

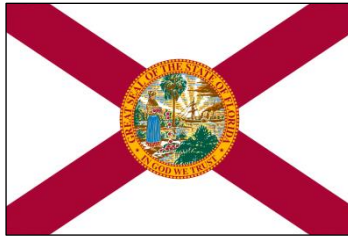
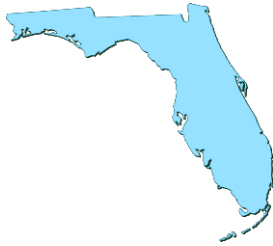
# Managing Florida's Aquifers: Annual Conference

## Groundwater Issues - ASR 18 (Yes! - 18th year of this event)

Florida Hotel & Conference Center, 1500 Sand Lake Rd, Orlando, FL 32809  
 Monday, September 24 & Tuesday, September 25, 2018

### PRESENTATION SCHEDULE

The American Ground Water Trust Annual Florida Groundwater Program



#### CONTINUING EDUCATION

The AGWT will issue certificates of attendance:  
 Application submitted to FL Water Environmental Association for approval for Water Operators for CE  
 Approved by FL DEP for Water Well Contractors for 4 S/B CECs and 5 R/R CECs – Course ID #124-092418-101  
 Approved by FL Board of Professional Engineers

#### Event sponsors:



#### Event exhibitors:

Collier Consulting, INTERA Inc., Layne, Tampa Bay Water, WellIntel

## CONFERENCE SCHEDULE – Monday, September 24, 2018

7:30 – 8:30 REGISTRATION

8:30 – 8:40

### **INTRODUCTION – BASIS FOR SELECTION OF 2018 CONFERENCE SESSION TOPICS**

Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

8:40 – 10:10

### **APPLICATIONS OF THE INTEGRATED HYDROLOGIC MODEL (IHM) TO PROVIDE WATER MANAGEMENT SOLUTIONS IN FLORIDA**

[The IHM model is a coupling of the Hydrologic Simulation Program (HSPF) for surface water with the groundwater capabilities of MODFLOW. IHM is a collaborative effort between Tampa Bay Water and the Southwest Florida Water Management District.]

#### **AN INTRODUCTION TO THE INTEGRATED HYDROLOGIC MODEL AND A CALIBRATED APPLICATION**

Jeffrey Geurink, PhD, PE, Principal Water Resources System Engineer, Tampa Bay Water, Clearwater, FL

#### **INTEGRATED HYDROLOGIC MODELING APPLICATIONS USING THE IHM AND THE INTB MODEL**

Patrick Tara, PE, Principal Water Resources Engineer, Intera, Tampa, FL

#### **USE OF THE INTEGRATED NORTHERN TAMPA BAY MODEL (INTB) TO EVALUATE MINIMUM FLOWS AND LEVELS (MFLS) IN THE TAMPA BAY AREA**

Ron Basso, PG, Chief Hydrogeologist, Southwest Florida Water Management District, Brooksville, FL

#### **RELEVANCE OF RAINFALL UNCERTAINTY TO RIVER MINIMUM FLOWS AND LEVELS (MFL)**

Jeffrey Geurink, PhD, PE, Principal Water Resources System Engineer, Tampa Bay Water, Clearwater, FL

10:10 – 10:30 BREAK

10:30 – 12:00

### **WELL AND PUMP TECHNOLOGY FOR WATER ENGINEERS, GROUNDWATER CONSULTANTS AND WATER MANAGERS**

[Selection of pumping equipment can have an impact on efficiency. Operation protocols based on real-time water level data from beyond the well-field can inform management decisions.]

#### **COST AND PERFORMANCE CONSIDERATIONS FOR HIGH CAPACITY PUMP SELECTIONS**

David Kill, PE, Training Consultant, Xylem Goulds Water Technology, St. Paul, MN

#### **NEXT GENERATION GROUNDWATER LEVEL INFORMATION SYSTEMS FOR FLORIDA: EXTENDING WELL DATA NETWORKS BEYOND THE WELLFIELD TO INFORM OPERATION AND MANAGEMENT DECISIONS**

Chuck Dunning, PhD, PG, Vice President Business Development, WellIntel, Milwaukee, WI

12:00 – 1:00 LUNCH

Sponsor - Dan Ringdahl, President, Florida Design Drilling Corp, West Palm Beach

1:00 – 2:30

### **WATER SUPPLY CHALLENGES: RISING SEA LEVELS AND STORM SURGE IMPACTS ON GROUNDWATER SUPPLY FOR HOMES AND COMMUNITIES ALONG FLORIDA'S COASTS, ESTUARIES AND TIDAL RIVERS.**

[The session will review expected impacts on fresh groundwater from sea level changes and storm surge saline flooding – infrastructure implications for water supply and wastewater disposal - consideration of proactive planning for future water supply infrastructure.]

#### **SALTWATER FRESHWATER INTERACTIONS AND INLAND GROUNDWATER IMPACTS IN FLORIDA FROM RISING SEA LEVELS**

Fredrick Bloetscher, PhD, Professor, Dept. of Civil, Environmental and Geomatics Engineering, Florida Atlantic University, Boca Raton, FL

#### **FLORIDA KEYS: GROUND ZERO FOR THE IMPACTS OF GLOBAL CLIMATE CHANGE AND SEA LEVEL RISE**

Julie Cheon, Water Quality & Environmental Manager, Florida Keys Aqueduct Authority – FCAA, Key West, FL

#### **BROWARD COUNTY: PROACTIVE APPROACHES TO HYDROLOGIC CONSEQUENCES OF RISING SEAS AND KING TIDES**

Samantha Danchuk, PhD, PE, Assistant Director, Environmental Planning & Community Resilience, Broward County, Fort Lauderdale, FL

2:30 – 2:45 BREAK

2:45 – 4:45

**AQUIFER STORAGE RECOVERY – REGULATIONS - ACHIEVING SUPPLY RELIABILITY - NEED FOR SINGLE PROTOCOL STANDARD FOR DEFINING AMBIENT QUALITY – APPLICATION OF GEOCHEMICAL MODELS**

[How shiny is the ASR silver bullet? Why can't we all use the same quality protocols? Can chemical signature aid in aquifer to aquifer recharge decisions? Regulatory perspectives on aquifer recharge.]

**OVERVIEW OF UNDERGROUND INJECTION CONTROL (UIC) AND AN UPDATE OF AQUIFER RECHARGE IN FLORIDA**

Joe Haberfeld, PG, Senior Program Analyst and  
Tracy Woods, PG, Environmental Administrator, Aquifer Protection Program, Florida Department of Environmental Protection, Tallahassee, FL

**ACHIEVING WATER SUPPLY RELIABILITY FOR FLORIDA WITH ASR**

David Pyne, PE, President, ASR Systems, Gainesville, FL

**TAMPA AUGMENTATION PROJECT GEOCHEMICAL MODEL (INTERAQUIFER GROUNDWATER TRACERS)**

June Mirecki, PhD, Senior Hydrogeologist, US Army Corps of Engineers, Jacksonville, FL

**FACTORS TO CONSIDER IN DEFINING AMBIENT WATER QUALITY FOR AQUIFER RECHARGE PROJECTS**

Mark McNeal, PG, President, ASRus, Tampa, FL

4:45 – 5:00 General Q & A for Day one presentations

5:00 - 6:30 RECEPTION (Cash bar) Sponsor - Mark McNeal, President, ASRus, LLC, Tampa



**CONFERENCE SCHEDULE - Tuesday, September 25, 2018**

7:30 – 8:30 REGISTRATION

8:30 – 8:40 SUMMARY OF DAY ONE - INTRODUCTION TO DAY TWO

Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

8:40 – 10:10

**HOW TO CONSERVE WATER AND MAXIMIZE NON-CONSUMPTIVE USE OF FLORIDA'S GROUNDWATER BY DEVELOPING COOLING SYSTEMS BASED ON GEOTHERMAL TECHNOLOGY**

**CASE STUDIES TO EXPLAIN THE DESIGN AND OPERATION OF COMMERCIAL GEOTHERMAL SYSTEMS IN FLORIDA**

Jay Egg, President, Egg Geothermal, Orlando, FL

**GEOLOGICAL CONSIDERATIONS FOR SITING, CONSTRUCTION AND INSTALLATION OF GEOTHERMAL BORES IN FLORIDA WITHOUT CAUSING JEOPARDY TO AQUIFERS**

Paul Petrey, Operations Manager, Applied Drilling Engineering, Tampa, FL

10:10 – 10:40

## Keynote Presentation

**Robert Beltran, President, Hydro Solutions Consulting, Lakeland, FL**

### **FLORIDA'S PRESENT AND FUTURE GROUNDWATER MANAGEMENT CHALLENGES**

**Robert Beltran, PE, BCEE, President, Hydro Solutions Consulting, Lakeland, FL**



University, New Orleans.

Robert Beltran, is a Polk County Native, and a professional engineer with over 20 years of experience. He has worked throughout Florida, with the public and private sectors on water related initiatives throughout the one-water spectrum. Mr. Beltran's experience includes service as the Southwest Florida Water Management District (SWFWMD) Assistant and then Executive Director. In these roles he worked on water policy and projects that helped form the foundation and key elements of the comprehensive water bill that passed into law in 2016. Mr. Beltran's experience also includes leading the solutions team for the Central Florida Water Initiative (CFWI) to ensure an adequate alternative water supply projects that overlap three water management districts; and chairing the Management Oversight Committee. He has BS and MS degrees in Civil Engineering and Environmental Engineering from Tulane

10:40 – 11:00

**BREAK**

11:00 – 12:30

### **UPDATE ON THE WORK OF THE POTABLE REUSE COMMISSION IN DEVELOPING A STATUTORY FRAMEWORK FOR THE IMPLEMENTATION OF POTABLE REUSE**

[The mission of the PRC is to develop a framework for potable reuse implementation in Florida that will augment future water supply and support water quality initiatives. The Commission will advise elected officials and regulatory agencies on statutory and regulatory challenges, and present consensus based solutions.]

#### **ORIGINS, PURPOSE AND ACTIONS OF THE POTABLE REUSE COMMISSION**

Chuck Drake, PG, Vice President, Tetrattech, Orlando, FL

#### **BACKGROUND AND UPDATE ON LEGISLATION AND OTHER EFFORTS TO IMPROVE THE REGULATORY PROCESS FOR AQUIFER RECHARGE WITH RECLAIMED WATER**

Eric T. Olsen, JD, Attorney, Hopping Green & Sams, P.A., Tallahassee, FL

#### **CITY OF DAYTONA BEACH DIRECT POTABLE REUSE DEMONSTRATION PROJECT**

Chuck Drake, PG, Vice President, Tetrattech, Orlando, FL

12:30 - 1:30

**LUNCH** (provided)

1:30 – 4:00

(Refreshments available all afternoon but no afternoon break)

### **UPDATE ON THE STATUS OF FLORIDA GROUNDWATER RECHARGE PROJECTS**

[What is the status of these current projects and what is in the crystal ball for their long-term operational future?]

#### **UPDATE ON THE STATUS OF THE LAKE OKEECHOBEE INJECTION WELLS PROJECT**

Robert Verrastro, PG, Lead Hydrologist, S. Florida Water Management District., West Palm Beach, FL

#### **AQUIFER RECHARGE PROJECT IN NORTH FLORIDA: FEASIBILITY STUDIES AND IMPLEMENTATION STATUS**

Cathleen Beaudoin Jonas, PG, Principal Hydrogeologist, HSW Engineering, Inc., Tampa, FL

#### **RESULTS OF THE PARTIALLY TREATED SURFACE WATER ASR PILOT TESTING FOR THE PEACE RIVER ASR SYSTEM**

Mike Coates, PG, Director, Peace River Manasota Water Supply Authority, Bradenton, FL

#### **PINELLAS COUNTY'S EVALUATION OF ASR & MAR SOLUTIONS TO DRY WEATHER RECLAIMED WATER SHORTAGES**

Mike Weatherby, PG, CEO, HydroGeo Consulting LLC, Riverview, FL, and  
David Adams, PG, Hydrogeology Manager, Pinellas County Utilities Engineering, Clearwater, FL

#### **RECLAIMED RECHARGE WATER QUALITY AND QUANTITY OPTIMIZATION FOR MFL OFFSET: LAKE EVA**

David MacIntyre, President, AquaSciTech Consulting, PLLC, Ocoee, FL

4:00 **LAST CHANCE FOR Q & A - WRAP-UP – COMPLETE CEU FORMS & ADJOURN**

