



Data Summit Results

North Region - 4-H & Youth Development

Water

Issue: Water

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Section 1. Relevance

Where did this issue surface?

Texas Community Futures Forum

What is the issue/problem?

Water education, conservation and use, water quality

Water is one of the most valuable resources we have. Texas's water usage is increasing because of population and rising per capita water use rates. Water is a huge issue in Texas, so teaching young people proper water conservation techniques should benefit all of us in the future.

Problem size and scope? (How many people does it affect? How wide spread?)

state-wide

Problem severity? (How serious is this issue?) **High**

Description: **Water use, management, conservation and quality**

Target Audience? (Who does the problem impact and how many?)

Home owners, public, youth, state wide

What are some general characteristics of the audience this program targets?

Water users, youth learners, future water users/ conservationists

Section 2. Response

Goal: To increase youth's ability to manage water through knowledge of conservation process, water quality issues, and proper water use

State the outcome objectives.

| Client Change | At the end of this program, will... |
|---------------|-------------------------------------|
| | |

| | |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Knowledge | increase knowledge on... -conservation practices, -water quality issues, and -proper water use. |
| Skills | develop skills.... -conservation practices, -water management and declining water quality and -issue effecting water quality |
| Attitude | change their attitudes pertaining to... -water use, -water quality and -water conservation/ management |
| Behavior Change | adopt... -conservation practices and -water quality around the home, school, and business |
| New Technology | adopt... -equipment such as reduced flow water hoses, - faucets, sprinklers, irrigation; techniques- timers |
| Best Practice | adopt -conserve water in and around the house |

Listed below are some educational design ideas that could be used to address this issue.

| Topic (Subject Matter) | Strategy to deliver content | Existing Resource(s) | Contact Person(s) |
|---------------------------------------------------|-----------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|
| Determining water quality in and around the house | curriculum enrichment 4-H curriculum | Extension curriculum; give water a hard evaluation; gov't agencies | CEAs, water specialists, TCE, water districts personnel, Monty Dozier |
| Future supply of water in Texas | same | " " The Groundwater foundation for - Kids Course | NRCS, Local teachers, university educators |
| Ground Water Protection | same | " " | TDA, EPA, NRCS |
| Ground Water Vocabulary | same | " " | Internet/web-resources, NRCS |
| Water Conservation Practices | same | " " | Underground water district specialists, CEAs, NRCS |
| Surface Water Management and Protection | same | " " | Texas Parks and Wildlife officials; NRCS |

Other Groundwater Resources Located on the Internet:

1. U.S. Geological Survey <http://water.usgs.gov/>
2. Kansas State Research and Extension Mobile Irrigation Lab <http://www.oznet.ksu.edu/mil/>
3. The Groundwater Foundation <http://www.groundwater.org/>
4. North Plains Groundwater District <http://www.npwd.org/Ogallala.htm>

5. Red River Authority of Texas <http://www.rra.dst.tx.us/>
6. High Plains Underground Water Conservation District No. 1 <http://www.hpwd.com/ogallala/ogallala.asp>
7. Texas Section American Water Works Association <http://www.tawwa.org/>
8. Irrigation Technology Center, a center of the Texas Water Resources Institute, Texas A&M University <http://itc.tamu.edu>
9. Groundwater <http://enterprise.cc.uakron.edu/geology/natscigeo/Lectures/gwater.htm>

Section 3. Results

| Client Change Level | Sample Questions (There are some example questions that could be used to measure client change.) |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Knowledge | Survey, Interview <ul style="list-style-type: none"> • List the conversation practices you have used in and around the home • Explain water quality as based on the curriculum • Discuss how you can determine water quality • Educate your neighborhood's water use based on what you have learned through the curriculum • Explain why water is a limited resource • List the components of the water cycle |
| Skills | Survey Interview <ul style="list-style-type: none"> • How often do you use the water quality self test in and around your home? • Explain water conservation equipment (i.e. spray nozzles, drip hoses, flow meters, use of times) you have implemented in and around your house. • Explain 2 ways you have conserved water use concerning your personal home |
| Attitude | <ul style="list-style-type: none"> • Discuss how your attitude has/hasn't changed concerning water quality after completing the curriculum • How do you feel about people who "waste" water |
| Behavior Change | <ul style="list-style-type: none"> • Have you noticed a change in your family water bill because of water conservation in and around your home? • Are you noticing water abuse in your neighborhood? • Have you developed a water management plan for your home? |
| New Technology | <ul style="list-style-type: none"> • Do you seek information on water use, quality, and conservation through the internet on a web based program? • Have you installed water saving devices in your house? |
| Best Practice | <ul style="list-style-type: none"> • Develop a list of conservation practices you and your family have developed based on your participating in the youth curriculum? |

Economic Indicators: Are there economic indicators that can be measured concerning this issue?

YES

Please list item below:

WATER BILL

| Internal to Extension Stakeholders | External Stakeholders |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water specialist 4-H Agent Monty Dozier 4-H Adult Volunteers | NRCS TDA EPA Underground water districts Water Authorities Elected officials City/county water management officials Water equipment dealers |

Additional Resources: What additional resources are needed to address this issue?
Curriculum Specialist that worked on the Youth Water Resources
A Resources/Finance for curriculum development

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