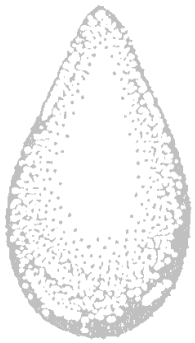
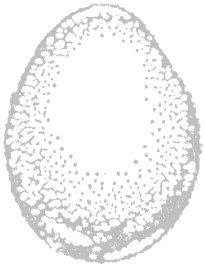
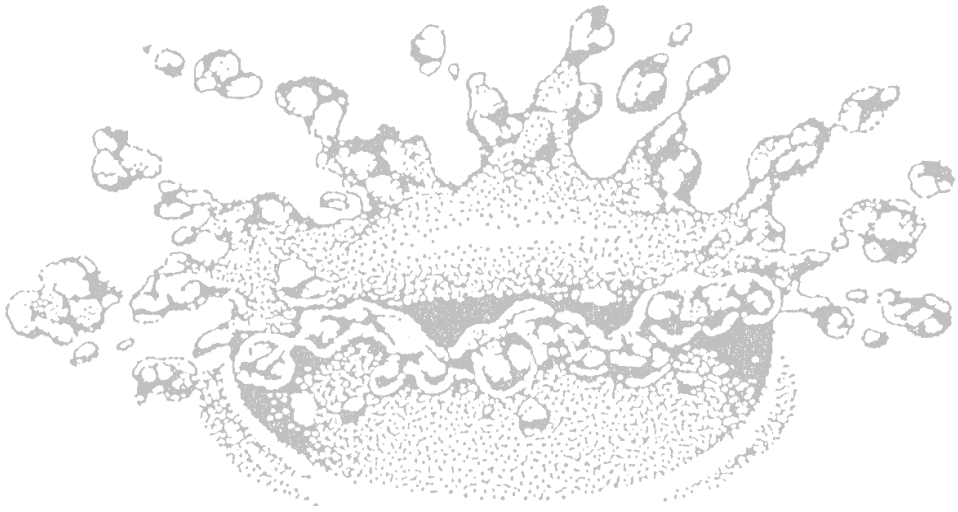


Water Quality Educational Materials





Dr. Kitt Farrell-Poe
Extension Environmental Engineer

Utah State University Extension

October 1997

This booklet lists and describes water quality educational materials provided by Utah State University Extension. If you have any questions about this booklet or the materials described herein, please feel free to contact your county extension office or:

Dr. Kitt Farrell-Poe, Program Director
Utah State University Extension Nonpoint Source Pollution Education Program
Agricultural Systems Technology & Education Dept.
1500 North 800 East
Utah State University
Logan, UT 84322-2300
(voice) 435-797-3389
(FAX) 435-797-4002
(Email) kittfp@ext.usu.edu

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Idea Booklets for Hands-On Activities

Title: **Groundwater Flow Demonstration Model Activities for Grades 6-12**
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: free
Audience: youth (grades 6-12)
Abstract: This activity booklet includes directions for four hands-on activities demonstrating groundwater movement concepts using a groundwater flow demonstration model, a glossary, and a correlation to the 1994 Utah Core Curriculum for Science. Each activity consists of the purpose of the lesson, background material for the teacher, list of materials, procedures, and extensions to the lesson. 22 pp. (at USU)

Title: **Utah Nonpoint Source Pollution Education Activities for Grades 1-12**
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: free
Audience: youth (grades 1-12)
Abstract: This activity booklet includes directions for ten hands-on activities demonstrating nonpoint source pollution concepts, a glossary, and a correlation to the 1994 Utah Core Curriculum for Science. Each activity consists of the purpose of the lesson, background material for the teacher, list of materials, procedures, and extensions to the lesson. 37 pp. (at USU)

Title: **Water Conservation and Nonpoint Source Pollution**
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: $5.00
Audience: youth (grades K-8)
Abstract: This activity booklet features hands-on -- minds-on science activities for elementary grades. The booklet incorporates the activities in the *Utah Nonpoint Source Pollution Education Activities for Grades 1-12* and *Groundwater Flow Demonstration Model Activities for Grades 6-12* and includes new materials on water conservation. It was co-developed with the International Office of Water Education to provide inservice training to teachers on water quality and quantity issues. Many of the activities include a correlation to the 1994 Utah Core Curriculum for Science. 94 pp. (at USU)

Title: **Groundwater**
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: free for loan
Audience: general public
Abstract: 3-panel tabletop booth display concerning topics for groundwater education: hydrologic cycle, Utah's principal aquifers, contamination, and protection. The groundwater model can be included as part of the display. Approximate size: each panel = 22 " wide x 32" tall - three panels require a minimum of a 6' table. (at USU)

Title: **Safe Drinking Water**
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: free for loan
Audience: general public
Abstract: 3-panel tabletop booth display concerning topics of safe drinking water: testing, treating, and protecting. Approximate size: each panel = 22 " wide x 32" tall - three panels require a minimum of a 6' table. (at USU)

Title: **Surface Water**
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: free for loan
Audience: general public
Abstract: 3-panel tabletop booth display concerning surface water protection. The watershed model can be included as part of the display. Approximate size: each panel = 22 " wide x 32" tall - three panels require a minimum of a 6' table. (at USU)

Title: Nitrate Test Kits
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: free for loan
Audience: adults, teachers, educators
Abstract: Two different types of kits for testing nitrate-nitrogen are available. The color cube can be used for nitrate ranges between 0-50 mg/L in 10 mg/L increments (20 kits). The color discs can be used for nitrate ranges between 0-1 (0.02 mg/L smallest increment), 0-10 (0.2 mg/L smallest increment) and 0-50 (1.0 mg/L smallest increment) - there is 1 of each available. Each kit includes all necessary reagents for testing nitrate-nitrogen. (at USU)

Title: Surface Water Test Kits
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: $10.00 refundable deposit
Audience: adults, teachers, educators
Abstract: Rugged, lightweight kit includes all necessary apparatus and reagents for testing ammonia, chlorine, pH, nitrate, dissolved oxygen, phosphorus, and temperature. There are 2 of these kits available. (at USU)

Title: Turbidimeter
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: $10.00 refundable deposit
Audience: adults, teachers, educators
Abstract: Portable, self-contained unit measures turbidity in the range of 0-1000 NTUs by choosing between one of three manual range modes (0-9.99, 10-99.9, 100-1000 NTU) or automatic range mode for samples that vary widely in turbidity. It is field ready, with four AA alkaline batteries (DC adapter available), necessary apparatus, and rugged carrying case. There are 1 of these test kits available. (at USU)

Title: **Diatomaceous Earth Watershed Model**
Source: Utah State University Extension -- Cache County Office
Address: c/o Mike Allred, Courthouse, Logan, UT 84321-4597
Phone #: 435-753-5279
Cost: free for loan
Audience: youth (grades 4-12) and adults
Abstract: Diatomaceous earth resembles coarse flour and can hold many times its weight in water. Using colored water and various "accessories," you can demonstrate how rivers form watersheds and how land treatments affect overland flow.

Title: **Groundwater Flow Demonstration Model**
Source: Utah State University Extension
Address: contact your County Extension Office
Phone #: 435-797-3389 (to locate models closest to you)
Cost: $25 refundable deposit
Audience: youth (grades 4-12) and adults
Abstract: The groundwater models are used to demonstrate groundwater movement principles. The model is constructed with clear plexiglass which allows viewers to watch how the water within a groundwater system moves. (at USU)

Title: **Watershed Model**
Source: Utah State University Extension
Address: contact your County Extension Office
Phone #: 435-797-3389 (to locate models closest to you)
Cost: $25 refundable deposit
Audience: youth (grades 4-12) and adults
Abstract: The surface water models are used to demonstrate how activities on land affect the quality of the water in a watershed. It can show how water becomes polluted and how best management practices can prevent pollution. The model depicts land uses in a "typical" watershed -- urban, industrial/commercial, agricultural, highway, forest, streambank, and lake shore. (at USU)

Title: **NPS Educational Directory**
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: free
Audience: adults, teachers, educators
Abstract: This is a not-so-complete directory of nonpoint source pollution (NPS) educational materials for both youth and adults containing curricula, activities, books, videos, pamphlets, and fact sheets. Each entry has the material's title, source, address of the source, price, intended audience, and abstract. The intent is to provide a resource to assist educators in finding materials that are suitable for their audience and pocketbook. Also available on the Internet at: http://ext.usu.edu/publicat/nrpubs.htm. (at USU)

Title: **Watershed**
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: $10.00
Audience: youth (grades 6-12) and adults
Abstract: This IBM-compatible software program uses a multi-media format to explain what a watershed is and the water quality issues facing land uses, provide a quick overview of various watersheds being monitored in Utah, and provide a simulation gaming format for youth to make decisions on land use and the consequences of those land use decisions. (at USU)

Title: **Utah Groundwater**
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: $10.00
Audience: youth (grades 5-12) and adults
Abstract: This IBM-compatible software program discusses groundwater concepts including the hydrologic cycle, types of aquifers, and groundwater contamination. It is designed to be self-pacing and interactive by using hyper-text and computer graphics. (at USU)

Title: **Utah Residential Water Conservation Techniques**
Source: Utah State University Extension
Address: 1500 N. 800 E., Ag. Systems Technology & Ed. Dept., Utah State University, Logan, UT 84322-2300
Phone #: 435-797-3389
Cost: $10.00
Audience: youth (grades 4-12) and adults
Abstract: This IBM-compatible software program discusses water conservation techniques in and around the home. It is designed to be self-pacing and interactive by using hyper-text and computer graphics. (at USU)

Title: Adventures of Mr. Muddy, The (or As the Water Churns)
Source: Milwaukee Metropolitan Sewerage District
Address: 260 West Seeboth St., P.O. Box 3049, Milwaukee, WI 53201-3049
Phone #: 414-272-5100
Cost:
Audience: youth
Abstract: A videotape created by Milwaukee students to teach other students about household hazardous waste and the importance of clean water. 23 minutes (at USU).

Title: Do Your Part
Source: Region 6 North American Waterfowl Management Plan Office
Address: Plan Office, Denver, CO
Phone #: 303-236-8676
Cost:
Audience: youth, grades 4-6
Abstract: This video takes three students on an adventure through a wetland. They discover the importance of wetlands, why they are disappearing, and what students can do to help protect them. Included is a teacher's guide with activities to enhance the video's effectiveness. 23 minutes (at USU).

Title: Groundwater Adventure, The
Source: Water Environment Federation
Address: Publications Order Dept., 601 Wythe St., Alexandria, VA 22314-1994
Phone #: 800-666-0206
Cost: $49.00
Audience: youth, grades 5-9
Abstract: The often puzzling concept of groundwater is graphically explained using a video game format. An animated "spokes-dinosaur" helps a live-action student gain points by preventing groundwater pollution from industrial, agricultural, and private residential sources. The price includes a video, teacher's guide, and 20 student guides. (at USU).

Title: Non-Point Source Pollution: The solution begins with you
Source: USU Extension
Address: Ag. Systems Technology & Ed. Dept., Utah State University, 1500 N. 800 E., Logan, UT 84322-2300
Phone #: 435-797-3389
Cost:
Audience: youth (grades 5-12), adults
Abstract: This video discusses the sources of nonpoint source pollution, the effects that various pollutants have on water quality, and a few successful remediation activities within the State of Utah. 20 minutes (at USU).

Title: Saving Water—The Conservation Unit
Source: Water Environment Federation
Address: Publications Order Dept., 601 Wythe St., Alexandria, VA 22314-1994
Phone #: 800-666-0206
Cost: $49.00
Audience: youth, grades 5-9
Abstract: Set in the future, an animated dinosaur is a museum's exhibit curator and explains how all of the earth's water, except for one small vial, has been wasted or polluted beyond use. Students travel to the future to see what can and might happen. Students also learn what they can do today. The package includes a video, teacher's guide, and 20 student workbooks. (at USU).

Title: Surface Water Unit
Source: Water Environment Federation
Address: Publications Order Dept., 601 Wythe St., Alexandria, VA 22314-1994
Phone #: 800-666-0206
Cost: $49.00
Audience: youth, grades 5-9
Abstract: This video presents a thorough overview of surface water. Dino Sorrus, WEF's animated water quality spokes-dinosaur, introduces live-action students reporting on the state of today's surface water quality. The video also provides ideas on how to reduce or prevent water pollution. Package includes a video, teacher's guide, and 20 student workbooks. 8 min (at USU).

Title: W.E.T.
Source: Kansas State Cooperative Extension Service
Address: 201 Umberger Hall, Kansas State University, Manhattan, KS 66506
Phone #: 913-532-5800
Cost: $15.00 binder + 25.00 video
Audience: youth, grades 4-8 and 4-H
Abstract: This teacher's guide and video includes over 60 lessons in the areas of water cycle, supply, treatment, conservation, and pollution for hands on experience. (at USU).

Title: Wastewater Treatment H2O TV
Source: Water Environment Federation
Address: Publications Order Dept., 601 Wythe St., Alexandria, VA 22314-1994
Phone #: 800-666-0206
Cost: $49.00
Audience: youth, grades 5-9
Abstract: Starting with a "music video" style introduction, Dino Sorrus (WEF's animated water quality spokes-dinosaur), presents a complete examination of the wastewater treatment process. Students will be entertained and challenged into understanding water quality issues. The package includes a video, teacher's guide, and 20 student workbooks. (at USU).

Title: Water: A Never Ending Story
Source: Utah Division of Water Resources, Dept. of Natural Resources
Address: 1636 West North Temple, Suite 310, Salt Lake City, UT 84116-3156
Phone #: 801-538-7299
Cost: free
Audience: youth, grades 5-9
Abstract: This 1995 video presents a brief introduction to specific segments of the hydrologic cycle: evaporation, precipitation, water storage, water treatment, distribution systems, water use, sewer systems, and waste treatment. Filmed and produced in Utah. Accompanying curricula available. 20 minutes (at USU).

Title: Water Follies (A Soak Opera)
Source: Utah Division of Water Resources, Dept. of Natural Resources
Address: 1636 West North Temple, Suite 310, Salt Lake City, UT 84116-3156
Phone #: 801-538-7299
Cost:
Audience: youth, grades 5-9
Abstract: Developed by the Denver Water Department, this video has several humorous cartoon vignettes on water conservation. 7 minutes (at USU).

Title: Watershed Best Management Practices
Source: Utah State University Extension
Address: Fisheries & Wildlife Dept., Utah State University, Logan, UT 84322-5210
Phone #: 435-797-3975
Cost: $14.50
Audience: adults
Abstract: In this 1996 video, Extension resource specialists identify activities that occur in watersheds which may contribute to non-point source pollution of water systems and the best management practices which can be implemented to reduce the impact of non-point source pollution on water systems. 23 minutes (at USU).

Title: We All Live Downstream
Source: Oregon State University Extension Service
Address: Publications Orders, Agricultural Communications, Oregon State University, Administrative Services Building A422, Corvallis, OR 97331-2119
Phone #: 503-737-2513
Cost: $30.00
Audience: youth (grades 9-12) and adults
Abstract: This video gives an introduction to nonpoint source pollution. It gives an example of an American river under stress (the Tualatin River in Oregon) and the positive steps taken to improve the river's water quality. It gives a good overview of urban/stormwater runoff and includes a segment on agricultural nonpoint source pollution. 23½ minutes (at USU).

Title: Wonders of WATER
Source: Utah Division of Water Resources, Dept. of Natural Resources
Address: 1636 West North Temple, Suite 310, Salt Lake City, UT 84116-3156
Phone #: 801-538-7299
Cost:
Audience: youth (grades 6-12) and adults
Abstract: This video gives a Utah perspective of water management from the hydrologic cycle to its uses (including domestic, industrial/commercial, agricultural, recreational, and hydroelectrical), contamination, Western water laws, and conservation. 14 minutes (at USU).