

# GreenStar Homes Certification Workbook update

**Filter Measures By:**

Worksheet Status:  None Selected  Yes  Proposed  No  N/A

Has points in

Energy  Health  Land  Materials  Water

Show Prerequisite  Hide Prerequisite

Clear

Points: Total Level

Min Required:	266	109	110	162	58	60
Proposed:	0	0	0	0	0	0
Yes:	0	0	0	0	6	6 None
Verified:	0	0	0	0	0	0 None
Eligible Pillars:						

+ Maximize All    - Minimize All

▼ Click the top or bottom of sections to expand or collapse them ▼

1. Overall Requirements
2. Preconstruction Design Strategies
3. Site & Landscape
4. Improve Existing Floor, Wall, and Roof
5. New Floor, Wall, and Roof
6. Mechanical
7. Electrical
8. Water - Plumbing, Systems & Fixtures
9. Finish Materials & Coatings
10. Waste Management
11. Education
12. Innovation

# Presenter

Brett Little  
Executive Director  
GreenHome Institute





# EMPOWERING PEOPLE

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To make healthier and more sustainable choices in the renovation and construction of the places we live

Over 20,000 educated  
Nearly 8,000 certified homes  
501 C3 Non Profit  
[Greenhomeinstitute.org](http://Greenhomeinstitute.org)

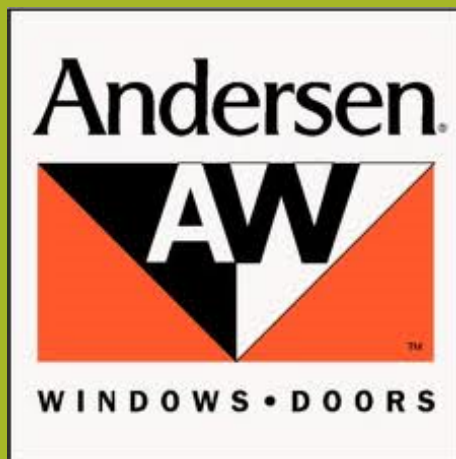
# WE COULDN'T DO IT WITHOUT YOU!

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Nearly 100 members

Dozens of volunteers

Board of Directors + Partners



# Do you support greener homes?

- Support our mission
- GreenStar Homes - Registration Discount
- [Greenhomeinstitute.org](http://Greenhomeinstitute.org) / becomeamember



# Summary of changes

- 1. New construction home size adjuster removed
- 2. Home size credited expanded
- 3. No changes to square feet credit removed
- 4. Numbering is fixed!
- 5. Updates made to drought tolerant / adaptive or native plants
- 6. WaterSense water budget tool for outdoor water performance added.
- 7. GreenStar Qualification requirement education opportunity.

**GET QUALIFIED**

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# Get qualified or renew qualification

- [Greenhomeinstitute.org/greenstar](http://Greenhomeinstitute.org/greenstar)
- Basics of Residential Green (Re) Building
- Introduction to the GreenStar Homes Certification
- On demand - Open note Quiz
- Take it as many times as you like
- GSHqualified = 75% through end of summer
- 1<sup>st</sup> steps to becoming a GreenHome Associate



# The Basics of Residential Green (Re)Building



When it comes to building new homes, remodeling, additions or developing multifamily housing, it's important to incorporate green strategies to stay competitive.

These measures can save your clients money, improve resale value and give you more of a competitive edge in the market. In this 8 part series, we will cover the basics of the five pillars of Green Building: Energy, Health, Water, Materials and Place along with some of the different green certification systems that can help guide your decisions and give you a marketing tool to tell your story. We will also introduce the concepts of financing and fund green projects and how to further your education or professional credentials to set yourself apart as a better professional.

Integrating sustainability into your practice, whether an individual, small business or major corporation is key to thriving in this market where the green building will be \$200 billion industry by 2018.

Completion of this course is a step to [becoming greenstar qualified](#)

## Lessons Learned

How to articulate the 5 pillars of green building and holistic construction practices

Know where to get more resources to expand knowledge in each of these areas

Reiterate the benefits of certification standards and labels

How to take the first steps to make your client's projects greener & better

## Continuing Education Units (CEUS)

3 Hours In

- GBCI
- AIA(HSW)
- CGP (NARI/NAHB)
- AIBD
- Certified GreenHome Professional (CGHP)
- State contractor or designer license may apply

This course is a mandatory [GreenHome Associates Training Course](#)



[greenhomeinstitute.org/portfolio-item/basics-residential-green-rebuilding/](http://greenhomeinstitute.org/portfolio-item/basics-residential-green-rebuilding/)

Free to Watch

Certificate Costs \$100.00  
GHI Members: Free

Access exam and pay at  
Construction-Ed.com

Module 1 - Course  
Introduction



Module 2 - Energy



Module 3 - Health



Module 4 - Materials



Module 5 - Water



Module 6 - Place



Module 7 - Certifications  
& Labels



Module 8 - Value |  
Financing | Education &  
Credentials



[greenhomeinstitute.org/portfolio-item/basics-residential-green-rebuilding/](http://greenhomeinstitute.org/portfolio-item/basics-residential-green-rebuilding/)

# Introduction to GreenStar Homes Certification



Formerly the MNGreenStar Program, [GreenStar Homes Certification](#) is your one-stop shop for renovations, additions and/or new construction projects on single family and multifamily homes.

## In this course we cover

- How to access and navigate the free user manual and online checklist.
- The program process and costs.
- How to become GreenStar Qualified and GreenHome Professional.
- Where to find a GreenStar Rater.
- Basic prerequisites and overall opportunities in the 5 key categories of green across the 7 systems of a home.
- Quick comparison to other programs like LEED, Energy Star and NGBS

## Lessons Learned

1. How to access and navigate the free user manual and online checklist
2. The program process and costs
3. How to become GreenStar Qualified and GreenHome Professional
4. Where to find a GreenStar Rater
5. Basic prerequisites and overall opportunities in the 5 key categories of green across the 7 systems of a home
6. Quick comparison to other programs like LEED, Energy Star and NGBS

## Continuing Education Units (CEUS)

### 1 Hour in

- AIA(HSW)
- GBCI
- GCP (Nari + NAHB)
- AIBD
- State Design/Contractor License may apply
- Certified GreenHome Professional (CGHP)

## Online construction courses for skilled trades.

Watch online courses published by real pros in the industry.

Browse All Courses

Or search by keyword (ex. "business management" or "foreman training")

Search courses by

<https://www.construct-ed.com/>

SEARCH

Search online construction courses and construction classes by subject:



Management



Design



Equipment



Estimating & bidding



Financial



Green building



Leadership



Marketing & sales



Safety



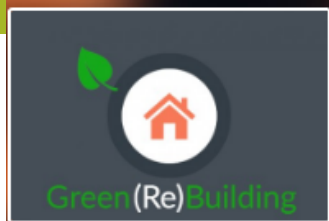
Technology



Trade skills



Featured courses



GREEN BUILDING

\$100.00

## Basics of Residential Green (Re)Building

★★★★★ (0 REVIEWS)

STUDENTS

TAKE COURSE

# GSHqualified = \$25.00

HOME CURRICULUM MEMBERS



Greenhomeinst

\$100.00

UNLIMITED ACCESS

BUILDING / REMODELING

COURSE CERTIFICATE



STUDENTS ENROLLED

### Learn the Basics of Residential Green (Re)Building

When it comes to building new homes, remodeling, additions or developing multifamily housing, it's important to incorporate green strategies to stay competitive.

These measures can save your clients money, improve resale value and give you more of a competitive edge in the market. In this 8 part series, we will cover the basics of the five pillars of Green Building: Energy, Health, Water, Materials and Place along with some of the different green certification systems that can help guide your decisions and give you a marketing tool to tell your story. We will also introduce the concepts of financing and fund green projects and how to further your education or professional credentials to set yourself apart as a better professional.

Integrating sustainability into your practice, whether an individual, small business or major corporation is key to thriving in this market where the green building will be \$200 billion industry by 2018.



**Instructor:** GreenHome Institute



**CEUs:**

- GBCI (LEED H Specific) (3 hr)
- AIA (HSW) (3 hr)
- NARI GREEN (3 hr)
- GCP (3 hr)



**You'll learn:**

- How to articulate the 5 pillars of green building and holistic construction practices
- Know where to get more resources to expand knowledge in each of these areas
- Reiterate the benefits of certification standards and labels
- How to take the first steps to make your client's projects greener & better



**Resources included:**

- Handouts



**Time:** 2 hrs 30 min.



**Quiz included**



**Language:** English

<https://www.construct-ed.com/>

# How else can I qualify

## Live

- Webinars this fall
- In person course 4 - 8 course
- Contact [Brett.Little@greenhomeinstitute.org](mailto:Brett.Little@greenhomeinstitute.org) if you want a live session
- **Busy professional tracks**

Have a project ready to go? Complete a team design meeting with GHI staff or qualified greenstar rater and get on the job qualification training

Please complete this form to start the process of becoming a GreenStar Qualified Professional

## GreenStar Qualified Professional Application

Name \*

First

Last

Email \*

Enter Email

Confirm Email

Phone \*

Profession \*

Company

Company Position

If relevant to qualification

Address \*

How do you plan to get qualified \*

- On demand webinar series
- In person education or online live webinar
- Host a preliminary plan meeting
- Unsure - Help me!

Street Address

Submit

Address Line 2

City

State / Province / Region

ZIP / Postal Code

Country

Put company address if this is for professional

Profession \*

[greenhomeinstitute.org/qualification-application-greenstar-homes-certification/](https://greenhomeinstitute.org/qualification-application-greenstar-homes-certification/)

# WORKBOOK UPDATES











































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# 1. Overall Requirements

## 1.1 Prerequisites

Yes/Proposed/No

	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	 1.1.1 <b>Project Type &amp; Certification Level</b> Start here first	New Construction - Bronze
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.2 <b>Register project with GreenHome Institute</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.3 <b>Qualified project team leader</b> Become qualified or work with someone who is	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.4 <b>Obtain all required permits &amp; follow all required local and state bldg codes</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.5 <b>Create or submit a waste management plan</b> Waste slips are also accepted instead	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.6 <b>Pass Fresh Air Supply (FAS) and Worst Case Combustion Spillage (WCCS) tests at end of the project.</b> Include any fireplace in WCCS	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.7 <b>Minimum of one carbon monoxide alarm installed within ten (10) feet of each bedroom.</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.8 <b>Perform radon test in lowest possible habitable space. Mitigate if necessary.</b> Remodel only	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.9 <b>Use Integrated Pest Management (IPM) methods to minimize pest entry.</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.10 <b>No intentional use of imported Forest Products on the "Controlled Imports List" unless FSC Certified.</b> All Products from Canada are allowed without FSC Certification.	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.11 <b>All new connecting doors between living space and attached garage must be gasketed or made substantially air-tight with weather stripping and an automatic closer</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.12 <b>Any new installation of salvaged doors or windows in an exterior application must be weather stripped, or air sealed with appropriate gasket.</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.13 <b>New structural plywood &amp; OSB must conform to PS1 and PS2 standards.</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.14 <b>No mercury thermostats (remove/replace if pre-existing, dispose of properly)</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.15 <b>No power roof vents unless adequate air inlets exist.</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.16 <b>All insulation used must be formaldehyde free</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.19 <b>Seal all ducts and air handlers to prevent contamination during construction</b> Cleaning ducts is acceptable as well.	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.21 <b>No construction debris shall be discarded and closed inside any wall assembly</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.22 <b>Educate the homeowner about how to "operate" their home</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.23 <b>Provide homeowner with a user's manual covering house maintenance and green features of home.</b>	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> N/A	 1.1.24 <b>Homeowner to sign utility release waiver</b> Provide pre and post utility data.	

# 1. Overall Requirements

## 1.1 Prerequisites

Yes/Proposed/No		Points:
	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <b>?</b> 1.1.1 <b>Project Type &amp; Certification Level</b> Start here first	New Construction - Bronze
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.2 <b>Register project with GreenHome Institute</b>	Project Types & Certification Levels
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.3 <b>Qualified project team leader</b> Become qualified or work with someone who is	Addition - Gold
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.4 <b>Obtain all required permits &amp; follow all required local and state bldg codes</b>	Addition - Silver
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.5 <b>Create or submit a waste management plan</b> Waste slips are also accepted instead	Addition - Bronze
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.6 <b>Pass Fresh Air Supply (FAS) and Worst Case Combustion Spillage (WCCS) tests at end of the project.</b> Include any fireplace in WCCS	Add Conditioned Space Exterior - Gold
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.7 <b>Minimum of one carbon monoxide alarm installed within ten (10) feet of each bedroom.</b>	Add Conditioned Space Exterior - Silver
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.8 <b>Perform radon test in lowest possible habitable space. Mitigate if necessary.</b> Remodel only	Add Conditioned Space Exterior - Bronze
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.9 <b>Use Integrated Pest Management (IPM) methods to minimize pest entry.</b>	Add Conditioned Space Interior - Gold
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.10 <b>No intentional use of imported Forest Products on the "Controlled Imports List" unless FSC Certified.</b> All Products from Canada are allowed without FSC Certification.	Add Conditioned Space Interior - Silver
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.11 <b>All new connecting doors between living space and attached garage must be gasketed or made substantially air-tight with weather stripping and an automatic closer</b>	Add Conditioned Space Interior - Bronze
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.12 <b>Any new installation of salvaged doors or windows in an exterior application must be weather stripped, or air sealed with appropriate gasket.</b>	Remodel - Gold
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.13 <b>New structural plywood &amp; OSB must conform to PS1 and PS2 standards.</b>	Remodel - Silver
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.14 <b>No mercury thermostats (remove/replace if pre-existing, dispose of properly)</b>	Remodel - Bronze
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.15 <b>No power roof vents unless adequate air inlets exist.</b>	<b>New Construction - Bronze</b>
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.16 <b>All insulation used must be formaldehyde free</b>	New Construction - Silver
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.19 <b>Seal all ducts and air handlers to prevent contamination during construction</b> Cleaning ducts is acceptable as well.	New Construction - Gold
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	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.22 <b>Educate the homeowner about how to "operate" their home</b>	
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.23 <b>Provide homeowner with a user's manual covering house maintenance and green features of home.</b>	
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <b>N/A</b> <b>?</b> 1.1.24 <b>Homeowner to sign utility release waiver</b> Provide pre and post utility data.	

## 2. Preconstruction Design Strategies

### 2.1 Integrated & Trained Project Team

Yes/Proposed/No		Points:
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.1.1 Trained Project Team. Unique trade team member(s) have GreenStar status of "Qualified" or higher.</b> Not counting mandatory qualified team member	4 to 7 Qualif
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.1.2 Create multi-disciplinary project team, including homeowner, contractor and all subcontractors and include each in design and pre-construction meetings.</b>	
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.1.4 Hire a credentialed HVAC contractor</b>	
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.1.6 GreenHome Designated Professional as team leader</b>	
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.1.7 Complete preconstruction plan review</b> Do before construction	

### 2.2 Design

Yes/Proposed/No		Points:
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.2.1 Energy Model + Post Construction Testing</b> Calculate Energy Use Intensity (EUI) through approved model and post construction testing	9
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.2.2 Water performance modeling + testing</b> Predict water usage & costs	
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.2.2 Home Size</b> after construction or renovation	1000 - 1499 square feet
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.2.3 Document all existing conditions, equipment and assemblies in house.</b> Remodel only	1000 - 1499 square feet 1749-1500 square feet 1999-1750 square feet 2249-2000 square feet 2500-2250 square feet
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.2.4 Contract with a GreenStar approved Rater for a pre-design, whole home inspection.</b>	750 - 999 square feet
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.2.5 Estimate carbon emissions of operating the home</b>	< 750 square feet
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.2.6 Accessibility &amp; Universal Design</b> Utilize zerostep guidance	
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.2.7 Allocate space in the home as a disaster protection area</b>	
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.2.8 Passive solar heating design package (includes orientation, south glazing/floor area ratio orientation specific low-e tuning, summer shading and thermal mass design</b>	
<input type="radio"/> <input type="radio"/> <input type="radio"/>	<b>2.2.9 Passive cooling design package (including orientation, summer shading, thermal mass, attic ventilation, additional ceiling fans, heat recovery ventilation and natural ventilation design)</b>	

## 1. Overall Requirements

## 2. Preconstruction Design Strategies

## 3. Site & Landscape

## 4. Improve Existing Floor, Wall, and Roof

## 5. New Floor, Wall, and Roof

## 6. Mechanical

## 7. Electrical

## 8. Water - Plumbing, Systems & Fixtures

## 9. Finish Materials & Coatings

## 10. Waste Management

## 11. Education

## 12. Innovation

### 3. Site & Landscape

#### 3.1 Prerequisites

Yes/Proposed/No

- |                          |                          |                          |     |                          |   |
|--------------------------|--------------------------|--------------------------|-----|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | N/A | <input type="checkbox"/> | 3.1.1 No invasive species are planted                               |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | N/A | <input type="checkbox"/> | 3.1.2 No cypress mulch  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | N/A | <input type="checkbox"/> | 3.1.3 No railroad ties or other landscape materials that contain cr |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | N/A | <input type="checkbox"/> | 3.1.4 Following construction completion, no part of the disturbed : |

#### 3.2 Soil and Permeability

Yes/Proposed/No

- |                          |                          |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3.2.1 Soil tested and amended to achieve optimal nutrient level ar |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3.2.2 No impervious surfaces constructed outside existing building |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3.2.3 Total site has XX% permeable surface. Select one:            |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3.2.4 Permeability of the total site is increased by XX%           |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3.2.5 Keep excavated soils on site.                                |

#### 3.3 Planting/Trees

Yes/Proposed/No

- |                          |                          |                          |                                     |                          |   |
|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | 3.3.1 Natural features on site (trees, prairie and wet lands, tundra project type or scope. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | 3.3.2 50% or more of the lot contains plants or trees other than tu                         |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | 3.3.3 No Heritage trees removed   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.3.4 New plantings are compatible with soil type   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.3.4 Native / Drought Tolerant and/or Adaptive Plants Installed or                         |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | 3.3.5 Live trees from site are replanted or donated   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | 3.3.7 Restore damaged ecosystem (i.e. restore existing prairie or v species, etc)           |

# 3.3 Planting/Trees

Trees

Used/No

?	3.3.1 Natural features on site (trees, prairie and wet lands, tundra and ecosystems) are protected during construction, regardless of project type or scope.							
?	3.3.2 50% or more of the lot contains plants or trees other than turf							
?	3.3.3 No Heritage trees removed							
?	3.3.4 New plantings are compatible with soil type							
?	3.3.4 Native / Drought Tolerant and/or Adaptive Plants installed or existing	90%	0	0	3	0	6	
?	3.3.5 Live trees from site are replanted or donated	40%	0	0	2	0	0	
?	3.3.7 Restore damaged ecosystem (I.e. restore existing prairie or wet lands, establish wildlife habitat, remove extensive invasive plant species, etc)	90%	0	0	5	0	0	
?	3.3.8 Participate in a wildlife conservation program	30%	0	0	1	1	0	

Proposed:	0	0	0	0	0
Yes:	78	59	59	97	
Verified:	0	0	0	0	
Eligible Pillars:	✖	✖	✖	✖	
+ Maximize All					-



## STEP 1 Location and Area

## STEP 2 Plants and Irrigation

## STEP 3 The Results

Congratulations on choosing to design a locally appropriate water-efficient landscape! The WaterSense water budget tool will help you determine if your landscape meets EPA's criteria for efficient outdoor water use in your area.

In order to use the water budget tool, you will need to know some basic information about your landscape:

- The location and zip code
- The total area of applicable landscape
- Types of plants and the total coverage
- Methods of irrigation (if any)

Your landscape will receive a pass/fail based on local climate, plant selection, irrigation methods, and size of the landscape. Follow the instructions on screen to find out if your landscape meets the WaterSense criteria.

For what purpose is the tool being used?  
What are you landscaping?

Other

GreenStar Homes

How many sites?

Development of Multiple Landscapes

Single Site

Is there an irrigation system?

Yes

No

Enter Zip Code

49506

Enter Landscaped Area  
for a Single Home or Site<sup>i</sup>

2000

Sq. Ft.

Enter Multi-Home/Development Landscaped Area Range<sup>i</sup>

to

Sq. Ft.

NEXT STEP >

## STEP 1 Location and Area

## STEP 2 Plants and Irrigation

## STEP 3 The Results

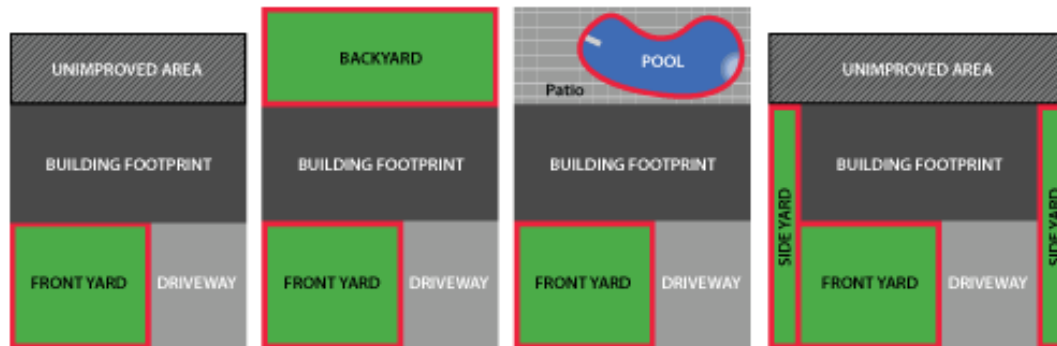
Congratulations on choosing to design a locally appropriate water-efficient landscape! The WaterSense water budget tool will help you determine if your landscape meets EPA's criteria for

For what purpose is the tool being used?  
What are you landscaping?

Other

GreenStar Homes

For a home, the landscaped area includes the front yard, as well as any additional area that is improved upon by features such as turf, water features, irrigation systems, pools or spas, and other permanent vegetation. Hardscaped areas (concrete driveways, walkways, and decks or porches) should be excluded.



Multiple Landscapes

Single Site

irrigation system?

Enter Landscaped Area  
for a Single Home or Site

2000 Sq. Ft.

Development Landscaped Area

to Sq. Ft.

STEP >



## STEP 1 Location and Area

## STEP 2 Plants and Irrigation

## STEP 3 The Results

Fill out the chart below with all the appropriate information to calculate your landscape's water needs.

Zone	Area (sq. ft.)	Plant Type / Landscape Feature	Water Demand	Irrigation Type	Impact on Water Use	Required Water (gal/month)
× 1						
× 2						
× 3						
× 4						
× 5						
× 6						

Total: **0**

+ add zone

**2,000**

Remaining Area (sq. ft.)

**5,288**

Water Allowance (gal/month)

**0**

Total Water Requirement for the Site (gal/month)

**5,288**

Below Allowance (gal/month)

NEXT STEP >

**STEP 1** Location and Area

**STEP 2** Plants and Irrigation

**STEP 3** The Results

Fill out the chart below with all the appropriate information to calculate your landscape's water needs.

Zone	Area (sq. ft.)	Plant Type / Landscape Feature	Water Demand	Irrigation Type	Impact on Water Use	Required Water (gal/month)
× 1	500	Turfgrass	High	Micro Spray	🌧️🌧️🌧️🌧️🌧️🌧️🌧️🌧️	1843
× 2	250	Groundcover				
× 3	250	Nonvegetated Softscape				
× 4	500	Permeable Hardscape				
× 5	250	Pool, Spa, or Water Feature				
× 6	250	Shrubs	NA	NA		0
× 6	250	Trees	NA	NA		0

Total: **1000**

+ add zone

**1,000**  
Remaining Area (sq. ft.)

**5,288**  
Water Allowance (gal/month)

**1,843**  
Total Water Requirement for the Site (gal/month)

**3,445**  
Below Allowance (gal/month)

NEXT STEP >

**STEP 1** Location and Area

**STEP 2** Plants and Irrigation

**STEP 3** The Results

Fill out the chart below with all the appropriate information to calculate your landscape's water needs.

Zone	Area (sq. ft.)	Plant Type / Landscape Feature	Water Demand	Irrigation Type	Impact on Water Use	Required Water (gal/month)
× 1	500	Turfgrass	High	Micro Spray	🌧️🌧️🌧️🌧️🌧️🌧️🌧️🌧️	1843
× 2	250	Trees	Low			
× 3	250	Shrubs	Medium			
× 4	500	Groundcover	High			
× 5	250	Nonvegetated Softscape	NA	NA		0
× 6	250	Permeable Hardscape	NA	NA		0

Total: **1000**

+ add zone

**1,000**

Remaining Area (sq. ft.)

**5,288**

Water Allowance (gal/month)

**1,843**

Total Water Requirement for the Site (gal/month)

**3,445**

Below Allowance (gal/month)

NEXT STEP >

**STEP 1** Location and Area

**STEP 2** Plants and Irrigation

**STEP 3** The Results

Fill out the chart below with all the appropriate information to calculate your landscape's water needs.

Zone	Area (sq. ft.)	Plant Type / Landscape Feature	Water Demand	Irrigation Type	Impact on Water Use	Required Water (gal/month)
× 1	500	Turfgrass	High	Micro Spray	●●●●●●●●	1843
× 2	250	Trees		Drip (Standard)		
× 3	250	Shrubs		Drip (Press Comp)		
× 4	500	Groundcover		Fixed Spray		
× 5	250	Nonvegetated Softscape	NA	Micro Spray		0
× 6	250	Permeable Hardscape	NA	Rotor		0
<b>Total: 1000</b>						
+ add zone						

**1,000**  
Remaining Area (sq. ft.)

**5,288**  
Water Allowance (gal/month)

**1,843**  
Total Water Requirement for the Site (gal/month)

**3,445**  
Below Allowance (gal/month)

NEXT STEP >

**STEP 1** Location and Area

**STEP 2** Plants and Irrigation

**STEP 3** The Results

Fill out the chart below with all the appropriate information to calculate your landscape's water needs.

Zone	Area (sq. ft.)	Plant Type / Landscape Feature	Water Demand	Irrigation Type	Impact on Water Use	Required Water (gal/month)
× 1	500	Turfgrass	High	Micro Spray		1843
× 2	250	Trees	NA	No Irrigation		0
× 3	250	Shrubs	NA	No Irrigation		0
× 4	500	Groundcover	Medium	Drip (Standard)		1034
× 5	250	Nonvegetated Softscape	NA	NA		0
× 6	250	Permeable Hardscape	NA	NA		0

Total: **2000**

+ add zone

**0**

Remaining Area (sq. ft.)

**5,288**

Water Allowance (gal/month)

**2,877**

Total Water Requirement for the Site (gal/month)

**2,411**

Below Allowance (gal/month)

**NEXT STEP >**

STEP 1 Location and Area

STEP 2 Plants and Irrigation

STEP 3 The Results



# Congratulations!

Your designed landscape meets the water budget!

Landscape Water Allowance: **5,288 Gallons/Month**

~~X~~ Landscape Water Requirements: **2,877 Gallons/Month**

Your landscape is **62%** below the baseline for this site

To create a report (PDF), please fill out the form below:

Your Name

Brett Little

Builder Name

GreenStar Builders

Street Address

920 Cherry St Se

City

Grand Rapids

State

MI

Zip Code

49506

Email Address

Brett.Little@greenhomeinstitute.org

Share my contact information with WaterSense

[Legal Notice](#)

CREATE REPORT

**Brett Little** | GreenStar Builders  
920 Cherry St Se Grand Rapids, MI 49506

Your landscape is **62%** below the baseline for this site.

**Single Site or Development?**  
Single Site

**Landscape Water Allowance**  
5288 gal/month

**Landscape Area**  
2000.0 sq.ft

**Landscape Water Requirement**  
2877 gal/month

**Irrigation?**  
Yes

**Potential Peak Watering Savings**  
**2411 gal/month**

**Total Area of Turfgrass, Pools/Spas, and Water Features**  
500 sq. ft




**Summary of Hydrozones**

Zone	Area (sq. ft.)	Plant Type / Landscape Feature	Water Demand	Irrigation Type	Required Water (gal/month)
1	500	Turfgrass	High	Micro Spray	1843
2	250	Trees	NA	No Irrigation	0
3	250	Shrubs	NA	No Irrigation	0
4	500	Groundcover	Medium	Drip (Standard)	1034
5	250	Nonvegetated Softscape	NA	NA	0
6	250	Permeable Hardscape	NA	NA	0

# understanding radon test results

The table below provides recommendations on the **action to take** based on the **type of radon test** you used and the **test results** you received. These recommendations are different than test results during a real estate transaction. To learn more about real estate testing, see page 23 or the MDH "Radon in Real Estate Transactions" publication.

## Only test homes without systems

<b>Initial Short-term Test+</b> 	Less than 2	Consider performing a long-term test.+
	2 to 8	Perform long-term test.+
	Greater than 8	Perform a second short-term test. Contact MDH at 651-201-4601 before buying a second test kit.
<b>Second Short-term Test+</b> 	Less than 4	Perform long-term test.+
	4 or greater	Mitigation* strongly recommended if first test result was also 4 pCi/L or greater.
<b>Long-term Test+</b> 	Less than 2	Retest if major changes made to the home (see page 9 on how often to test).
	2 to less than 4	Consider performing mitigation.*
	4 or greater	Mitigation strongly recommended.*

\* For information on **radon mitigation**, see page 12.

+ For information on **short-term** and **long-term radon tests**, see page 8.

These recommendations assume that the radon tests were conducted properly.

### What are the units of radon?

Picocuries per liter (pCi/L) which is a unit that measures levels of radon/radioactive gas.

### What is the recommended action based on my results?

The Environmental Protection Agency and Minnesota Department of Health set the recommended **action level for radon at 4.0 pCi/L**.



**Above 4 pCi/L** Fix your house \*

**2 pCi/L to 4 pCi/L** Consider fixing your house\*

To apply the recommended action level correctly, the results should be based on the **annual average level of radon** measured in a home. If the annual average **level of radon is above 4 pCi/L**, EPA and MDH recommend that **steps be taken to lower it**. While it isn't possible to reduce radon to zero, the best approach is to lower the radon level as much as possible. Any amount of radon, even at or below the recommended action level, carries some risk.

### How much radon is safe?

There is **no safe level of radon**. Your risk for lung cancer increases with higher levels of radon gas and increased exposure.

The following table estimates your lifetime risk of lung cancer death due to long-term exposure to radon.

Radon Level Annual Average	Lung Cancer Risk for people who Never Smoked	Lung Cancer Risk for people who Smoke
20 pCi/L	36 out of 1,000	260 out of 1,000
10 pCi/L	18 out of 1,000	150 out of 1,000
8 pCi/L	15 out of 1,000	120 out of 1,000
4 pCi/L	7 out of 1,000	62 out of 1,000
2 pCi/L	4 out of 1,000	32 out of 1,000

[www.health.state.mn.us/divs/eh/indoorair/radon/rnbrochure.pdf](http://www.health.state.mn.us/divs/eh/indoorair/radon/rnbrochure.pdf)



# Get connected



[www.facebook.com/groups/GreenStarHome/](http://www.facebook.com/groups/GreenStarHome/)



# Up coming updates

- Water Performance Score
  - Water Efficiency Rating System points
- Dept of Energy Home Energy Score (HES)
  - Points / Perquisite for existing homes
  - Free HES score energy modeling for all registered projects
  - Work to train local raters and integrate with greenstar
- Design for reduced electrical loads update
- New accessibility section will be added
- Submittal & GreenStar Rater Protocol

# Next Steps

- Access workbook
  - <http://50.112.244.1/projects/>
  - Username: Firstname last initial
  - Password:greenstar1
- Create a project
- Get qualified or renew
- Project registration
  - Myfirstgreenstar = 25% of coupon code
  - Through Dec 31<sup>st</sup>



# QUESTIONS?

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616.458.6733

[Greenhomeinstitute.org/greenstar](http://Greenhomeinstitute.org/greenstar)

Workbook - <http://50.112.244.1/projects/>