

This presentation premiered at WaterSmart Innovations

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*Smart practices.
Sustainable solutions.*

A close-up photograph of a vibrant green leaf, likely from a plant, showing detailed vein patterns. Several clear, spherical water droplets are resting on the leaf's surface, reflecting light. This image serves as a background for the lower half of the slide.

Overview EPA Water Budget Tool

Brent Mecham Industry Development Director



www.epa.gov/watersense



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Building a WaterSense Labeled New Home

- [Become a Builder Partner](#)
- [Final Specification for Single-Family New Homes \(PDF\)](#) (15pp, 120K, [About PDF](#))
- [WaterSense Single-Family New Home Specification Supporting Statement](#) (17 pp, 196K, [About PDF](#))
- Using the water Budget Approach for Landscape Design (Option 1 in section 4.1.1 of the specification for new homes)
 - [Water Budget Quick Start Guide \(PDF\)](#) (4pp, 792k, [About PDF](#)) – an easy to use guide for first time users of the tool.
 - [Water Budget Approach \(PDF\)](#) (14pp, 8.5GB, [About PDF](#)) – information on how to use the water budget and how the tool was developed.
 - [WaterSense Landscape Water Budget Tool](#) (xls)
 - [Water Budget Data Finder](#)
- [Resource Manual for Building WaterSense Labeled New Homes \(PDF\)](#) (66pp, 540KB, [About PDF](#))
- Information about having your home [inspected and certifying to the specification](#).
- Find a [licensed certification provider](#) to have your home inspected.



Single Family Home Specification

- Section 1 Scope & Objective
 - Reduce indoor & outdoor water usage
 - Goal 20% reduction than a standard new home
- Section 2 Summary of Criteria
 - Indoor water use
 - Outdoor water use
 - Homeowner education
- Section 3 Indoor Water-Efficiency Criteria
- Section 4 Outdoor Water-Efficiency Criteria



4.0 Outdoor Water-Efficiency Criteria

- Section 4.1 Landscape criteria applies to front yard or all other areas improved by the builder.
 - Permanent vegetation
 - Irrigation systems
 - Pools, spas, water features



4.1 Landscapes

- Option 1 Water budget tool
- Option 2 Turfgrass not too exceed 40%

The tool allows for variety and creativity in the plant materials used and appearance of the landscape.



4.1 Landscape guidelines

- Landscapes less than 1000 square feet are exempt
- Slopes greater than 4:1 must be vegetated
- Exposed soil shall be mulched
- Pools/spas shall have a cover
- Water features must recirculate water and have beneficial use



Definitions

- Front yard – Use local code definitions when available. Otherwise, the front yard means the portion of the lot extending across the full width of the lot between the front lot line and the front walls of the house.



Definitions

- Landscaped area – The designed area of landscape excluding the footprint of the home and permanent hardscape areas such as driveways, sidewalks, and patios. **Septic drainage fields and public right-of-ways should also be excluded from this calculation.**



Definitions

- Microirrigation System - The frequent application of small quantities of water on or below the soil surface as drops, tiny streams, or miniature spray through emitters or applicators placed along a water delivery line. Microirrigation encompasses a number of methods or concepts such as bubbler, drip, trickle, mist, or spray and subsurface irrigation. For purposes of this specification, microirrigation includes **emission devices that have flow rates less than 30 gallons per hour (113.6 liters per hour).**



Water Pressure

- Service Pressure – The **static service pressure** shall be a maximum of **60 pounds per square inch (psi)** (414 kilopascal [kPa]). Use of a pressure-regulating valve (PRV) downstream of the point of connection. All fixture connections shall be downstream of the PRV.
- ***Note: design appropriately***



Definitions

- Slopes – Slopes in excess of 4 feet of horizontal run per 1 foot vertical rise (4:1) shall be vegetated.
- (no sprinkler irrigation allowed)



Definitions

- Mulching – All exposed soil shall be covered with a 2- to 3-inch layer of mulching material-- A permeable arrangement of organic and/or inorganic materials that will help to retain soil moisture, suppress weeds, and allow free movement of oxygen into and out of the soil.



4.2 Irrigation System

- Design and installation – All irrigation systems shall be designed or installed by a WaterSense irrigation partner.



Water Budget Calculator

- Part 1
 - Determine landscape water allowance (LWA)
- Part 2
 - Calculate landscape water requirement (LWR)
- Part 3
 - Results compare LWR to LWA

The Water Budget Tool



WaterSense Single-Family New Home Specification: Water Budget Tool (V 1.01)

This water budget tool shall be used to determine if the designed landscape meets Criteria 4.1.1.1 of the specification. Please refer to the WaterSense Water Budget Approach for additional information.

Your Name:	Brent Mecham
Builder Name:	Quality Builder
Lot Number/Street Address:	123 Example
City, State, Zip Code:	Falls Church, VA 22042
Peak Watering Month:	June
Obtain from Water Budget Data Finder at www.epa.gov/watersense/nhspeccs/wb_data_finder.html	
Is an irrigation system being installed on this site?	yes

This worksheet determines the baseline and the landscape water allowance (LWA) for a site based on its peak watering month.

The baseline is the amount of water required by the site during the peak watering month if watered at 100 percent of reference evapotranspiration (ET_o). The following formula is used to calculate the baseline:

$$Baseline = ET_o \times A \times C_u$$

Where:

ET_o = Local reference evapotranspiration (inches/month)

A = Landscaped area (square feet)

C_u = Conversion factor (0.6233 for results in gallons/month)

The LWA is the water allotment for the site. The following formula is used to calculate the LWA:

$$LWA = 0.70 \times Baseline$$

Where:

LWA = Landscape water allowance (gallons/month)

Baseline = $ET_o \times \text{landscaped area} \times 0.6233$



Landscape Water Allowance

This worksheet determines the baseline and the landscape water allowance (LWA) for a site based on its peak watering month.

The baseline is the amount of water required by the site during the peak watering month if watered at 100 percent of reference evapotranspiration (ET_o). The following formula is used to calculate the baseline:

$$Baseline = ET_o \times A \times C_u$$

Where:

ET_o = Local reference evapotranspiration (inches/month)

A = Landscaped area (square feet)

C_u = Conversion factor (0.6233 for results in gallons/month)

The LWA is the water allotment for the site. The following formula is used to calculate the LWA:

$$LWA = 0.70 \times Baseline$$

Where:

LWA = Landscape water allowance (gallons/month)

Baseline = $ET_o \times \text{landscaped area} \times 0.6233$

LWA = “size of bucket” for landscape water

Water Budget Data Finder

Irrigation professionals using the WaterSense Landscape Water Budget Tool may use the Water Budget Data Finder to determine peak watering month and the appropriate evapotranspiration and rainfall values for a specific United States zip code.

Information presented in the Data Finder comes from the World Water and Climate Atlas, a project of the [International Water Management Institute \(IWMI\)](#) [\[EXIT Disclaimer\]](#). EPA would like to thank IWMI for the use of this data.

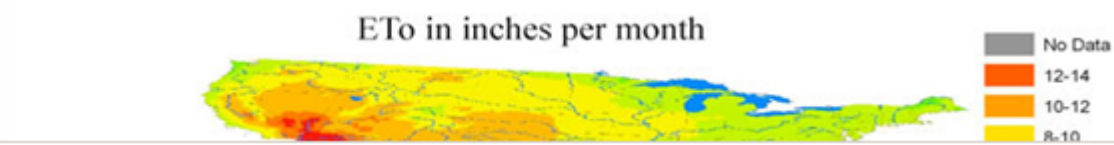
Enter Zip Code:

Peak Month: **Jun**

ETo Value: **6.39** inches/month

Rainfall: **2.91** inches/month

[For more information about the Water Budget Data Finder, visit How the Water Budget Data Finder Works.](#)



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Peak Month

- Month with the largest need for supplemental irrigation (ET – rainfall)
- Automatically determined by data finder

Enter Zip Code:

Peak Month: **Jun**

ETo Value: **6.39** inches/month

Rainfall: **2.91** inches/month

Falls Church, VA



Landscape Water Allowance

To calculate the Baseline and LWA for a site, enter the designed landscaped area and average monthly reference evapotranspiration for the site's peak watering month. (Enter data in white cells only.)

STEP 1A - ENTER THE LANDSCAPED AREA (A)

7,830 Area of the designed landscape (square feet)

STEP 1B - ENTER THE AVERAGE MONTHLY REFERENCE EVAPOTRANSPIRATION (ET_o)

6.39 Average monthly reference ET (inches/month) for the site's peak watering month

Obtain from Water Budget Data Finder at www.epa.gov/watersense/nhspecs/wb_data_finder.html

OUTPUT - BASELINE FOR THE SITE

31,188 Monthly baseline (gallons/month) based on the site's peak watering month

OUTPUT - WATER ALLOWANCE FOR THE SITE

21,831 Monthly landscape water allowance (gallons/month) based on the site's peak watering month

Next Step: Click on the next tab labeled *Part 2 - LWR* to calculate the landscape water requirement.

Landscape Water Requirement

WaterSense Single-Family New Home Specification: Water Budget Tool

This water budget tool shall be used to determine if the designed landscape meets Criteria 4.1.1.1 of the specification. Please refer to the WaterSense Water Budget Approach for additional information.

Your Name:	Brent Mecham
Builder Name:	Quality Builder USA
Lot Number/Street Address:	123 Example
City, State, Zip Code:	Falls Church, VA 22042
Peak Watering Month:	June



Is an irrigation system being installed on this site?

This worksheet determines the monthly landscape water requirement (LWR) for a site based on its peak watering month.

The monthly LWR is the water requirement specific to the designed landscape. The sum of the LWRs for each hydrozone equals the site LWR.

The following formula is used to calculate the LWR for each hydrozone:

$$LWR_H = \frac{1}{DU_{LQ}} \times [(ET_o \times K_L) - R_a] \times A \times C_u$$

Where:

LWR_H = Landscape water requirement for the hydrozone (gallons/month)

DU_{LQ} = Lower quarter distribution uniformity

ET_o = Local reference evapotranspiration (inches/month)

K_L = Landscape coefficient for the type of plant in that hydrozone (dimensionless)

R_a = Allowable rainfall, designated by WaterSense as 25% of average peak monthly rainfall (R)

A = Area of the hydrozone (square feet)

C_u = Conversion factor (0.6233 for results in gallons/month)

LWR for Peak Month

STEP 2A - ENTER THE AVERAGE MONTHLY RAINFALL (R) AT THE SITE FOR THE PEAK WATERING MONTH IDENTIFIED IN PART 1

2.91 Average monthly rainfall (inches/month) for the site's peak watering month

Obtain from Water Budget Data Finder www.epa.gov/watersense/nhspeccs/wb_data_finder.html

STEP 2B - COMPLETE TABLE 1 BELOW (enter data in white cells only)

Enter the area of the hydrozone (square feet). The total area must equal the landscaped area entered in Step 1A.

Choose the plant type from the dropdown list (source data is displayed in Table 2).

Choose the irrigation type from the dropdown list (source data is displayed in Table 3; guidance is displayed in Table 4 and Table 5).

Table 1. Landscape Water Requirement

Zone	Hydrozone/Landscape Feature Area (sq. ft.)	Plant Type or Landscape Feature	Landscape Coefficient (K_L)	Irrigation Type	Distribution Uniformity (DU_{LQ})	LWR _H (gal/month)
1	1,800	Turfgrass - Medium water requirement	0.7	Fixed Spray	65%	6,465
2	3,210	Turfgrass - High water requirement	0.8	Rotor	70%	12,533
3	1,140	Shrubs - Medium water requirement	0.5	Drip - Press Comp	90%	1,948
4	680	Groundcover - Low water requirement	0.2	Micro Spray	70%	333
5	1,000	Nonvegetated Softscape		No Irrigation	NA	-
6						-
7						-
8						-
9						-
10						-
11						-
12						-
13						-
14						-
15						-
Total Area	7,830	Landscape Water Requirement for the Site (gal/month)				21,280

LWR for Peak Month

Table 1. Landscape Water Requirement

Zone	Hydrozone/Landscape Feature Area (sq. ft.)	Plant Type or Landscape Feature	Landscape Coefficient (K_L)	Irrigation Type	Distribution Uniformity (DU_{LQ})	LWR_H (gal/month)
1	1,800	Turfgrass - Medium water requirement	0.7	Fixed Spray	65%	6,465
2	3,210	Turfgrass - High water requirement	0.8	Rotor	70%	12,533
3	1,140	Shrubs - Medium water requirement	0.5	Drip - Press Comp	90%	1,948
4	680	Groundcover - Low water requirement	0.2	Micro Spray	70%	333
5	1,000	Nonvegetated Softscape		No Irrigation	NA	-
6						-
7						-
8						-
9						-
10						-
11						-
12						-
13						-
14						-
15						-
Total Area	7,830	Landscape Water Requirement for the Site (gal/month)				21,280



Tables used for LWR calculation

Table 2. Plant Type or Landscape Feature and Associated Landscape Coefficient

Plant Type or Landscape Feature	K_L		
	Water Requirements		
	Low	Medium	High
Trees	0.2	0.5	0.9
Shrubs	0.2	0.5	0.7
Groundcover	0.2	0.5	0.7
Turfgrass	0.6	0.7	0.8
Pool, Spa, or Water Feature	0.8		
Permeable Hardscape	0		
Nonvegetated Softscape	0		

Source: Based on LEED for Homes Rating System 2008.

Table 3. Distribution Uniformity

Irrigation Type	$DU_{(LQ)}$ or EU*
Drip - Standard	70%
Drip - Press Comp	90%
Fixed Spray	65%
Micro Spray	70%
Rotor	70%
No Irrigation	NA

*Lower quarter distribution uniformity ($DU_{(LQ)}$) applies to sprinkler zones and emission uniformity (EU) applies to drip/microirrigation zones.

Source: (The Irrigation Association, October 2001) in Landscape Irrigation Scheduling and Water Management, IA, 2005.

Table 4. Appropriate Irrigation Types - Landscaped Areas with Irrigation Systems

IF THE PLANT TYPE IS:	THEN THE IRRIGATION TYPE CAN BE:			
	Drip - Standard	Drip - Press Comp	Fixed Spray	Micro Spray*
Trees	x	x		x
Shrubs	x	x		x
Groundcover	x	x		x
Turfgrass	x	x	x	x

* Micro spray may only be used on vegetation other than turfgrass if it meets the definition of microirrigation system, which according to the 2003 *WaterSense Single-Family New Home Specification* is: "The frequent application of small quantities of water on or below the soil surface as drops, tiny streams or miniature spray through emitters or applicators placed along a water delivery line. Microirrigation encompasses a number of methods or concepts, such as bubbler, drip, trickle, mist or spray, and subsurface irrigation. For the purposes of this specification, microirrigation includes emission devices that have flow rates less than 30 gallons per hour."

Results: LWA & LWR

WaterSense Single-Family New Home Specification: Water Budget Tool

This water budget tool shall be used to determine if the designed landscape meets Criteria 4.1.1.1 of the specification. Please refer to the WaterSense Water Budget Approach for additional information.

Your Name:	Brent Mecham
Builder Name:	Quality Builder USA
Lot Number/Street Address:	123 Example
City, State, Zip Code:	Falls Church, VA 22042
Peak Watering Month:	June
Is an irrigation system being installed on this site?	yes



This worksheet determines if the designed landscape meets the water budget.

If the landscape water requirement is LESS than the landscape water allowance, then the water budget criterion is met.

If the landscape water requirement is GREATER than the landscape water allowance, then the landscape and/or irrigation system needs to be redesigned to use less water.

STEP 3A - REVIEW THE LWA AND LWR FROM PART 1 AND PART 2

LWA **21,831** (gallons/month) LWR **21,280** (gallons/month)

STEP 3B - REVIEW THE TOTAL AREA OF TURFGRASS* IN THE DESIGNED LANDSCAPE FROM STEP 2B

The designed landscape contains **5,010** square feet of turfgrass.* This is **64%** of the landscaped area.

*This includes the area of any pools, spas, and/or water features, designated by WaterSense to be counted as turfgrass.

OUTPUT - DOES THE DESIGNED LANDSCAPE MEET THE WATER BUDGET?

YES

If YES, then the water budget criterion is met.

If NO, then the landscape and/or irrigation system needs to be redesigned to use less water.

The designed landscape water requirement is a **32%** reduction in water use from the baseline calculated in Part 1.



Results: LWA & LWR

This worksheet determines if the designed landscape meets the water budget.

If the landscape water requirement is LESS than the landscape water allowance, then the water budget criterion is met.

If the landscape water requirement is GREATER than the landscape water allowance, then the landscape and/or irrigation system needs to be redesigned to use less water.

STEP 3A - REVIEW THE LWA AND LWR FROM PART 1 AND PART 2

LWA **21,831** (gallons/month) LWR **21,280** (gallons/month)

STEP 3B - REVIEW THE TOTAL AREA OF TURFGRASS* IN THE DESIGNED LANDSCAPE FROM STEP 2B

The designed landscape contains **5,010** square feet of turfgrass.* This is **64%** of the landscaped area.

*This includes the area of any pools, spas, and/or water features, designated by WaterSense to be counted as turfgrass.

OUTPUT - DOES THE DESIGNED LANDSCAPE MEET THE WATER BUDGET?

YES

If YES, then the water budget criterion is met.

If NO, then the landscape and/or irrigation system needs to be redesigned to use less water.

The designed landscape water requirement is a **32%** reduction in water use from the baseline calculated in Part 1.



Western Example

Enter Zip Code:



Peak Month: Jul

ETo Value: 7.98 inches/month

Rainfall: 1.62 inches/month

Loveland, CO



Landscape Water Allowance

STEP 1A - ENTER THE LANDSCAPED AREA (A)

7,830 Area of the designed landscape (square feet)

STEP 1B - ENTER THE AVERAGE MONTHLY REFERENCE EVAPOTRANSPIRATION (ET_o)

7.98 Average monthly reference ET (inches/month) for the site's peak watering month

Obtain from Water Budget Data Finder at www.epa.gov/watersense/nhspeccs/wb_data_finder.html

OUTPUT - BASELINE FOR THE SITE

38,948 Monthly baseline (gallons/month) based on the site's peak watering month

OUTPUT - WATER ALLOWANCE FOR THE SITE

27,264 Monthly landscape water allowance (gallons/month) based on the site's peak watering month



LWA = 27,264 gallons
LWR = 29,585 gallons

Table 1. Landscape Water Requirement

Zone	Hydrozone/Landscape Feature Area (sq. ft.)	Plant Type or Landscape Feature	Landscape Coefficient (K_L)	Irrigation Type	Distribution Uniformity (DU_{LQ})	LWR_H (gal/month)
1	1,800	Turfgrass - Medium water requirement	0.7	Fixed Spray	65%	8,943
2	3,210	Turfgrass - High water requirement	0.8	Rotor	70%	17,091
3	1,140	Shrubs - Medium water requirement	0.5	Drip - Press Comp	90%	2,831
4	680	Groundcover - Low water requirement	0.2	Micro Spray	70%	721
5	1,000	Nonvegetated Softscape		No Irrigation	NA	-
6						-
7						-
8						-
9						-
10						-
11						-
12						-
13						-
14						-
15						-
Total Area	7,830	Landscape Water Requirement for the Site (gal/month)				29,585

Make changes to the landscape components



Changes to the landscape

LWA = 27,264 gallons

Table 1. Landscape Water Requirement

Zone	Hydrozone/Landscape Feature Area (sq. ft.)	Plant Type or Landscape Feature	Landscape Coefficient (K_L)	Irrigation Type	Distribution Uniformity (DU_{LQ})	LWR_H (gal/month)
1	1,800	Turfgrass - Medium water requirement	0.7	Fixed Spray	65%	8,943
2	2,760	Turfgrass - High water requirement	0.8	Rotor	70%	14,695
3	1,140	Shrubs - Medium water requirement	0.5	Drip - Press Comp	90%	2,831
4	680	Groundcover - Low water requirement	0.2	Micro Spray	70%	721
5	1,450	Nonvegetated Softscape		No Irrigation	NA	-
6						-
7						-
8						-
9						-
10						-
11						-
12						-
13						-
14						-
15						-
Total Area	7,830	Landscape Water Requirement for the Site (gal/month)				27,190

STEP 3A - REVIEW THE LWA AND LWR FROM PART 1 AND PART 2

LWA 27,264 (gallons/month) LWR 27,190 (gallons/month)

Colorado Example

STEP 3B - REVIEW THE TOTAL AREA OF TURFGRASS* IN THE DESIGNED LANDSCAPE FROM STEP 2B

The designed landscape contains 4,560 square feet of turfgrass.* This is 58% of the landscaped area.

*This includes the area of any pools, spas, and/or water features, designated by WaterSense to be counted as turfgrass.

OUTPUT - DOES THE DESIGNED LANDSCAPE MEET THE WATER BUDGET?

YES

If YES, then the water budget criterion is met.

If NO, then the landscape and/or irrigation system needs to be redesigned to use less water.

The designed landscape water requirement is a 30% reduction in water use from the baseline calculated in Part 1.

STEP 3A - REVIEW THE LWA AND LWR FROM PART 1 AND PART 2

LWA 21,831 (gallons/month) LWR 21,280 (gallons/month)

Virginia Example

STEP 3B - REVIEW THE TOTAL AREA OF TURFGRASS* IN THE DESIGNED LANDSCAPE FROM STEP 2B

The designed landscape contains 5,010 square feet of turfgrass.* This is 64% of the landscaped area.

*This includes the area of any pools, spas, and/or water features, designated by WaterSense to be counted as turfgrass.

OUTPUT - DOES THE DESIGNED LANDSCAPE MEET THE WATER BUDGET?

YES

If YES, then the water budget criterion is met.

If NO, then the landscape and/or irrigation system needs to be redesigned to use less water.

The designed landscape water requirement is a 32% reduction in water use from the baseline calculated in Part 1.



Desert Example

Enter Zip Code:



Peak Month: Jul

ETo Value: 14.24 inches/month

Rainfall: 0.23 inches/month



To calculate the Baseline and LWA for a site, enter the designed landscaped area and average monthly reference evapotranspiration for the site's peak watering month. (Enter data in white cells only.)

STEP 1A - ENTER THE LANDSCAPED AREA (A)

7,830 Area of the designed landscape (square feet)

STEP 1B - ENTER THE AVERAGE MONTHLY REFERENCE EVAPOTRANSPIRATION (ET_o)

14.24 Average monthly reference ET (inches/month) for the site's peak watering month

Obtain from Water Budget Data Finder a www.epa.gov/watersense/nhspeccs/wb_data_finder.html

OUTPUT - BASELINE FOR THE SITE

69,501 Monthly baseline (gallons/month) based on the site's peak watering month

OUTPUT - WATER ALLOWANCE FOR THE SITE

48,651 Monthly landscape water allowance (gallons/month) based on the site's peak watering month

LWR for Las Vegas

Table 1. Landscape Water Requirement

Zone	Hydrozone/Landscape Feature Area (sq. ft.)	Plant Type or Landscape Feature	Landscape Coefficient (K_L)	Irrigation Type	Distribution Uniformity (DU_{Lo})	LWR_H (gal/month)
1	2,300	Turfgrass - Medium water requirement	0.7	Fixed Spray	65%	21,859
2	1,600	Shrubs - Low water requirement	0.2	Drip - Press Comp	90%	3,092
3	1,050	Groundcover - Medium water requirement	0.5	Drip - Press Comp	90%	5,136
4	2,300	Nonvegetated Softscape		No Irrigation	NA	-
5	580	Pool, Spa, or Water Feature	0.8	Fixed Spray	65%	6,304
6						-
7						-
8						-
9						-
10						-
11						-
12						-
13						-
14						-
15						-
Total Area	7,830	Landscape Water Requirement for the Site (gal/month)				36,392

STEP 3A - REVIEW THE LWA AND LWR FROM PART 1 AND PART 2

LWA 48,651 (gallons/month) LWR 36,392 (gallons/month)

STEP 3B - REVIEW THE TOTAL AREA OF TURFGRASS* IN THE DESIGNED LANDSCAPE FROM STEP 2B

The designed landscape contains 2,880 square feet of turfgrass.* This is 37% of the landscaped area.

*This includes the area of any pools, spas, and/or water features, designated by WaterSense to be counted as turfgrass.

OUTPUT - DOES THE DESIGNED LANDSCAPE MEET THE WATER BUDGET?

YES

If YES, then the water budget criterion is met.

If NO, then the landscape and/or irrigation system needs to be redesigned to use less water.

The designed landscape water requirement is a 48% reduction in water use from the baseline calculated in Part 1.



Review irrigation requirements

- Designed or installed by WS partner
- Audited by WS partner
- NO
 - Leaks
 - Runoff/overspray
 - Sprinklers on slopes or narrow areas
- Sprinkler DU_{LQ} 0.65 on largest area
- Rain shut-off device
- Quality controller
- Schedule
 - Establishment
 - Long term maintenance

Appropriate Irrigation

Table 4. Appropriate Irrigation Types - Landscaped Areas with Irrigation Systems

IF THE PLANT TYPE IS:	THEN THE IRRIGATION TYPE CAN BE:			
	Drip - Standard	Drip - Press Comp	Fixed Spray	Micro Spray*
Trees	X	X		X
Shrubs	X	X		X
Groundcover	X	X		X
Turfgrass	X	X	X	X

* Micro spray may only be used on vegetation other than turfgrass if it meets the definition of microirrigation system, which according to the *2009 WaterSense Single-Family New Home Specification* is: "The soil surface as drops, tiny streams or miniature spray through emitters or applicators placed along a water delivery line. Microirrigation encompasses a number of methods or concepts, such as bubbler, drip purposes of this specification, microirrigation includes emission devices that have flow rates less than 30 gallons per hour."

Table 5. Appropriate Irrigation Types - Landscaped Areas without Irrigation Systems

IF THE PLANT TYPE OR LANDSCAPE FEATURE IS:	THEN THE IRRIGATION TYPE SHALL BE:		
	Drip - Standard	Fixed Spray	No Irrigation
Trees, Shrubs, or Groundcover with Low Water Requirements ($K_L = 0.2$)	X		
Trees, Shrubs, or Groundcover with Medium or High Water Requirements ($K_L > 0.2$)		X	
Turfgrass with Low, Medium, or High Water Requirements ($K_L > 0.2$)		X	
Pool, Spa, or Water Feature		X	
Permeable Hardscape			X
Nonvegetated Softscape			X

*Please see additional information in the 'WaterSense' Water Budget Approach for landscapes installed without irrigation systems.



Summary

- Water budget tool helps define the landscape design and appearance.
- Based on peak irrigation month.
- On day of inspection, hydrozone areas must match water budget tool.
- Plant water requirements are based on local determination for various plant types.



New Home Specification

- Preference to use the water budget tool
- Must use WS partners when available
 - Design/install
 - Audit irrigation performance
- New business opportunity for Water Sense partners



WaterSense Builder Partners

Partner Name	Partner Type	State
Allgood Construction Company, Inc.	Builders	AR
Capital Home Builders & Development, Inc.	Builders	GA
Coger Custom Construction Company	Builders	AR
Earthen Concepts & Development, Inc.	Builders	MO
Energy Smart Homes LLC	Builders	AZ
Estate Builders, LLC	Builders	SC
Great Bear Builders Inc.	Builders	MT
Green Hammer, Inc.	Builders	OR
GreenCraft Master Builders, LLC	Builders	SC
GreenHaus Builders	Builders	TX
Hardwick General Contracting, Inc.	Builders	FL
ILM Design and Build Incorporated	Builders	NC
J T Turner Construction Co., Inc.	Builders	GA
KB Home	Builders	CA
Meritage Homes Corporation	Builders	AZ
Nappier & Turner Construction Co., Inc	Builders	NC
studio26 homes	Builders	PA
Terra Pacific Construction	Builders	HI



Questions?