APPENDIX G

SUMMARY OF SELECTED CURRICULA ACTIVITIES – CORRELATION WITH SOURCE WATER KEY TOPICS: Based on the 122 curricula in the *Educating Young People About Water* database evaluated prior to September 1997 and newly acquired curricula

Environmental Protection Agency - Office of Ground Water and Drinking Water: Key Source Water Topics and Subtopics	**University of Wisconsin - Environmental Resources Center: Selected Source Water Curricula and Associated Activities**
Identification of Drinking Water Sources	
Definition of source water: Relationship to ground and surface water	**That Magnificent Ground Water Connection:** Track Down and Protect Your Critical Ground Water Resources (7-12)
Sources of drinking water: Surface water Ground water	**The Comprehensive Water Education Book:** Streams, Lakes, and Rivers (K-6) Underground Water (K-6) **From Ridges to Rivers: Watershed Explorations:** Watershed (ages 9-12) **Project Wet:** Rainy Day Hike (4-8) **Water Resources Professional's Outreach Notebook, Ground Water:** Aquifer (6-8) **Surface Water: The Student's Resource Guide** (7-9)
Mapping source water areas: Surface water Ground water	**From Ridges to Rivers: Watershed Explorations:** Topo Maps (ages 12-15) **Give Water A Hand Action Guide:** Map Your Watershed (6-8) **Project Wet:** Color Me a Watershed (9-12) **Sourcebook for Watershed Education:** Watershed and Map Reading (K-12) **Watershed Science for Educators:** Chapter 3: Introduction to Watersheds (6-12) Chapter 4: Topographic Maps (6-12) **Watershed to Bay: A Raindrop Journey:** Finding the Ups and Downs of the Landscape (4-8) Planning Your Own Raindrop Journey (4-8) **The Ways of the Watersheds:** Line Up! (6-12)

Geohydrology: Dynamics of Drinking Water Sources

Source water movements and interactions: Surface water Ground water	**A Child's Place in the Environment; Caring for Aquatic Systems:** What Part Does the Watershed Play in the Water in the Water Cycle? (4 – adaptable to higher levels) **Always a River:** Ground Water Model (K-12) **From Ridges to Rivers: Watershed Explorations:** The Case of the Missing Soda (ages 9-12) Infiltration and Percolation (ages 9-12) Where Has All the Water Gone? (ages12-15) **From Ridges to Rivers: Watershed Explorations, Guide to an Independent Science Project:** Life on Top of The Aquifer (grade not specified) **H2O Below:** Where in the World is Carmine Kool Aid? (6-8) **Hands-On Save Our Streams:** Water Pollution Runs Downhill (K-12) **Project Wet:** Branching Out (6-8) Just Passing Through (4-8) **That Magnificent Ground Water Connection:** An Easy Watershed Model (7-12) **Water Resources Professional's Outreach Notebook, Groundwater:** Porosity (6-8) Permeability (6-8) **Watershed Connections:** Understanding Ground Water Flow (6-12) Part 1: Filtering Contaminants Part 2: Contaminant Movement in the Soil **Watershed to Bay: A Raindrop Journey:** Groundwater Models (4-8) **The Ways of the Watersheds:** Pump It Up (6-12) The Lay of the Land (6-12) Soil Labyrinths (6-12) The Webs of Water (K-5) Water and Soils: Defining Soils (K-8)

Accessing, Storing, Treating, and Distributing Drinking Water Sources

Wells and surface water intakes	**Ecological Citizenship (EcoCit): Precious Water:** Laketown Community (5) **Investigation H20:** A Groundwater Drink (5-6)

Accessing, Storing, Treating, and Distributing Drinking Water Sources (cont.)

Storage of source water before treatment: Location Method	**A Child's Place in the Environment; Caring for Aquatic Systems:** How Can Diverting Water to a Community Be an Issue? (grade 4 – adaptable to middle school) **Always a River:** Where Does Our Water Come From? (K-12)
Treatment of source water	**A Child's Place in the Environment; Caring for Aquatic Systems:** How Do We Get Our Water? (4) **Always a River:** How Water is Cleaned (K-12) **Ecological Citizenship (EcoCit): Precious Water:** Filter Me! (5) **Project Water Science:** The Mud Mystery…"I Can See Clearly Now" (7-12) **Streets to Streams: Youth Investigations into Water Quality:** Water Clean-Up (5-9) **Water Sourcebook:** Purification of Water (6-8) Cleaning Point Source Pollution (6-8) **Water, Water Everywhere:** (7-12) Ground Water Analysis: Test Your Tap Water **The Ways of the Watersheds:** The Clean Water Girl & The Solar Water Cleaner (K-12)
Distribution of drinking water after treatment	**Always a River:** Model Distribution System (K-12) **That Magnificent Ground Water Connection:** The Great Water Hook-up (7-12)

Contamination, Risk Assessment, and Remediation of Drinking Water Sources

How source water becomes contaminated	**Investigating Groundwater: The Fruitvale Story:** The Fruitvale Story (6-9) **Project Water Science:** The Storm Drain Saga (7-12) The No-Know Non-Point Source Pollution Game (7-12) **Project Wet:** A Grave Mistake (6-12) Super Sleuths (6-12) Poison Pump (6-8) No Bellyachers (4-8) Sum of the Parts (4-8) A-maze-ing Water (K-6)

Contamination, Risk Assessment, and Remediation of Drinking Water Sources (cont.)

How source water becomes contaminated (cont.)	**That Magnificent Ground Water Connection:** Who's the Responsible Party? (7-12) **The Ways of the Watersheds:** The Watershed Whodunit (6-12) Washing Away (K-8)
Means of assessing importance of contaminants (risk assessment)	**From Ridges to Rivers: Watershed Exploration, Guide to an Independent Science Project:** Sustainable Land Use (grade level not specified) **Ground Water Education for Secondary Students:** How Much is Too Much? (7-12) **Investigating Groundwater: The Fruitvale Story:** Mapping It Out (6-9) **That Magnificent Ground Water Connection:** A Little Bit Goes A Long Way – Parts Per Million/ Parts Per Billion (7-12) Investigating My Own Community (7-12) **Water Politics:** Risk Assessment (9-12)
Identification of substances which contaminate source water	**Aquatic Project Wild:** Deadly Waters (3-12) **From Ridges to Rivers: Watershed Explorations:** Creatures of the Deep and Shallow (ages 12-15) **From Ridges to Rivers: Watershed Exploration, Guide to an Independent Science Project:** Aquatic Ecology: Habitat Assessment and Bio-survey of Macro-Invertebrates Dirt Made Our Lunch…and Dinner…and Even Dessert! (Grade level not specified) **Local Watershed Problem Studies:** Monitoring Pollutants in Snow (6-12) **Project Wet:** Super Sleuths (6-12) The Pucker Effect (6-12) **Sourcebook for Watershed Education:** Sediment Control (9-12) **Water Quality** (Adopt-A-Watershed): Data Collection Field Trip (10-12) **Watershed Science for Educators:** Chapter 6: Biological Monitoring (6-12) Sampling the Water at Your Study Site (6-12) **The Ways of the Watersheds:** Is It Clean (6-8)

Contamination, Risk Assessment, and Remediation of Drinking Water Sources (cont.)

Consequences of source water contamination: Treatment New sources Purchase	**Project Wet:** The Price is Right (9-12) **Water Politics:** Protecting the Quality of the San Joaquin Reservoir (9-12)
Remediation strategies for contaminated source water: Surface water Ground water	**Discover Wetlands:** Unit Three: Activity #3: Pure, Pure Water **From Ridges to Rivers: Watershed Explorations, Guide to an Independent Science Project:** Life on Top of The Aquifer, Investigation #2: Natural Solutions to Ground Water Contamination – Oil Degradation by Microbes (grade not specified) **Investigating Groundwater: The Fruitvale Story:** Cleaning It Up (6-9)
What can citizens and communities do when drinking water becomes contaminated?	**Ecological Citizenship (EcoCit): Precious Water:** Community Concern (5)

Protection and/or Pollution Prevention Activities and Programs of Citizens, Communities, and the Government

How citizens can protect drinking water sources	**Always a River:** Who Pollutes the River? (K-12) **Ecological Citizenship (EcoCit): Precious Water:** How Can I Help? (5) Take Action (5) Keep It Going! (5) **Sourcebook for Watershed Education:** Create a Brochure (9-12) Getting Legislation Passed (9-12) **That Magnificent Ground Water Connection:** Getting Up to Speed: Protecting Ground Water Track Down and Protect Your Critical Ground Water Resources (10-12) Investigating My Own Community (10-12) **Water Quality** (Adopt-A-Watershed): Water Quality Improvement Project: What Can We Do to Help? (10-12)
How communities can protect drinking water sources	**All the Rivers Run:** Watershed Decisions (4-8) **Aquatic Project Wild:** Dragonfly Pond (4-12)

Protection and/or Pollution Prevention Activities and Programs of Citizens, Communities, and the Government (cont.)

How communities can protect drinking water sources (cont.)	**Local Watershed Problem Studies:** A Simulation Game: Water Quality Implications in Land Use Planning (6-12) **That Magnificent Ground Water Connection:** Investigating My Own Community (10-12) Develop a Wellhead Protection Program (10-12)
How the individual at home can protect source water	**All the Rivers Run:** Market Madness (4-8) **That Magnificent Ground Water Connection:** How Much Water Do You Use (7-12) Household Hazardous Waste Survey (7-12) **Water Sourcebook:** Xeriscaping – Seven Steps to Water-Wise Landscaping (6-8)
Protection programs and laws for drinking water sources: State Federal	**Sourcebook for Watershed Education:** Who's in Control? Regulatory Agencies and Water Control (9-12) **That Magnificent Ground Water Connection:** Track Down and Protect Your Critical Ground Water Resources (10-12)
1996 Safe Drinking Water Act Amendments: Source Water Assessment Program (SWAP)	**Project Water Science; including Layperson's Guide to Drinking Water:** This Game May Be Hazardous to Your Health (7-12)
Public involvement in implementation of 1996 SWAP	Not present in evaluated curricula

Present and Future Needs for Safe Drinking Water Sources

Safe drinking water supplies: Present needs Future needs	**A Child's Place in the Environment; Caring for Aquatic Systems:** How Do People Currently Use Water (4) **Children's Groundwater Festival Outreach Packet:** Water Uses (4-6) **Project Wet:** The Long Haul (K-12) Whose Problem Is It? (6-12) **Water Conservation - E2: Environment & Education:** Evaluate World and U.S. Water Use (6-12) **The Ways of the Watersheds:** Drought Days (K-8)