



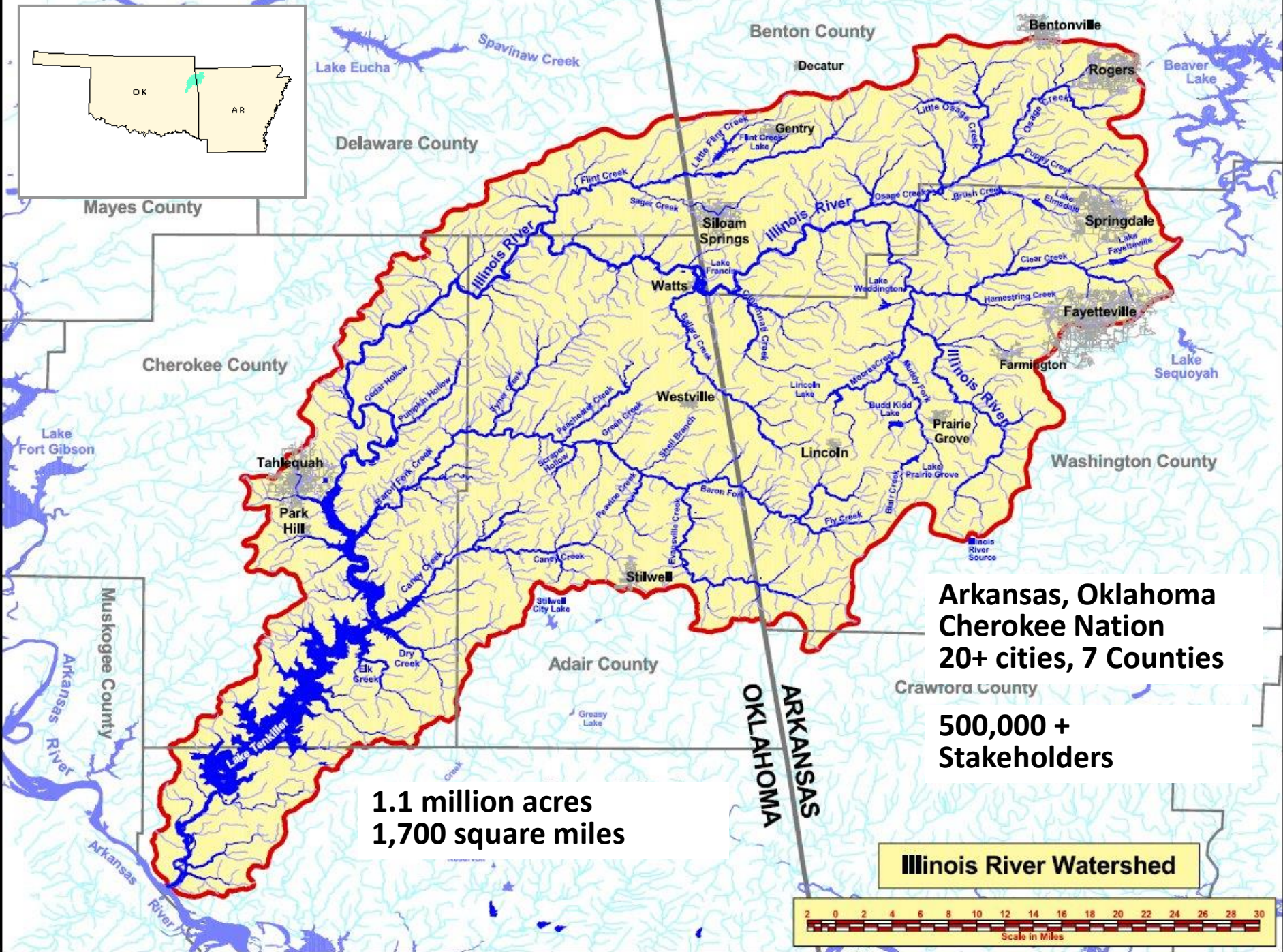
# Implementing Green Infrastructure Elements for Enhanced Water Quality in the Illinois River Watershed

**Grant #15-800**

**Project Period: Oct. 1, 2015 – June 30, 2017**

**2016 Nonpoint Source Pollution Stakeholder & Project Review Meeting**





Delaware County

Benton County

Mayes County

Cherokee County

Adair County

Washington County

Crawford County

**1.1 million acres  
1,700 square miles**

**Arkansas, Oklahoma  
Cherokee Nation  
20+ cities, 7 Counties**

**500,000 +  
Stakeholders**

**Illinois River Watershed**



## Project Deliverables:

- Train 150 people in green infrastructure design and installation
- Implement 15 demonstration projects in public/quasi-public locations in the Illinois River Watershed
- Help foster a “Green Infrastructure Culture” in Arkansas.

## Project Deliverables:

15 Demonstration Projects:

**Porous Pavers/Pathways**

**Bioswales**

**Rain Gardens**

**Water Harvesting**



**Green Infrastructure in the IRW  
Grant 15-800**

## Previous Rain Garden Grant Waiting List

	A	B	C
4	<b>Date</b>	<b>Organization</b>	<b>City</b>
5	12/15/2015	JBU Facilities	Siloam Springs, AR
6	12/15/2015	Springdale School of Innovation	Springdale, AR
7	12/15/2015	NWALT	Fayetteville, AR
8	8/1/2014	Mathais Elem	Rogers, AR
9	5/15/2014	J.O. Kelly	Springdale, AR
10	4/1/2016	JBU Leadership Class	Siloam Springs, AR
11	4/1/2016	Siloam Springs Parks Dept.	Siloam Springs, AR
12			
13			
14	<b>Inquiry List</b>		
15	12/15/2015	Rogers ALE School	Rogers, AR
16	7/4/2014	New Bentonville HS- not built	Bentonville, AR
17	7/28/2014	JBU/Resident	Siloam Springs, AR
18	8/4/2014	Arts Center of the Ozarks	Springdale, AR
19	8/13/2014	Simmons Foods	Siloam Springs, AR
20	8/28/2014	Rolling Hills Church	Fayetteville, AR
21	9/2/2014	Tyson Foods	Springdale, AR
22	4/15/2015	Shiloh Museum	Springdale, AR
23	6/15/2015	Lake Fayetteville	Fayetteville, AR
24	5/15/2014	WAC/AMP	Fayetteville, AR
25			
26	8/5/2015	Har-ber High School EAST	Springdale, AR
27	5/15/2014	Unitarian Universalist	Fayetteville, AR
28	5/15/2015	Benton County Public Service Bldg	Bentonville, AR
29	5/15/2014	Life Styles	Fayetteville, AR
30	5/15/2014	OMNI	Fayetteville, AR
31			
32	5/15/2014	Rogers Historical Museum	Rogers, AR

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Grant 15-800**

Learn how we can collectively improve and manage water where it falls using Green Infrastructure.

Apply for a grant with Illinois River Watershed Partnership to install these tools at your location.

The Illinois River Watershed Partnership is a non-profit group who seeks to improve the integrity of the Illinois River and its tributaries. Funding for green infrastructure provided by US EPA 319 funds and Arkansas Natural Resources Commission Non-point Source Program.

Illinois River Watershed Partnership

# Green Infrastructure

## WORKSHOP

Monday, May 16

9 am - 11 am

IRWP Watershed Learning Center

221 S. Main St.  
Cave Springs, AR

Please RSVP at [contact@irwp.org](mailto:contact@irwp.org)



[www.irwp.org](http://www.irwp.org)  
479-215-6623



May 2016

30 Participants at GI Workshop

IRWP Watershed Learning Center

Cave Springs, AR

# Green Infrastructure in the IRW Grant 15-800





Jan & Aug 2016  
Native Plant Workshops

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## 2015 – 2016 Grant Recipients:

George Junior High, Springdale

Harber High School + Hellstern, Springdale

JBU Campus, Siloam Springs

JO Kelly, Springdale

Mathias Elementary, Rogers

Northwest Arkansas Land Trust, Fayetteville

School of Innovation, Springdale

Siloam Springs Parks Dept., Siloam Springs



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## Green Infrastructure in the IRW Grant 15-800



**FUPC GI Project, August 2016**

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## Green Infrastructure in the IRW Grant 15-800



[PURCHASE](#)

NWA Democrat-Gazette/ANDY SHUPE

Sue Madison (left) of Fayetteville and local landscape architect Alan Ostner work together Tuesday, Aug. 2, 2016, to plant bee balm and other native plants in a nearly completed rain garden at First United Presbyterian Church in Fayetteville. The garden is the product of a service project by Boy Scout Troop 46 that grew in scope to include help from the church's members and facilities management and receive grant funding through the Illinois River Watershed Partnership.

[» More](#)

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dignity and respect.**

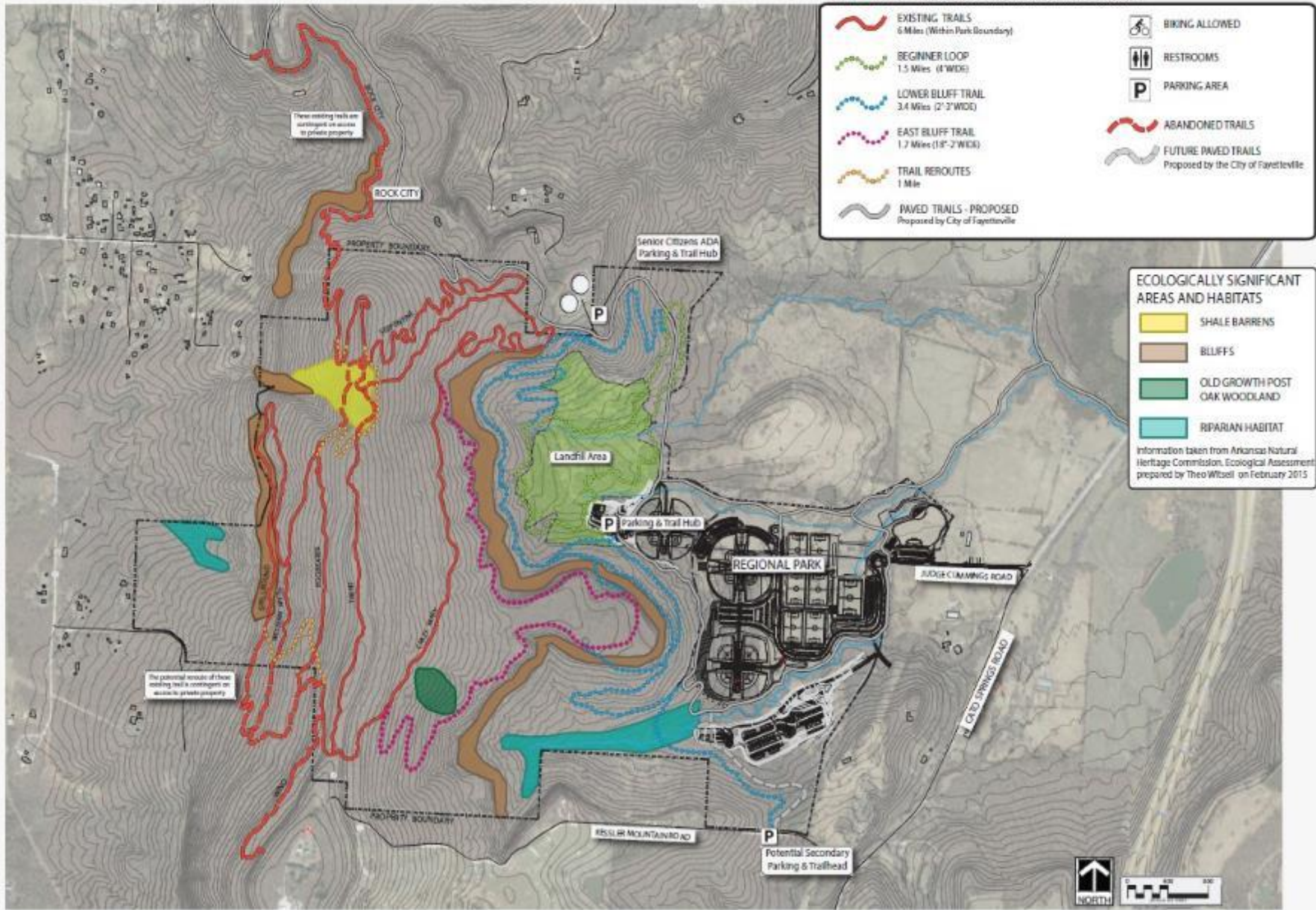


*The Meadows*

ASSISTED LIVING COMMUNITY

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Again for Best of Best 2016](#)

# Green Infrastructure in the IRW Grant 15-800





SOURCE:  
<http://webdemos.cesr.usark.edu/watershed.php?hucid=11110102>

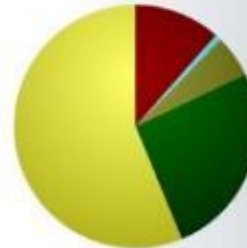
## Goose Creek-Illinois River

Huc Id	111101030102
Total Area	44.18 mi <sup>2</sup>
Total Acres	28605.7
Population 1990	5755
Population 2000	9832
Density 1990	130.26 persons/mi <sup>2</sup>
Density 2000	222.54 persons/mi <sup>2</sup>

## Watershed Information

(Click a chart below to see the full selection of informative charts for this watershed.)

2006 Land Cover



1999 Land Cover



Watershed Context:



**Green Infrastructure Grant Project**  
 For Northwest Arkansas Land Trust & Ozark Mountain Smokehouse  
 1725 Smokehouse Trail Fayetteville, AR 72701

SHEET  
 1/4



Project Funding Provided By:

**Green Infrastructure Grant Project**  
 For Northwest Arkansas Land Trust & Ozark Mountain Smokehouse  
 1725 Smokehouse Trail Fayetteville, AR 72701

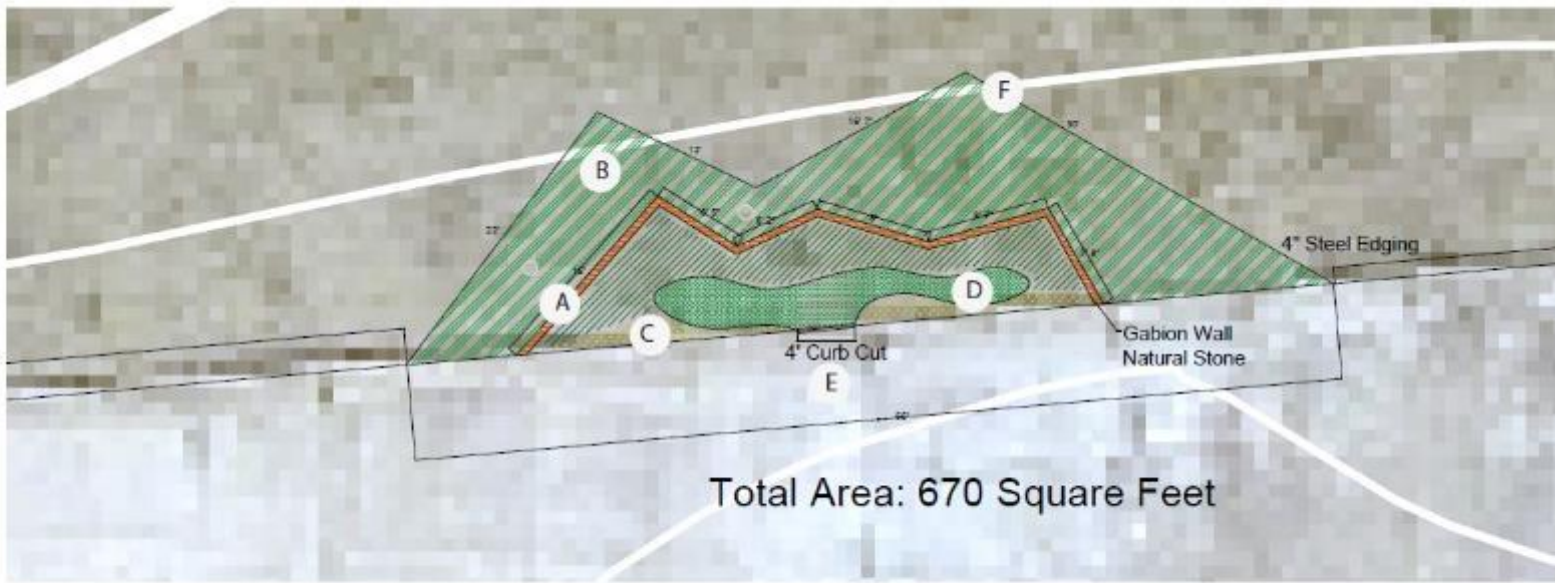
Arkansas Watersheds > 8-Digit: 11110103 > 10-Digit: 1111010301 > 12-Digit: 111101030102

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# Green Infrastructure in the IRW Grant 15-800







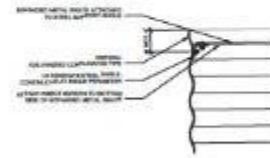
Project Funding Provided By:

**Green Infrastructure Grant Project**  
 For Northwest Arkansas Land Trust & Ozark Mountain Smokehouse  
 1725 Smokehouse Trail Fayetteville, AR 72701

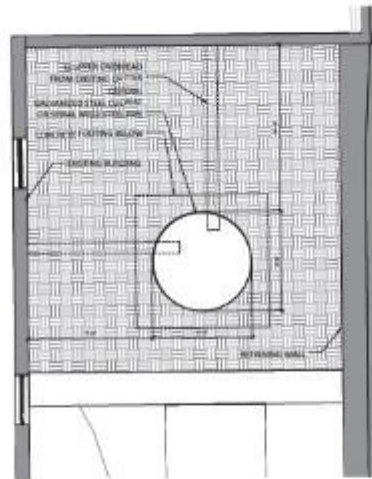
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# Green Infrastructure in the IRW Grant 15-800

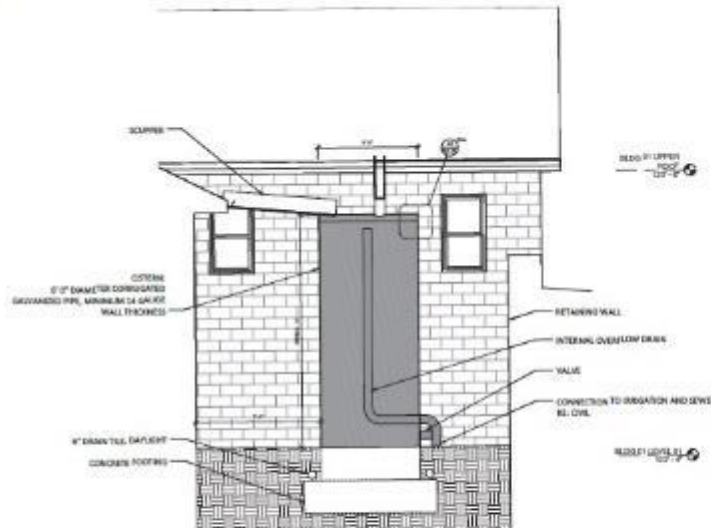




A5 Detail Detail



A4 Green Wall



A5 Detail Section

Illinois River Watershed Learning Center  
219 S Main St  
Cave Springs, AR 72738  
A5.00

modus studio  
www.modusstudio.com  
1111101003  
1111101003



Green Infrastructure Grant Project  
For Northwest Arkansas Land Trust & Ozark Mountain Smokehouse  
1725 Smokehouse Trail Fayetteville, AR 72701

SHEET 4/4

# Green Infrastructure in the IRW Grant 15-800





## Green Infrastructure in the IRW Grant 15-800



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Grant 15-800**

**ST. MARY'S RIVER**

# Oyster Reef Project

**Eastern oysters (*Crassostrea virginica*)** are keystone species critical to maintaining and improving the health of the Chesapeake Bay. Historically, oyster reefs were located throughout the Bay and were once twenty feet tall. Today, oyster reefs in the Bay are very rare. The remaining wild oysters struggle for survival in the bays on the bottom where low oxygen and smothering alkaloids increase sediment accretion.

**Oyster Reefs...**

- Increase water three-dimensional structure, reducing overall turbidity to improve light availability
- Support diverse communities, including both the ground and water stages of fish and invertebrates
- Improve light penetration to an oyster's eye (the oyster's eye is 42 inches of water on the average) upon and associated activities. The increased light growth of bay grasses and increases sediment from coastal ridge accretion.

**In 2010 the tidal St. Mary's River north of Church Point was designated an oyster sanctuary.**

The project's primary restoration area, located in the sanctuary in front of St. Mary's College of Maryland, contains more than 1000 man-made reef elements varying from four to seven feet in height. Their purpose is to mimic the natural oyster reef structure, thus providing the oysters off the bottom where oxygenated conditions can reduce growth and survival.

**create**  
Three dimensional reef habitat on what was previously unshaded, barren and featureless.

**engage**  
Volunteers (over one thousand) installing reefs, planting over 30 million oysters, and monitoring oysters.

**maintain**  
An ecosystem that can create 500 million gallons of water each day.

**ONGOING GOALS**

**serve as a living classroom**  
For learning about oyster culture, studying reef ecosystems, and determining the success of various restoration methods.

The oyster reef is a partnership project of the St. Mary's River Watershed Association, St. Mary's College of Maryland, and the Leonardtown Rotary Club.

Sign and Exhibit are the property of the St. Mary's River Watershed Association, Leonardtown, Maryland. Core Fund, National Heritage Area, Chesapeake Bay National Estuary Program, State of Maryland, and the Chesapeake Bay Foundation. Photo credit: St. Mary's College of Maryland. All rights reserved. No part of this publication may be reproduced without the prior written permission of the publisher. All other rights reserved. © 2015 St. Mary's River Watershed Association. All rights reserved. For more information about the project or how to get involved visit [www.stmarysriver.org](http://www.stmarysriver.org)








SIGNAGE EXAMPLE

**Green Infrastructure in the IRW  
Grant 15-800**

**Oct. 2015 - Sept. 2016 Outreach Education & Conservation  
Project Implementation TD:**

**Participants: 6,457  
Hours: 8,621**

**Economic Value/Match: \$181,041**

\* Outreach Hours at \$21

<http://www.handsonnetwork.org/tools/volunteercalculator>



**Thank you!**

**Becky Roark, IRWP**

**[beckyroark@irwp.org](mailto:beckyroark@irwp.org)**

**479.215.6623**