



POSTER PRESENTATIONS

Poster presentations are listed below in thematic groups. All posters within the same thematic group will appear together in the Exhibit Hall.

Abstract# Poster title, Author, Affiliation

ASSESSING AND EVALUATING GROUND WATER AND DRINKING WATER RESOURCES

- 001 *Effects of Organic Carbon Distribution on Redox Chemistry in a Glacial Aquifer, Woodbury, Connecticut, **Craig Brown**, U.S. Geological Survey*
- 002 *Optimizing a Monitoring Network Using Water Quality and Environmental Factors in the Glacial Aquifer System, United States, **Terri Arnold**, U.S. Geological Survey*
- 003 *Estimation of Stream-Valley Aquifer Withdrawals, 2000, **Pierre Sargent**, USGS*
- 004 *Comparison of the Vulnerability of Domestic Wells and Public Wells to Volatile Organic Compounds, **Barbara Rowe**, U.S. Geological Survey*
- 005 *Nutrients in ground water from private, public-supply, and monitoring wells open to the glacial aquifer system, United States, **Kelly Warner**, U.S. Geological Survey*
- 006 *Can we distinguish regional from local variations in trace-element concentration in the glacial aquifer system of the northern United States?, **George Groschen**, U.S. Geological Survey*
- 007 *Natural and human factors affecting shallow ground-water quality at local and regional scales in the North Atlantic Coastal Plain, New York through North Carolina, **Scott Ator**, US Geological Survey*
- 008 *Trends in ground-water withdrawals for irrigation and public-supply uses across the United States, **Richard Marella**, U.S. Geological Survey*
- 009 *Using a modified probability approach for determining the contributing area to a public supply well in karst terrain, **Christy Crandall**, U.S. Geological Survey*
- 010 *Spatial distribution of dissolved solids in major aquifers and rivers in the Southwestern United States, **Nancy Bauch**, U.S. Geological Survey Colorado Water Science Center*
- 011 *Reactive Transport of Nitrate in a Heterogeneous Alluvial Fan Aquifer, San Joaquin Valley, California, **Christopher Green**, U.S. Geological Survey*
- 012 *Framework of Possible Factors that Affect Water Quality in Basin-fill Aquifers of the Southwestern United States, **Susan Thiros**, U.S. Geological Survey*
- 013 *New Jersey's Ambient Ground-Water-Quality Monitoring Network: An Update, **Michael Serfes**, New Jersey Geological Survey (NJGS)*
- 014 *Design Considerations for Assessing Ground-Water Quality in Regional Aquifer Systems: The High Plains Aquifer, **Bret Bruce**, U.S. Geological Survey*

EVALUATING THE EFFECTS OF KEY STRESSORS AND EMERGING CONTAMINANTS

- 015 *Salt Marsh Ecosystem Health at Ft. Pulaski National Monument near Savannah, Georgia*, **Joseph Richardson**, Savannah State University
- 016 *Relationships between species traits and trace element bioaccumulation in riverine fishes*, **Terry Short**, U.S. Geological Survey
- 017 *Uranium and 222radon in ground water from glacial and bedrock aquifers in the northern United States*, **Joseph Ayotte**, U.S. Geological Survey
- 018 *Agricultural Pesticides in Shallow Ground-water Flow Systems: A Contrast between Systems*, **Gregory Steele**, U.S. Geological Survey
- 019 *The Occurrence of Volatile Organic Compounds in Aquifers of the United States*, **Wayne Lapham**, U.S. Geological Survey
- 020 *Real-Time Monitoring and Regression Analysis for Specific Conductance and Sodium-Adsorption Ratios in an Area of Coalbed Natural Gas Development in the Powder River Basin, Montana and Wyoming*, **Melanie Clark**, U.S. Geological Survey
- 021 *Small Scale Water Monitoring Networks for USACE Construction Projects*, **John Baum**, U.S. Army Corps of Engineers Sacramento District
- 022 *Using Long-Term Monitoring and Special Studies To Evaluate Trends and Address Problems at Twelve USACE Managed Reservoirs in California*, **John Baum**, U.S. Army Corps of Engineers Sacramento District
- 023 *Using a Spatially Balanced, Random Sampling Design to Assist Informed Management Decisions*, **Sarah Lowe**, San Francisco Estuary Institute
- 024 *Analysis of Pesticides, Antibiotics, and their Degradation Products Using State-of-the-Art Mass Spectrometry*, **Elisabeth Scribner**, U.S. Geological Survey, Kansas Water Science Center
- 025 *Herbicide transport and transformations in the unsaturated zone of two small agricultural basins with corn and soybean row crops*, **Tracy Hancock**, U.S. Geological Survey
- 026 *Dissolved Copper Trends in Lower South San Francisco Bay*, **Eric Dunlavy**, City of San José
- 027 *Legacy and Emerging Contaminants in San Francisco Bay Sport Fish, 2003*, **Ben Greenfield**, San Francisco Estuary Institute (SFEI)
- 028 *Comparison of Anthropogenic Organic Compounds in the Source Water and Finished Water for the City of Atlanta, October 2002 - May 2005*, **Melinda Dalton**, U.S. Geological Survey, Georgia Water Science Center
- 029 *A National Assessment of PBDEs in Lake Fish Tissue*, **Leanne Stahl**, U.S. Environmental Protection Agency
- 030 *Establishment of Baseline Water-Quality and Sediment-Chemistry Data at Sentinel Sampling Sites on Lake Powell for Future Monitoring of Organic and Inorganic Contaminants*, **Robert Hart**, U.S. Geological Survey
- 031 *The National Stream Quality Accounting Network (NASQAN II) Program: A Case Study of Water Quality in the Lower Rio Grande Basin*, **Rebecca Lambert**, U.S. Geological Survey

MERCURY

- 032 *Mercury Biomagnification from the Base of the Food Chain in Guadalupe River Watershed, San Jose, CA*, **Brent Topping**, U.S. Geological Survey
- 033 *Monitoring Mercury Contamination in the Carson River System, Nevada*, **Karen Thomas**, Nevada Water Science Center
- 034 *Mercury transport to San Francisco Bay through the Sacramento-San Joaquin River Delta*, **Nicole David**, San Francisco Estuary Institute
- 035 *Water and Air – Mercury in Idaho*, **Marti Bridges**, Idaho Department of Environmental Quality
- 036 *Monitoring Mercury Bioaccumulation in Fish during Everglades Restoration*, **David Evans**, NOAA Center for Coastal Fisheries and Habitat Research
- 037 *The Fish Mercury Project: Involving Stakeholders in Monitoring and Risk Communication in the Sacramento-San Joaquin Delta Watershed*, **Alyce Ujihara**, California Department of Health Services, Environmental Health Investigations Branch
- 038 *Caspian and Forster's Terns as Indicators of Mercury and Other Priority Pollutant Exposure in San Francisco Bay*, **Terrence Adelsbach**, U.S. Fish and Wildlife Service
- 039 *Time Series Study of Mercury in San Francisco Bay*, Christopher Conaway, UC-Santa Cruz
- 040 *Use of a National Descriptive Model of Mercury in Fish in Site-specific Applications*, Stephen Wentz, U.S. Geological Survey
- 041 *Mercury in Stream Water, Streambed Sediment, and Fish of the Willamette Basin, Oregon, in Relation to Mercury Sources*, **Dennis Wentz**, U.S. Geological Survey
- 042 *Characterization of mercury concentrations in suspended sediment loads in Guadalupe River and Coyote Creek, San Jose, California: Can TMDL targets be met?*, **Lester McKee**, San Francisco Estuary Institute
- 043 *Mercury Monitoring in the San Jose/Santa Clara Water Pollution Control Plant*, **James Downing**, City of San José

NUTRIENTS

- 044 *Trends in Water Quality and Nutrient Sources and In-stream Nutrient Loads in the Southeastern United States*, **Douglas Harned**, U.S. Geological Survey
- 045 *Fate and transport of nutrients in the unsaturated zone in five agricultural areas of the United States*, **Lawrence Fisher**, U.S. Geological Survey
- 046 *Whole stream response to nitrate loading in three streams draining agricultural landscapes in Washington, Maryland, and Nebraska*, **John Duff**, U.S. Geological Survey
- 047 *Random nutrient concentration v. targeted nutrient concentration...is there a difference?*, **Mary Anne Nelson**, Idaho Department of Environmental Quality
- 048 *Supporting nutrient criteria development nationwide: Web application & Technical REQuest System (T-REQS)*, **Jeroen Gerritsen**, Tetra Tech, Inc.

049 *Determination of Trends in Nutrient and Sediment Concentrations and Loads in Major River Basins, South-Central United States*, **Richard Rebich**, U.S. Geological Survey, Mississippi Water Science Center

EVALUATING THE EFFECTS OF LAND USE ON WATER QUALITY: URBANIZATION AND AGRICULTURE

050 *Causes of Increased Total Dissolved Solids and Conductivity Levels in Urban Streams in Georgia*, **Ted Mikalsen**, Georgia Environmental Protection Division

051 *Effects of Altered Storm Water Discharge on Water Quality in the Vernon River Estuary, Georgia*, **Joseph Richardson**, Coastal Environmental Analysis

052 *NAWQA Addresses Urban Water-Quality Issues through Multiple Studies*, **Cathy Tate**, U.S. Geological Survey

053 *Effects of Urbanization on Stream Stage and Temperature during Winter and Summer Storms within the Piedmont of North Carolina, 2002-2003*, **Robin Brightbill**, U.S. Geological Survey

054 *Nutrients and Biological Communities of Ozark Streams, 1993-2005*, **James Petersen**, U.S. Geological Survey

055 *Environmental Monitoring Network in the Cedar Creek Experimental Watershed*, **Gary Heathman**, USDA-ARS

056 *Occurrence of Volatile Organic Compounds in Selected Urban Streams in the United States, 1995-2003*, **David Bender**, U.S. Geological Survey

057 *Analysis of the effects of road salt on water quality in the northern United States*, **John Mullaney**, U.S. Geological Survey

058 *Estimating and Projecting Impervious Cover in the Southeastern United States*, **James Harrison**, U.S. Environmental Protection Agency, Region 4

059 *Response of fish communities to gradients of urbanization in southeastern streams near Atlanta, Georgia*, **M. Brian Gregory**, U.S. Geological Survey

060 *Urban Hydrology Monitoring Programs in the Atlanta Metropolitan Area, Georgia*, **William Hughes**, U.S. Geological Survey

061 *Development of an urban hydrological model linking denitrification potential to urban wetland restoration*, **Michael Mak**, Rutgers University

062 *National Water Quality Surveillance for Waterborne Pathogens and Related Indicators in Canadian Agricultural Waters*, **Rob Kent**, Environment Canada

063 *Anthropogenic Impacts to Fish Assemblages in Northern New Jersey Streams*, **Leslie McGeorge**, New Jersey Department of Environmental Protection

064 *Controlling Cumulative Impacts from Impervious Surfaces: Relationship between California State Law and NPDES Requirements*, **Brian Schmidt**, Committee for Green Foothills

MONITORING APPROACHES FOR WATERSHED ASSESSMENT AND IMPROVEMENT

- 065 *Diurnal Nutrient Fluctuations in the Lake Okeechobee Watershed, Florida*, **Robert Sheridan**, ETI Professionals, Inc. c/o U.S. Geological Survey
- 066 *Assessment of native stream biodiversity and the influence of invasive species in Tierra del Fuego, Chile*, **Michelle Moorman**, U.S. Geological Survey
- 067 *Using Environmental Monitoring and Assessment Program Data for Describing Condition of Inner Columbia River Basin Streams*, **Lillian Herger**, U.S. Environmental Protection Agency, Region 10
- 068 *The Water Quality Monitoring Programs of the Oklahoma Water Resources Board (OWRB)*, **Bill Cauthron**, Oklahoma Water Resources Board
- 069 *Coastal Watershed Assessment - Point Reyes National Seashore and Golden Gate National Recreation Area*, **Brannon Ketcham**, Point Reyes National Seashore
- 070 *San Francisco Area Network Water Quality Monitoring Protocol*, **Mary Coopridger**, National Park Service
- 071 *Water Quality Status and Issues in Nepal*, **Ms. Keshari Bajracharya**, His Majesty's Government, Ministry of Environment, Science and Technology
- 072 *New York City's Harbor Survey Program Water Quality Monitoring in an Urban Watershed*, **Beau Ranheim**, City of New York Dept. of Environmental Protection
- 073 *An Overview of the California Monitoring and Assessment Program (CMAP) for Perennial Streams*, **Melenee Emanuel**, California State Water Resources Control Board
- 074 *Sediment Quality Indicators for the Delaware Estuary*, **Edward Santoro**, Delaware River Basin Commission
- 075 *EPA's National Study of Chemical Residues in Lake Fish Tissue*, **Leanne Stahl**, U.S. Environmental Protection Agency

VOLUNTEER MONITORING AND STAKEHOLDER PARTNERSHIPS AND COLLABORATIONS

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- 077 *BioSITE: Students Investigating Their Environment*, **Sandra Derby**, Children's Discovery Museum
- 078 *Resources Available for Volunteer Monitoring Programs*, **Elizabeth Herron**, Cooperative Extension
- 079 *The Nuts and Bolts of a Volunteer Monitoring Day*, **Janet Cohen**, Community Action Partners

DATA MANAGEMENT, ANALYSIS, SHARING, AND INTERPRETATION

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- 081 *Geographic Targeting for Watershed Restoration*, **Donald Malone**, Tennessee Valley Authority
- 082 *New NHD Tools for the Evaluation of Watershed Condition and Management Performance*, **William Cooter**, RTI International
- 083 *Evaluating Watershed Condition and Management Performance with the NHDPlus Toolkit*, **Mellony Hoskinson**, RTI International
- 084 *Arkansas Monitoring Data Assessment Program (AMDAP) Using the Segment Evaluation Spreadsheet (SEGEVAL.XLS)*, **Jessica Franks**, U.S. Environmental Protection Agency, Region 6
- 085 *Spatial Scale and the Proximity Factor for Water Quality-Landscape Correlations*, **Ronald Zelt**, U.S. Geological Survey
- 086 *An American/Canadian Partnership - Sharing Data for the Gulf of Maine*, **Deb Soule**, New Hampshire Department of Environmental Services
- 087 *RésEau: Building Canadian Water Connections*, **Chris Lochner**, National Water Research Institute, National Water Quality Monitoring Office
- 088 *Facilitating the Exchange and Reporting of Monitoring Data*, **Cristina Grosso**, San Francisco Estuary Institute
- 089 *New Tools for Importing, Sharing, and Visualizing Biological Monitoring Data Using the Ecological Data Analysis System (EDAS)*, **Jeffrey White**, Tetra Tech, Inc.
- 090 *Flood-Tracking Chart for the Chattahoochee River near Metropolitan Atlanta, Georgia*, **Jacob LaFontaine**, U.S. Geological Survey
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- 094 *A Comparison of Stream Biological Assessment Results Obtained Using Different Sampling Protocols in Midwestern Agricultural Streams*, **Thomas Wilton**, Iowa Department of Natural Resources
- 095 *A Comparison of Benthic Macroinvertebrate Assemblages Collected in New Mexico and Texas Reference Streams Using Selected Methods from State and Federal Agencies*, **James Moring**, U.S. Geological Survey
- 096 *Components of Variability in Long Term Regional Monitoring Program Data*, **Donald Yee**, San Francisco Estuary Institute

- 097 *Discrete versus continuous: A comparison of water quality monitoring frequencies*, **Nelia White**, San Francisco State University and San Francisco Bay Regional Water Quality Control Board
- 098 *Improving Quality Assurance Project Plans with an Expert System*, **Beverly van Buuren**, San Jose State University Foundation, Moss Landing Marine Laboratories
- 099 *The Analysis of Turbidity Data: Establishing the Link between Sample Characteristics and Measurement Technologies*, **Michael Sadar**, Hach Company
- 100 *Interstate assessment: Cross-calibration of the Biological Condition Gradient among state monitoring programs in New England*, **Jeroen Gerritsen**, Tetra Tech, Inc.
- 101 *Four Ways to Get Biased Estimates of Pollutant Loads*, **R Peter Richards**, National Center for Water Quality Research, Heidelberg College
- 102 *Site Evaluation and Field Sampling Coordination for National Scale Surveys: Supporting the Probability Design Network*, **Jennifer Pitt**, Tetra Tech, Inc.
- 103 *Optical Dissolved Oxygen Sensors Maximize Accuracy, Minimize Downtime*, **Robert Mooney**, In-Situ Inc.
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- 105 *Importance of field QC Samples in Designing Monitoring Programs and Interpreting Data for Trace Elements in Aquatic Organisms*, **Lawrence DeWeese**, U.S. Geological Survey

BIOASSESSMENT ISSUES, APPROACHES, AND EXPERIENCES

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- 107 *Environmental Monitoring Program benthic Special Studies*, **Karen Gehrts**, Division of Environmental Services
- 108 *Relations of hydrologic and physical characteristics to aquatic assemblages in low-gradient streams in agricultural settings in North-Central and Northeastern U.S.*, **Jennifer Hogan**, U.S. Geological Survey, Illinois Water Science Center
- 109 *Validation of a Multimetric Index Using Probabilistic Monitoring Data*, **Jason Hill**, Virginia Department of Environmental Quality
- 110 *The effects of fine sediment accumulation on macroinvertebrate distributions below urban dams*, **Steven Fend**, U.S. Geological Survey
- 111 *The effects of intra-annual variability on interpreting long-term trends in macroinvertebrate-based bioassessments*, **James Carter**, U.S. Geological Survey
- 112 *Probabilistic Monitoring in Oklahoma*, **Monty Porter**, Oklahoma Water Resources Board
- 113 *Application of the Reference Condition Approach to Assessing Aquatic Ecosystem Health in Canada's National Parks*, **Rob Kent**, Environment Canada

- 114 *Assessing the importance of restoration in improving water quality within the Tomales Bay watershed, **Lorraine Parsons**, Point Reyes National Seashore*
- 115 *An Assessment of the Chemical, Habitat and Biological Condition of Wadeable Streams in the Lower Columbia Region of Oregon, **Michael Mulvey**, Oregon Department of Environmental Quality*
- 116 *An Assessment of the Chemical, Habitat and Biological Condition of Wadeable Stream Habitat of Threatened Oregon Coastal Coho Salmon, **Michael Mulvey**, Oregon Department of Environmental Quality*
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- 126 *Towards a new procedure for wastewater discharge survey, **Marie-Florence Pouet**, Université de Sherbrooke*
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INTEGRATING MONITORING WITH SIMULATION AND PREDICTION

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