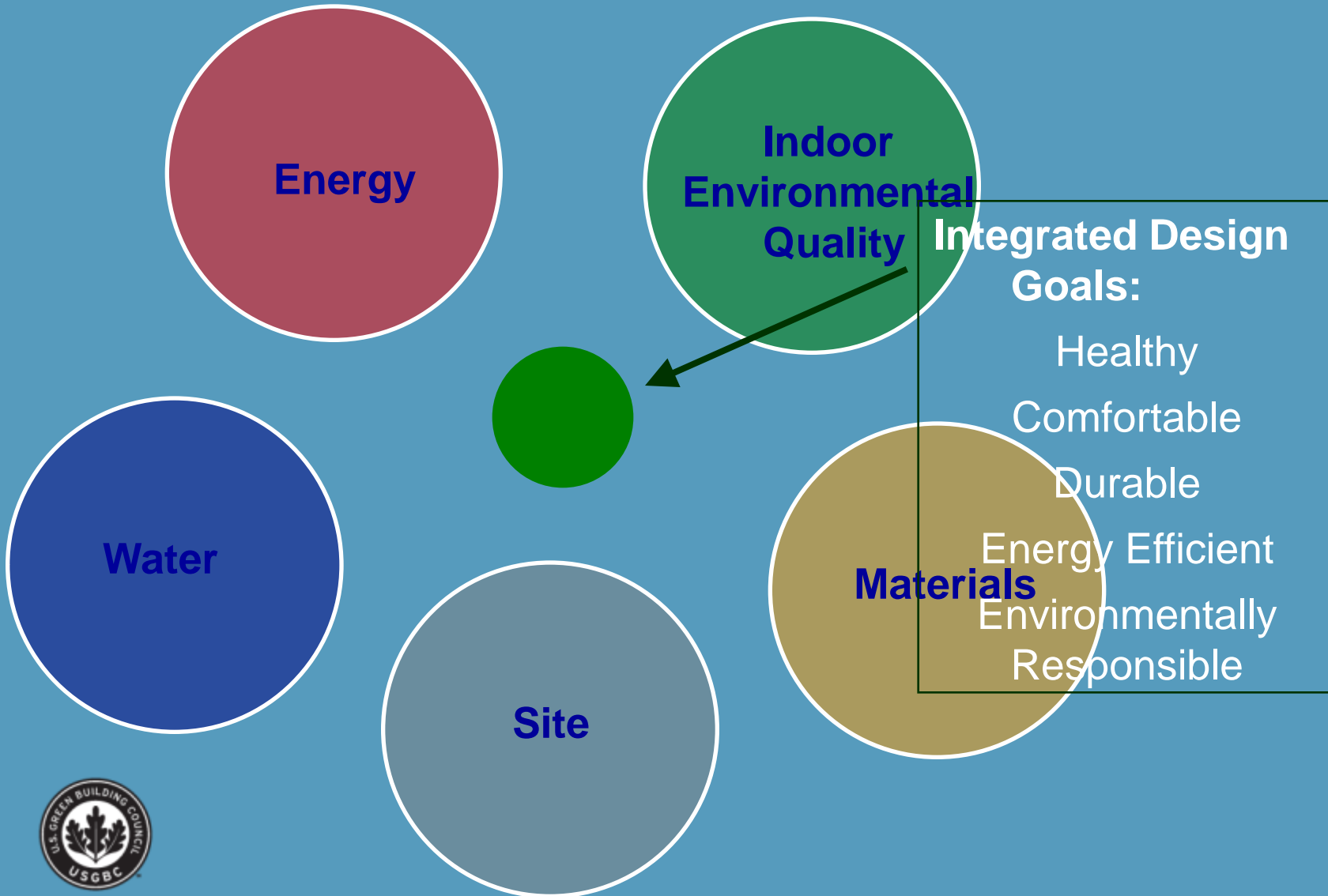
Up to 3 Stories  
and Mid Rise

Gut Rehab



Strip to Studs  
on One Side

# What is a Green Home?



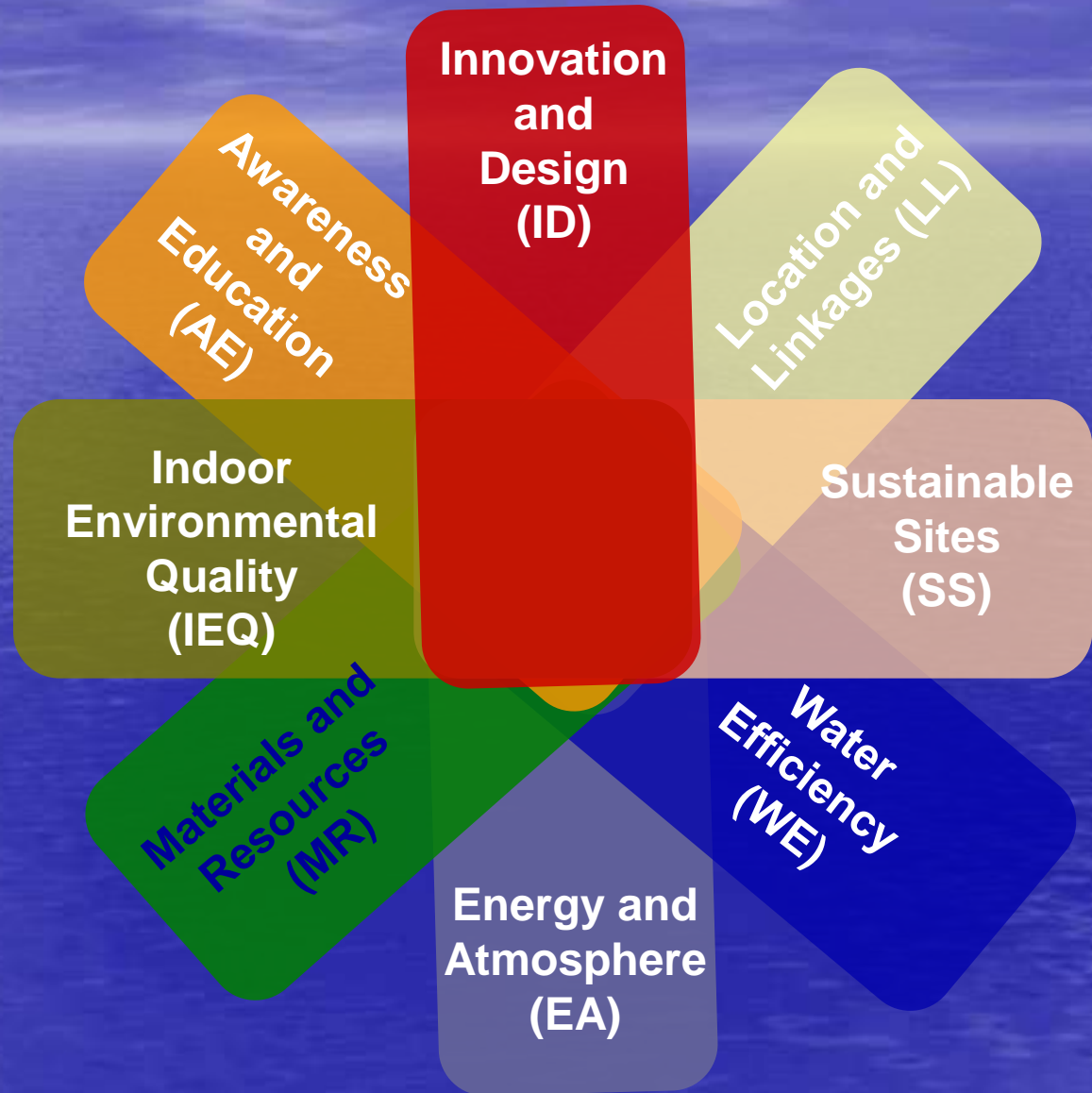
# 4 Levels of LEED Certification

Varying Performance Levels



# Credit Categories

*Resources  
To Use  
Wisely*



# Mandatory Measures

ENERGY STAR Labeled Home

Health and Safety Measures

Combustion Venting

Controlled Ventilation

Durability Plan

Waste Management Plan

Site Protections

Owner's Manual





# LEED Homes & Integrated Design

DHW (showers, appliances)  
Moist air flow in walls  
Ice damming

Built tight, ventilate right  
CO safety  
Supply air distribution



Landscaping  
Rainwater harvesting

Advanced framing

Low emission materials

Exterior rainfall management  
Pest, termite control  
Construction waste



# LEED for Homes Alliances

## Local and Regional Programs



# Roadmap



ENVIRONMENTS FOR **Living**



# Delivery System



**Step 1: Application/Orientation**

- Provider Certification Orientation
- LEED for Homes Certification/Process Matrix
- LEED for Homes Rating Manual/Online Checklists
- Durability & Accountability Forms
- Digital Documentation Binder
- Home Energy Rating System (HERS) Modeling Template
- USGBC-Online Registration Fees & Registration Form

**Step 2: Design & Plan Review**

- LEED Project Checklist Review
- Pre-Construction Documents & Design Drawings
- Certification Prerequisites and Credit Verification
- Home Energy Rating System (HERS) Modeling
- Provider Design & Plan Review Fee (2 hrs.)

**Step 3: Preliminary Rating**

**25% Retainer Fee**

- Submit Completed Expanded Checklist
- Sonoran LEED for Homes LLC Agreement
- HERS (Framing/Duct Leakage/Insulation/Thermal Bypass Checklist)

**Step 4: Documentation & Verification**

**50% Retainer Fee**

- HERS (Envelope Leakage)
- Digital/Print Documentation Binder
- Green Rater /Digital Photo Verification

**Step 5: Certification**

**Balance Due**

- HERS Index/Energy Star Certification
- Finalize Expanded Checklist/Durability/Accountability Forms
- USGBC-Project Certification Audit

**Step 6: USGBC Certificate**

# Cost of LEED for Homes

- Learning Curve Costs
- Design and Construction Costs
- Certification Costs



# Learning Curve Costs

## Types of Consulting Support

- Design Assistance Variable
- Consulting Variable
- Training Variable

## Depends on:

- Prior Experience in Green Home Building
- Experience with LEED for Homes
- Complexity of Project



# Verification Costs

## Provider Fees

### Ask Your Local Provider

- Design Review 4-8 hours
- Verification 8-16 hours
- With Sampling 2-4 hours



# Certification Costs - USGBC Fees

(Subsidies Available for Affordable Homes)

Type of Project		Registration	Certification
Single Family	Member	\$150	\$250
	Non-Member	\$250	\$350

# Recent Projects



Green Home



Georgia  
@ LEED Gold



New Orleans  
@ LEED Platinum



Los Angeles  
33 Homes @ LEED Gold



# How to Get Started (5 Things That You Can Do Today)

1. Establish clear goals
2. Learn more about green home building
3. Find a LEED for Homes Provider
4. Develop a network of colleagues / project team
5. Perform a preliminary rating



# List of Providers

[www.usgbc.org/leed/homes](http://www.usgbc.org/leed/homes)



# Summary

## LEED Homes:

- Are healthy, comfortable, durable...
- Use an integrated design process
- Offer market differentiation
- Are affordable

### LEED® Facts

Mosier Townhomes  
Mosier, OR

LEED for Homes Pilot Program  
Certified on: April 24, 2007

Silver 51

Locations & Linkages	8
Sustainable Sites	10
Water Efficiency	6
Energy & Atmosphere	19
Materials & Resources	6
Indoor Environmental Quality	2
Innovation & Design	0
Awareness & Education	0

# LEED for Homes Contacts

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[www.regreenprogram.org](http://www.regreenprogram.org)  
[www.greenbuild365.org](http://www.greenbuild365.org)



