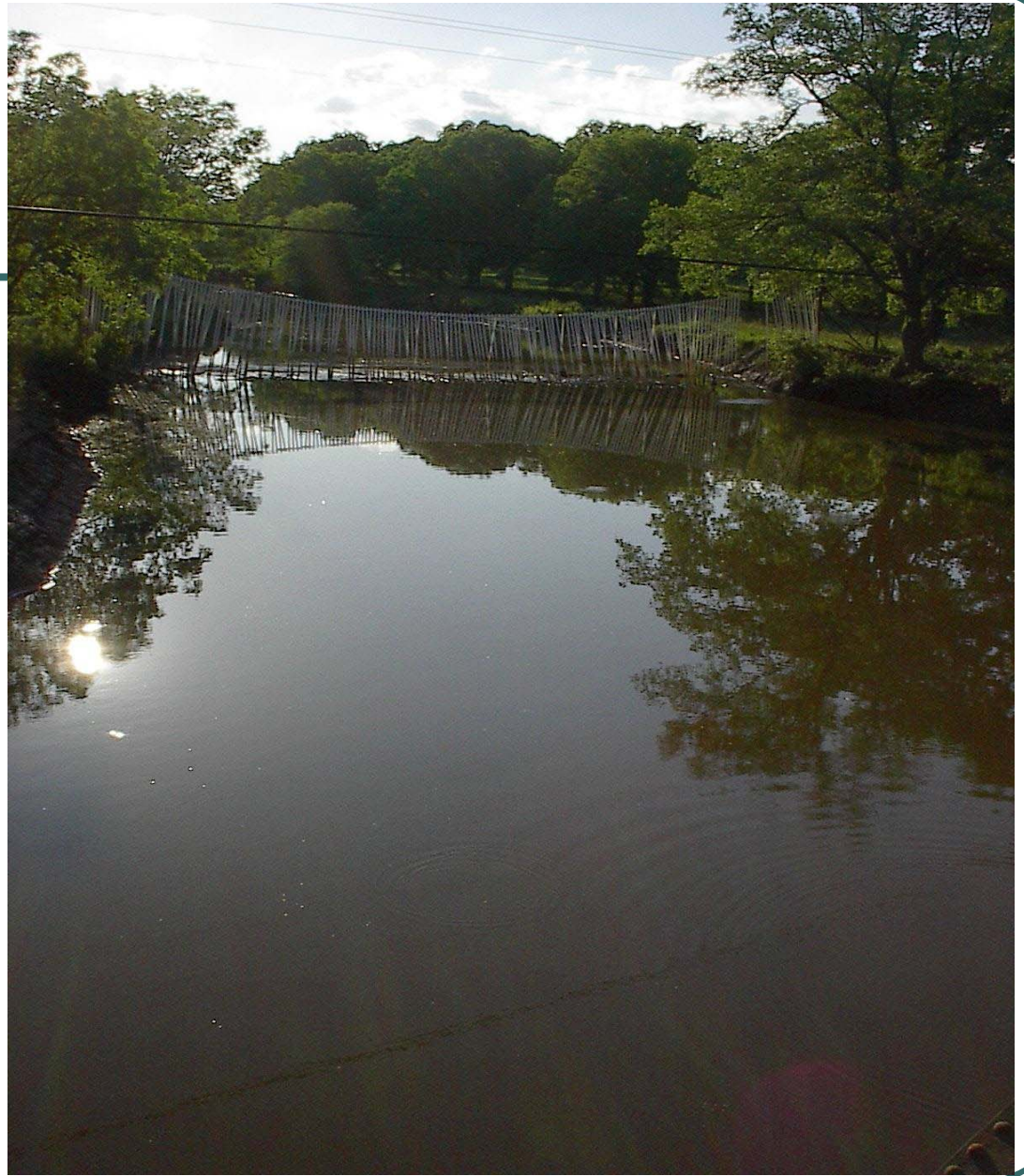


# ***Youth and Minority Drinking Water Programs***

LaDonna McCowan  
Oklahoma State University  
Cooperative Extension Service  
2003 Southern Region Water Quality  
Conference  
Ruidoso, NM. Oct-19-22

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# NonPoint Source Education Project



Partners

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# Water Quality Programs



*Tolta*



## **OBJECTIVE**

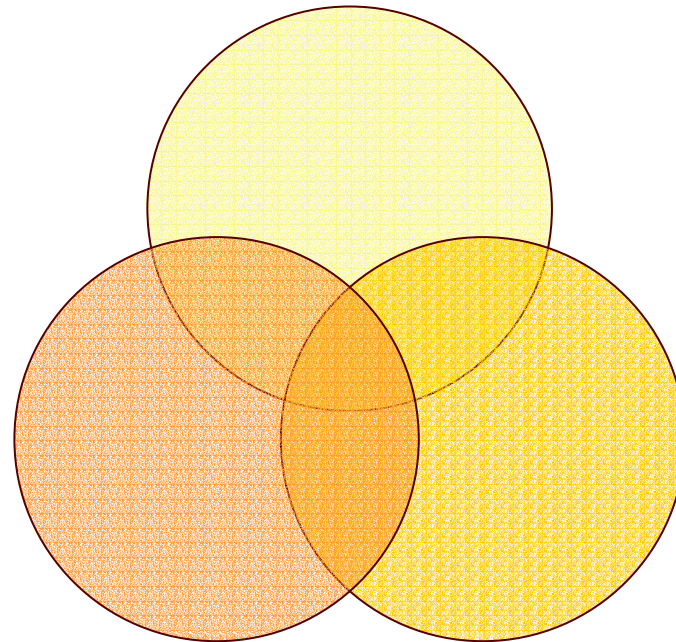
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- Increase the awareness and understanding of well-water protection in targeted rural minority communities.

# Development Model

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**OCES**



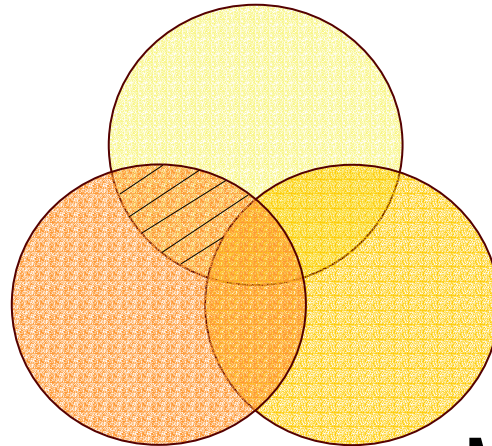
**TOLTA**

**REYAP**

# Technology & Under-Served Farmers

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**OCES (Technology)**



**TOLTA**  
**Under-Served Farmers**

**REYAP**  
**Minority Youth**

## **USDA Agricultural Economic and Land ownership of 1999**

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- 1910 Blacks owned 16-19 million acres of land
- 1999 Blacks owned 7.8 million acres of land
- Native Americans own 3.4 million acres of land
- Hispanics own 13 million acres of land

# **USDA Agricultural Economic and Land ownership of 1999**

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For All private US Agricultural land, whites;

- Are 96% of the owner
- Have 97% of the value
- Own 98% of the acres



# OKLAHOMA\*SYST IXL, OK (1999)

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- **Public meetings held in target areas for rural minority communities.**

---

<b>Community</b>	<b>Date</b>	<b>Location</b>	<b># water test</b>
IXL	2-16-99	Fire Department	10
Boley	2-16-99	Senior nutrition center	6
Paden	3-25-99	Paden High School	11
Gypsy	10-25-99	Gypsy school	14
Prague	7-31-2000	Prague City Hall	4

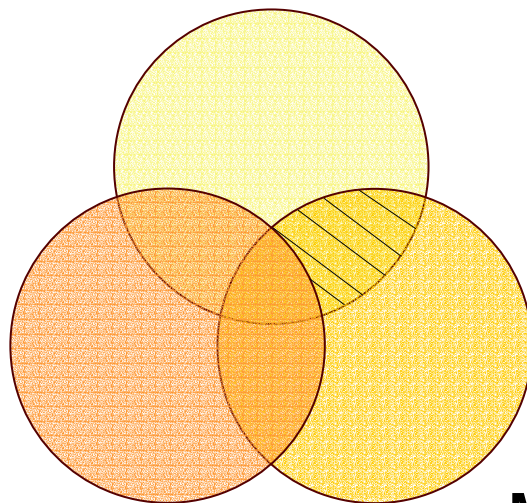
# Technology and Minority Youth

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**OCES (Technology)**

**TOLTA**  
**Under-Served Farmers**

**REYAP**  
**Minority Youth**

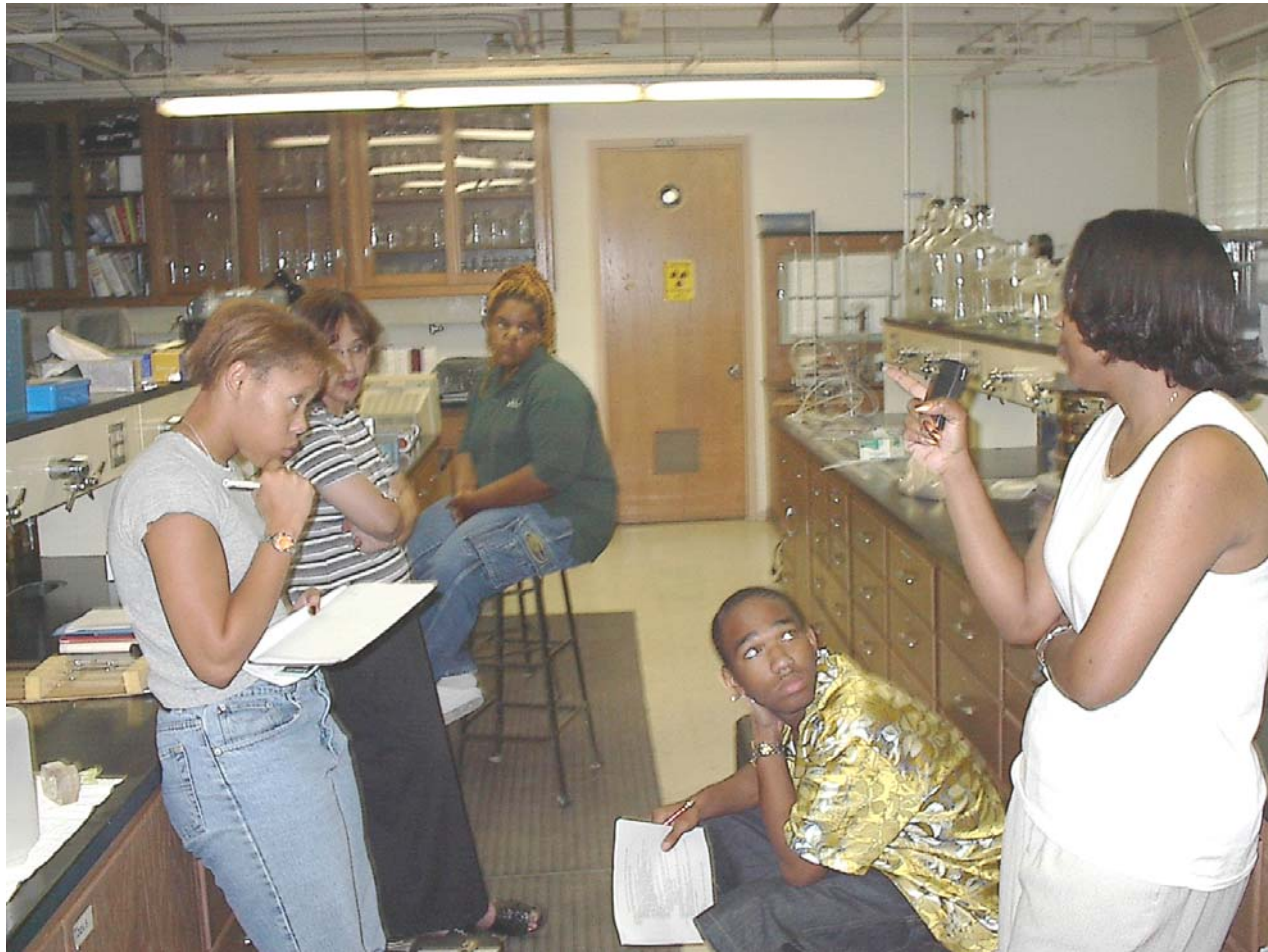


# Oklahoma Statistics

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- **Ag Teachers in Oklahoma (2002)**
  - 0
- **4-H Volunteers (2002)**
  - 6% African American men
  - 12% African American Women
- **FFA members (2002)**
  - 2%

# Little Deep Fork Watershed, 2000





# Global Positioning Systems





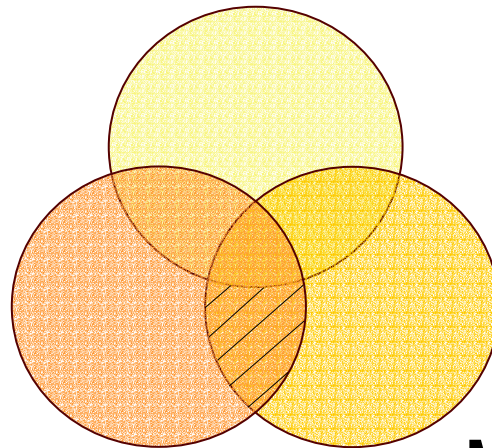
**Bristow**



# Under-Served Adults and Minority Youth

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**OCES (Technology)**



**TOLTA**  
**Under-Served Farmers**

**REYAP**  
**Minority Youth**



# Rural Minority Communities

Creek County

Okmulgee County

Okfuskee County

• Newby

• Preston

• Welty

• Mason

• IXL

• Boley

• Grayson

• Okemah

• Clearview

• Weleetka

0

9

18 Miles

Prepared by LaDonna McCowan, OSU June, 2000

# **Under-Served Communities Lack Technical Resources**

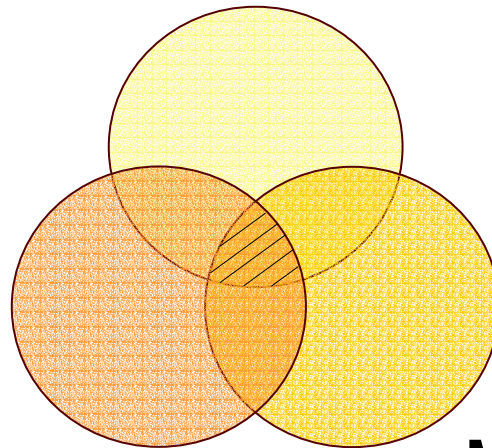
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- Lack economic development
- Less than 1000 population
- Less than 400 youth
- Average Age 55
- Average income less than \$10,000 / year

# What Happens When We Link?

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**OCES (Technology)**



**TOLTA**  
**Under-Served Farmers**

**REYAP**  
**Minority Youth**



*Tolta*

## **CBO Identify the Need**

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TOLTA Meeting

Bristow Community Center  
2002



TOTLA Meeting

St Luke Church, Spencer, OK  
2003

# OSU Extension as Resource



OKLAHOM\*A\*SYST

Dr. Mike Kizer, OSU

Gypsy, OK 2001



Riparian Management

Dr. Bill Ross, OSU

Bristow, OK 2002

# CBO Help With Solution

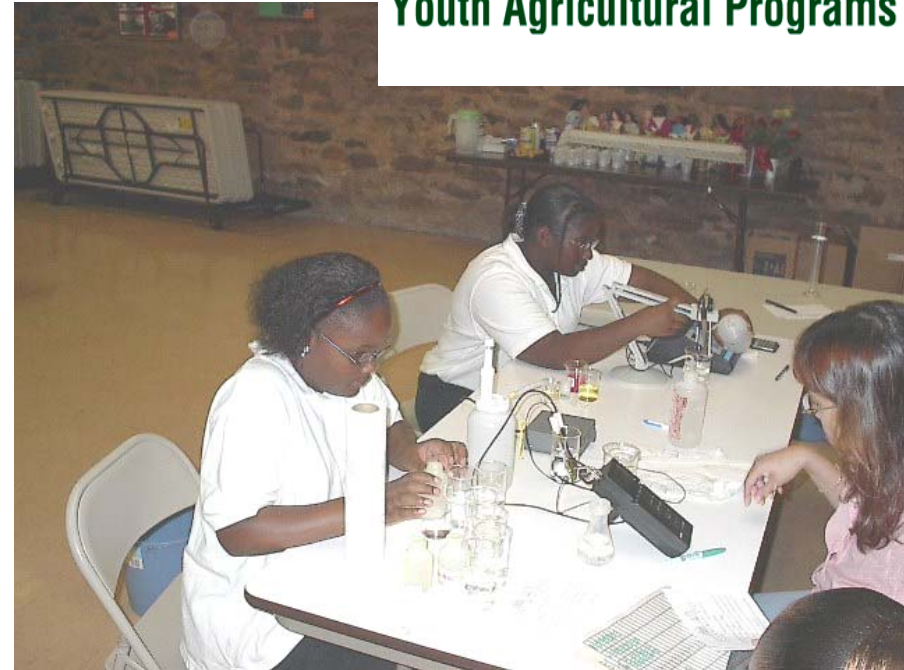


Retired Educators for  
Youth Agricultural Programs



REYAP

Spencer, OK 2003



REYAP

Boley, OK 2002

# OSU and Community-Based Organizations

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- 30 OKLAHOM\*A\*SYST Workshops
- 800 Assessments
- 300 Bacteria Test
- 500 Nitrate, Ph, and TDS Test



# OKLAHOM\*A\*SYST Worksheets

## OKLAHOM\*A\*SYST

### Home\*A\*Syst Home Assessment System



*Is your soil sandy or gravelly? Does it drain quickly? Does storm water flow from your property into a nearby lake or pond? Do you store hazardous chemicals? Are they stored close to your well or near a lake, stream, or river? This worksheet will help you identify risks to your water resources. This worksheet asks you to make a map of your home-site to identify potential trouble and to consider the following factors:*

- Soil type and depth
- Depth to bedrock
- Depth to the water table
- Location of wetlands, streams, or lakes
- Location of potential pollutant sources

Oklahoma Cooperative Extension Service  
Division of Agricultural Sciences  
and Natural Resources  
Oklahoma State University

### Site Assessment: Protecting Water Quality Around Your Home

#### Assessment Worksheet #1

#### How does Home\*A\*Syst work?

This worksheet introduces the Home\*A\*Syst assessment method you will use to evaluate your home and property. Other worksheets in the series cover specific health and pollution risks from septic systems, fuel storage, and solid waste. By completing this worksheet, you will become familiar with the format for ranking pollution risks and will gather information useful for later assessments.

If you identify potentially hazardous or unsafe conditions, what should you do? Develop an *action plan*. Each worksheet includes an Action Checklist and sources of additional information. A glossary of terms used in all of the Home\*A\*Syst worksheets is located at the end of this assessment.

#### Why do the assessment?

What you do in and around your home can affect water quality in ground water and nearby lakes, streams, or wetlands. This worksheet will help you evaluate important physical characteristics of your home-site, such as soils, geology, depth to ground water, and distance to surface water. By drawing a simple map of your home-site, you can see the potential impact of features and activities that may pose risks to your health and the environment. Animal wastes, garbage disposal methods, pesticides, fertilizers, and maintenance of your well and septic system can all affect ground water quality. Remember, this assessment is only a starting point. It is meant to encourage you to complete other Home\*A\*Syst worksheets.

## OKLAHOM\*A\*SYST

### Home\*A\*Syst Home Assessment System



*Keeping your well water free of harmful contaminants is a top priority—for your health and for the environment. This assessment helps you examine how you manage your well and how activities on or near your property may affect your water quality.*

#### This assessment covers:

1. Well location
  - separation distances
  - soil type
2. Well construction
  - well age
  - well type
3. Water testing and unused wells
  - water testing
  - abandoned wells

Oklahoma Cooperative Extension Service  
Division of Agricultural Sciences  
and Natural Resources  
Oklahoma State University

### Drinking Water Well Management

#### Assessment Worksheet #2

#### Why should you be concerned?

Many Oklahoma residents use wells to supply their drinking water. These wells, which tap into local ground water, are designed to provide clean, safe drinking water. Improper construction or poor maintenance can create a pathway that allows fertilizers, bacteria, pesticides, or other foreign materials to contaminate the water supply. Once in ground water, contaminants can move with the ground water to a neighbor's well, or from a neighbor's property to your well.

Most contaminants, have no odor or color and are difficult to detect, so they can put your health at risk. They are also difficult and expensive to remove. If your water is contaminated, your only options may be to treat the water or get water from another source.



#### How will this worksheet help me protect my drinking water and home environment?

This worksheet is a guide to help you better understand the condition of your well and how to take care of it. It identifies situations and practices that are safe and some that may require prompt attention.





**Improperly closed abandoned well**



**State Environmental Laboratory  
Oklahoma Department of Environmental Quality**

Mailing Address:  
P. O. Box 24104  
Oklahoma City, OK 73124-0104

Physical Address:  
707 North Robinson  
Oklahoma City, OK 73102

Bacteriological Water Analysis

Sample Number assigned by Lab \_\_\_\_\_

**Please fill to at least the EPA 100 mL line.**

**Complete Information Between the Black Lines. There is a \$12.00 charge for private water analysis.** Check or money order should be made payable to Oklahoma Department of Environmental Quality. Due to the high cost of postage & rising paper cost, the Department of Environmental Quality will no longer automatically send receipts for payment. If a receipt is required, please check this box,  otherwise your canceled check will serve as your receipt.

Private Well \_\_\_\_\_ County \_\_\_\_\_

Time Collected \_\_\_\_\_ Date Collected \_\_\_\_\_

Collected at \_\_\_\_\_ Collector's Initials \_\_\_\_\_

Owner \_\_\_\_\_

Mail Results to :

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Sampler's Remarks \_\_\_\_\_

**Note: Please do not use tape to seal lid, use a rubber band instead.**

**For Lab Use Only**

Analysis Date \_\_\_\_\_ Time \_\_\_\_\_ Rej Code \_\_\_\_\_

Circle Type of Analysis Required:

Total Coliform Test: \_\_\_\_\_ Total/100ml \_\_\_\_\_

Fecal Coliform Test: \_\_\_\_\_ Total/100ml \_\_\_\_\_

Fecal Streptococci Test: \_\_\_\_\_ Total/100ml \_\_\_\_\_

Heterotrophic Plate Count Test: \_\_\_\_\_ Total/1ml \_\_\_\_\_

Analyst Remarks \_\_\_\_\_

MF \_\_\_\_\_ LTB \_\_\_\_\_ BGB \_\_\_\_\_ EC \_\_\_\_\_ PA \_\_\_\_\_ UV \_\_\_\_\_ initials \_\_\_\_\_

# Test Results



OKLAHOMA \*A\* SYST

HOME \*A\* SYST

FARM & RANCH \*A\* SYST

## WATER ANALYSIS RESULTS

NAME \_\_\_\_\_

ELECTRICAL CONDUCTIVITY \_\_\_\_\_  $\mu$ S/CM (USED TO ESTIMATE TDS)

TOTAL DISSOLVED SOLIDS \_\_\_\_\_ PPM (SDWA GUIDELINE: 500 PPM)

PH \_\_\_\_\_ STANDARD UNITS (SDWA GUIDELINE: 6.5-8.5)

NITRATE (AS N) \_\_\_\_\_ PPM (SDWA STANDARD: 10 PPM)

OTHER \_\_\_\_\_

(THE RESULTS ARE APPROXIMATE VALUES AND DO NOT MEET EPA QUALITY ASSURANCE STANDARDS).

# OKLAHOMA \* A \* SYST

## Water Analysis Results

	ELECTRICAL CONDUCTIVITY		TDS	pH	NITRATE
1	35,400	X O.66=	23364	7.67	44.2
2	1710	X O.66=	1128.6	7.56	1.17
3	1705	X O.66=	1125.3	7.61	1.08
4	1739	X O.66=	1147.7	7.22	3.48
5	615	X O.66=	405.9	3.13	34.1
6		X O.66=			
7		X O.66=			
8		X O.66=			
9		X O.66=			
10		X O.66=			