

- Education Workshop -

PUBLIC HEALTH, GROUND WATER AND WATER WELLS

Small Water Systems, Private Wells
and Onsite Wastewater Disposal

presented by

American Ground Water Trust



Cooperating and Presenting Organizations Include:

American Society of Home Inspectors, Inc.

Atlantic Filter Corporation

Baroid Industrial Drilling Products

Florida Association of Building Inspectors, Inc.

Florida Department of Environmental Protection

Florida Department of Health

Florida Ground Water Association

Florida Manufactured Housing Association

Florida Water Environment Federation

Florida Water Quality Association

National Association of Certified Home Inspectors

National Association of Home Inspectors, Inc.

Southwest Florida Water Management District

St. Johns River Water Management District

Water Quality Association

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MONDAY - MARCH 27, 2006

8:20AM - 4:40PM

TAMPA HOTEL (FORMERLY HOLIDAY INN)

2701 E. FOWLER AVENUE

TAMPA, FL 33612

TUESDAY - MARCH 28, 2006

8:20AM - 4:40PM

HILTON - U OF FL CONFERENCE CENTER

1714 SW 34TH STREET

GAINESVILLE, FL 32605

CONTINUING EDUCATION CREDIT AVAILABLE

What's It All About?

The workshop will provide a unique opportunity for specialists involved with water supply and public health in Florida communities to learn about important technical and regulatory issues relating to drinking water, health, ground water protection, well construction and water systems.

Florida's ground water is the principal water supply source for homes, communities, schools and many other users such as shops, restaurants, campgrounds, etc. According to latest U.S. Geological Survey information, 90% of the public water supplies and essentially all residential and commercial properties in Florida obtain their fresh drinking water supplies from ground water sources. Over 2,200 new wells are drilled in Florida each month for drinking water supplies. Ground water will always be an important and viable water source in Florida. However, to maximize its future availability, Florida's citizens must have a clear understanding of the sources, the flow pathways and threats to ground water in order to make appropriate decisions about its use and alternatives.

Who Should Attend?

Environmental Health Professionals, Home Inspectors, Septic Tank Contractors, Real Estate Agents, Home Builders and Developers, Operators/owners of Water Systems, Water Well Contractors, Town Officials (Conservation, Zoning, Planning), Water Testing Specialists, Water Conditioning Specialists, Conditioning Equipment Sales Staff.

Why Should I Attend?

Many different specialists are involved in providing and maintaining safe drinking water to Florida's homes. Even though most professionals work independently, success results from a team effort. This workshop will bring you up to speed with the whole spectrum of technical issues that lie behind providing safe and reliable drinking water.

Water Professionals - You will gain insight to the complete water supply picture: geology, drilling, well design, conditioning equipment, water testing, health issues, legal liabilities, regulatory requirements, source water protection, etc. The better you understand the "whole" the more effective you can be in providing your "part" of the vital service of safe water supply.

Town Officials, Regulators, Health Professionals - Many town regulations, codes and ordinances are based on drinking water related health concerns. This workshop will provide you with an overview of ground water, wells and water systems. It will be a one of a kind source of information to help you support community efforts to maintain safe drinking water supplies beyond just "knowing the regulations." Your chance to ask the experts on wells.

Real Estate Professionals and Home Inspectors - The Trust has made presentations on the practical nuts and bolts of obtaining and protecting drinking water from wells to the National Association of REALTORS®, the American Society of Home Inspectors, the Florida Association of Building Inspectors. Discerning home buyers need the assurance that private well water supply is safe and reliable. This workshop will be a great learning opportunity for all professionals involved in property descriptions and real estate transactions.

Workshop Program

7:30 am to 8:20 am

Registration (Coffee & Donuts)

8:20 am to 8:50 am

Introduction to Well Water Basics

Garret W. Graaskamp, P.G., Ground Water Specialist, American Ground Water Trust,
Concord, NH

8:50 am to 9:20 am

Drinking Water and Public Health Basics

- Who is responsible for citizen and community public health in FL?
- How does the State assess water related health concerns?
- What services are offered by State and County Agencies?
- How serious are health issues related to water quality in FL

Bart Bibler, Chief, Bureau of Water Programs, FL Department of Health, Tallahassee, FL

9:20 am to 9:55 am

Ground Water Basics

- Where is the State's ground water?
- How to choose a drilling site for a well
- How do aquifers, springs and natural ground water systems work?
- Summary of potential threats to ground water quality

TAMPA - Tony Gilboy, Hydrologist, Southwest Florida Water Management District,
Tampa, FL

GAINESVILLE – Jim Frazee, Hydrologist IV, St. Johns River Water Management District,
Orlando, FL

9:55 am to 10:10 am

Break

10:10 am to 10:45 am

Water Quality Basics

How Do I Know My Water is OK?

- Water quality - isn't there a little bit of something in everything?
- What is "good" drinking water?
- Typical water analyses - you will only find what you test for!
- What is a "bad" test result?
- Why and when should I retest my well water?
- Testing options - do-it-yourself kits, private labs, state labs

Bernard Kirkland, Chemist-Project Management Director, Severn Trent Laboratories,
Savannah, GA

Workshop Program

10:45 am to 11:20 am

Water Wells for Yield and Health

- What is a water well and how is it drilled?
- Well yield – What is it and how do we test it?
- How deep should a well be?
- Why are wells constructed differently (screens vs. open hole, PVC vs. steel)
- Why do we grout wells?
- How to handle common well problems and some basic well maintenance:
 - pumping sand
 - low yield
 - cloudy water, foul taste
- Sealing (decommissioning) an abandoned well

James Mabrey, Senior Sales & Service Rep, Baroid Industrial Drilling Products, Orlando, FL

11:20 am to 12:00 pm

Water Treatment and Conditioning Basics

- The basics from well to faucet (homes and small systems)
- What conditioning equipment is available?
- When should conditioning equipment be used? What does it cost? Does it work?
- Water system design and system maintenance for schools
- What to do about microorganisms?
- Chlorination: benefits and problems
- Solutions to problems: iron and manganese, radon, arsenic

Mark Kuyawa, M.P.H., Atlantic Filter Corporation, West Palm Beach, FL;

12:00 am to 12:45 pm

Lunch

12:45 pm to 1:20 pm

Home Inspection, Arsenic and Ground Water

- Where is Arsenic found in Florida?
- Treatment Options
- Testing and reporting requirements

Garret W. Graaskamp, P.G., Ground Water Specialist, American Ground Water Trust, Concord, NH

1:20 pm to 2:00 pm

Chemicals and Health

- What are the health concerns of MTBE dissolved in water?
- Nitrates and pesticides in ground water - are there health implications?
- Ethylene Dibromide (EDB) health concerns

Alan Becker, M.P.H., Environmental Consultant, FL Department of Health, Tallahassee, FL

Workshop Program

2:00 pm to 2:40 pm

Microorganisms and Health

- Water borne microorganisms - life cycles, habitats and effects on health
- Coliform and non-coliform bacteria
- Health concerns from: fecal coliform bacteria,
Escherichia coli O157:H7
Cryptosporidium
and *Giardia*

TAMPA - David Wingfield, Biological Scientist, Florida Department of Health, Tampa, FL
GAINESVILLE - Samuel Farrah, Ph.D., Professor, University of Florida, Microbiology
and Cell Science, Gainesville, FL

2:40 pm to 2:50 pm

Break

2:50 pm to 3:30 pm

Onsite Sewage Disposal Systems

- What are the design options for on-site wastewater disposal?
- Is ground water quality affected by on-site wastewater disposal systems?
- Septic tanks and leach fields: what they can and cannot do
- What is a failed septic system?
- Can a failing septic system be fixed?
- Routine maintenance needs for on-site waste water systems

Bart Harriss, Registered Sanitarian, Florida Department of Health, Orlando, FL

3:30 pm to 4:05 pm

Source Water and Aquifer Protection

- What state measures are in place to protect ground water?
- What is Florida's Source Water and Assessment and Protection Program?
- What do local well code and zoning regulations require?
- What should homeowners do to protect ground water?
- What should communities do to protect local resources?
- Should communities be concerned about agricultural use of biosolids?
- Are Florida communities adequately protected from industry and landfills?
- What measures are in place to prevent salt water intrusion?

Donnie McClagherty, Professional Geologist 3, Florida, Department of Environmental
Protection, Tallahassee, FL

Workshop Program

4:05 pm to 4:40 pm

Legal Issues – Customers, Consumers and Private Wells

The legal responsibilities and potential liabilities of water supply professionals and equipment manufacturers:

- Small Community, Transient, Non-transient and Limited Use Registered Water Systems
- Companies selling water conditioning equipment
- Companies installing wells, pumps and water supply equipment
- Health officials and water system inspectors with advisory or oversight responsibilities
- Developers / builders / realtors involved with property transactions

Cynthia Christen, Attorney, Florida Department of Environmental Protection, Office of General Counsel, Tallahassee, FL

- ADJOURN -

CONTINUING EDUCATION CREDIT

You MUST bring a photo ID, and your license or certificate number to complete the sign-in/out records that will be submitted to these organizations and agencies to confirm Continuing Education credits. A Certificate of Attendance will be provided to those that want or need the document.

American Society of Home Inspectors, Inc.

Certified Environmental Health Professionals - "Individuals certified under Chapter 381.0101, Florida Statutes, will be awarded **7.0 contact hours** for this training."

Florida Registered Sanitarians (RS, REHP, REHS)

Florida Association of Building Inspectors. Inc.

Florida Water Well Contractors

Florida Registered Septic Tank Contractors

Florida Drinking Water and Waste Water Operator Licensees
through the **Florida Water Environment Federation**

International Association for Continuing Education & Training

National Association of Certified Home Inspectors (NACHI)

National Association of Home Inspectors, Inc. (NAHI)

Water Quality Association

Approved 7.0 ASHI® MRC

Approved 7.0 CE hours

Approved 7.0 CE hours

Approved "Rules & Regs" 7.0 CE hrs

Approved 7.0 CE hours

Approved 0.70 CEUs or 7.0 PDHs

Approved 7.0 CE hours

Approved 7.0 CE hours

Approved 7.0 CE hours

Approved 0.70 CEUs

AMERICAN GROUND WATER TRUST

16 Centre Street, Concord, New Hampshire 03301

TEL: 603-228-5444 FAX: 603-228-6557 E-MAIL: TrustInfo@agwt.org WEBSITE: www.agwt.org

The Trust is a not-for-profit education organization that partners with national, state and local organizations throughout North America. The mission of the American Ground Water Trust is to protect ground water, promote awareness of the environmental and economic importance of ground water and provide accurate information to assist citizens, communities and decision makers in water resource issues.

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EXPERT PRESENTERS H TIMELY INFORMATION H LATEST TECHNOLOGY

**AMERICAN GROUND WATER TRUST
16 Centre Street, Concord, NH 03301**

Workshop Dates And Locations

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TAMPA, FLORIDA

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- Do you own a water well?
- Does your business serve the public?
- Do you sell or inspect homes that have water wells?
- Do you sell supply or install water wells or conditioning equipment?
- Do you have oversight or regulatory responsibility for safe drinking water?
- Do you make planning or zoning decisions that could affect ground water protection?