

## CURRICULUM VITAE

FREDERICK BLOETSCHER, Ph.D., P.E.

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### EDUCATION

Ph.D. in Civil Engineering, 2001, University of Miami, with emphasis on risk analysis, groundwater resources and utility management and planning (Dissertation Title: *Development Of A Predictive Bayesian Microbial Dose-Response Function*; Advisor James D. Englehardt).

Master of Public Administration degree, 1984, University of North Carolina at Chapel Hill; emphasis on local government management and finance, minor in planning (Final Project: *Energy Contingency Planning*; Advisor Deil S. Wright).

Bachelor of Science, Civil Engineering, 1982, University of Cincinnati; concentration in construction project management and concrete design; strong emphasis in water and sewer system design and treatment, traffic engineering and planning.

### EMPLOYMENT EXPERIENCE

8/05 to date: Florida Atlantic University – Associate Dean for Undergraduate Studies and Community Outreach (June 2018 - date), Professor (August 2017 – date), Associate Professor (August 2011 - August 2017), Assistant Professor (August 2005 - August 2011), Department of Civil Engineering (Adjunct Professor in August, 2004 - August, 2005)

Classes taught:

Classes Taught	Descrip	Times Taught
Environ Systems Modeling	ENV 6025	7
Civil Engg Design 2	CGN 4804	28
Civil Engg Design 1	CGN 4803	27
Environ. Systems Processes	ENV 6668	4
Hydrology	CWR 4202	1
Water Resource Systems	CWR 6818	1
Water/ Wastewater Treatment Technology	ENV 4514	21
Groundwater Contamination	CWR 6708	1
Infrastructure Management	CGN 6930	4
Hydraulics	CWR 3201	4
Subdivison Design	CGN 4930	1
Digital Drafting	CGN 2327	5
Intro to Env. Engineering	ENV 3001	8
Project Management	CGN 6930	12
		124

Research issues include water resource issues associated with public infrastructure system management, watershed management, water resource management, utility finance and management, waste disposal, including injection wells, membrane concentrate management, water conservation practices, wastewater disposal practices, risk assessments, endocrine disruptor impacts and nutrient impacts in the coastal water of SE Florida (over \$885,000 in research in 5 years).

<b>Title of Research</b>	<b>Funding Agency</b>	<b>PI (Co-PI)</b>	<b>Period</b>	<b>Amount</b>
[1] "Green Lodging Performance Measures Phase 3"	Florida Department of Environmental Protection	Meeroff (Scarlatos)	2008	\$8,206
[2] "Taylor County Beaches Seasonal Water Quality Impacts"	Florida Department of Environmental Protection	Meeroff (Bloetscher)	2007-2008	\$23,891
[3] "Taylor County Source Tracking: Seasonal Variability Study"	Florida Department of Health	Meeroff (Bloetscher)	2007-2008	\$13,960
[4] "Determination of Water Use Profiles for Water Conservation"	Broward County Water and Wastewater Services	Bloetscher Meeroff	2007-2008	\$150,000
[5] "Boynton Inlet Water Quality Testing Phase 2"	Hazen and Sawyer, P.C.	Bloetscher (Meeroff)	2006-2007	\$6,800
[6] "Water Quality Review, Membrane System Pre-Qualification Document Preparation, Membrane Testing and Selection"	Camp, Dresser, and McKee	Bloetscher (Meeroff)	2006-2007	\$67,287
[7] "Publix Waste Management Project"	Publix Supermarkets	Berry (Meeroff, Bloetscher)	2006-2007	\$204,176
[8] "Boynton Inlet Water Quality Testing Phase 1"	Hazen and Sawyer, P.C.	Bloetscher	2007	\$9,704
[9] "Dania Beach Membranes"	Dania Beach	Bloetscher (Meeroff)	2006	\$6,234
[10] "CoQuina Desalination Plant"	Malcolm Pirnie	Bloetscher	2008	\$30,153
[11] "EcoWave Evaluation"	Ecowave	Bloetscher	2009	\$3,000
[12] "Evaluation of Coastal Discharges"	FWEA	Bloetscher (Meeroff)	2009	\$25,000
[13] "Southeast Florida's Resilient Water Resources: Adaptation to Sea Level Rise and Other Impacts of Climate Change"	National Commission on Energy Policy.	Murley (Bloetscher, Meeroff, Heimlich)	2009	\$75,000
[14] "Development of a Methodology for the Assessment and Mitigation of Sea Level Rise Impacts on Florida's Transportation Modes and Infrastructures"	FDOT	Berry (Bloetscher, Rodriguez, Kaisar)	2010-2011	\$149,071
[15] "CoQuina Desalination Plant Ph 2A"	Malcolm Pirnie	Bloetscher	2011	\$17,000

<b>Title of Research</b>	<b>Funding Agency</b>	<b>PI (Co-PI)</b>	<b>Period</b>	<b>Amount</b>
[16] “Pembroke Pines Reverse Osmosis Treatment of Wastewater”	Calvin Giordano & Associates	<b>Bloetscher</b>	2010-2011	\$56,000
[17] “FHWA Pilot Study - Tampa Bay”	FHWA/Jacobs Engineering	<b>Bloetscher</b>	2013-2015	\$13,000
[18] “Impact of Climate change on vulnerable Populations- Public Health Perspective”	Kresge Foundation/Florida Institute for Health Innovation	<b>Bloetscher</b>	2014-2015	\$150,000
[19] “Stormwater Research and Vulnerability Planning”	Town of Davie	<b>Bloetscher</b>	2014-2015	\$86,000
[20] “Stormwater Master Planning and Vulnerability Assessment Ph 1”	City of West Palm Beach/Chen-Moore	<b>Bloetscher</b>	2014-2015	\$32,000
[21] “Evaluation of Cooling System Fouling”	NEFCO	<b>Bloetscher, Meeroff</b>	2016	\$30,000
[22] “Adaptation Design and Planning Tool”	SeaGrant	<b>Huber, Mitsova, Bloetscher</b>	2017-2018	\$75,000
[23] “South Florida Regional Planning Council Transit Oriented Development Study - Assessment of Infrastructure for TOD zones – Brightline Corridor “	South Florida Regional Planning Council	<b>Renne, Bloetscher</b>	2018-2019	\$90,000
[24] “Workshop: Electron Beam Technical Conference Focused on Science, Applications, and Design Considerations”	NSF (1635881)	<b>Bloetscher</b>	2016-2018	\$49,500
[25] “Dania Beach Mobility Study”	City of Dania Beach	<b>Bloetscher</b>	2019-2020	\$116,000
[26] “Watershed Management Planning”	Division of Emergency Management	<b>Bloetscher, Yong, Meeroff, Nagarajan, Su, Mitsova, Zhang, Liu, others</b>	2019-2020	\$1,677,000
<b>Grand Total:</b>				<b>\$3,133,982</b>

Several projects are ongoing that have no research dollars, but have either had proposals submitted on them in the past, or have graduate students working on them as a part of their degree. These are listed below:

Title of Research	PI (Co-PI)	Period	Comments
1] "Modeling Injection Wells to Determine Geologic Variations Across the State of Florida"	Bloetscher	2004 - date	Paper Published
3] "Modeling of Outfall Plumes in the coastal ocean"	Bloetscher	2005 - date	Paper Published
4] "Modeling of Inlet Discharges to the Coastal Ocean "	Bloetscher	2007 - date	Paper Published
5) "Buoyancy Impacts on ASR well Success"	Bloetscher	2004 - date	Prior papers written on this. More work needed.
6] "Reclaimed Wastewater Quality Impacts on Local Water Supplies"	Bloetscher	2003 - date	Several conference papers written. No funding.
8] "Evaluation of Removal Capacity of Reverse Osmosis on Emerging Contaminants"	Bloetscher	2010 - date	3 Papers published
9] "Development of Predictive Bayesian Dose Response Model"	Bloetscher	2009 - date	Paper submitted
10] "National ASR Database"	Bloetscher	2012 - date	3 papers published, one in process
11] "Assessment of Utility System Risk"	Bloetscher	2017 - date	4 papers published
12] "EMOH Device Use for Algae Removal"	Bloetscher	2016 - date	2 papers published
13] "Infrastructure Risk Assessment, Economic Impacts and Predictive Maintenance "	Bloetscher	2016 - date	3 papers, 1 book published

A series of reports from research activities, 44 peer reviewed papers, 12 books, nearly over 100 conference papers and presentations have been completed while at FAU (there are over 100 others prior to coming to FAU).

As graduate advisor from 2005 to 2011, advised over 40 graduate students generally and participated directly in the activities of the following students:

Student	Thesis or Project Area	From	Degree	Role	Date of Gr
Frederic Morin	Water Quality Tracers	Thesis	MSCE	Committee	2005
Francois Gasnier	Photochemical reactions	Thesis	MSCE	Committee	2007
Thais Bocca	Water Quality Tracers	Thesis	MSCE	Committee	2007
Adrianna Toro	Concentrate Treatment	Thesis	MSCE	Chair	2007
Courtney Skinner	NEXRAD	Thesis	MSCE	Chair	2006
Tomoyuki Shibata	Arsenic Contamination	Dssert	PhD. UM	Committee	2006
Joaquin Pire-Schmidt	Inlet Modeling	Thesis	MSCE	Chair	2009
Jane Gao	Injection Well Modeling	Thesis	MSCE	Chair	2009
Krystin Bernsten	Horizontal Well Modeling	Project	MSCE	Chair	2009
Eric Stanley	undecided	Project	MSCE	Chair	2012
Delroy Peters	NEXRAD	Thesis	MSCE	Committee	2008
Angelica Echivarria	Bayesian Oil Methods	Dissert	PhD, UM	Committee	2010
Trent Van Allen	Inflow Removal	Thesis	MSCE	Chair	2014
Evan Kennedy	Water Quality Reuse Model	Thesis	MSCE	Chair	2009
Tom Romah	Using GIS and LIDAR to Predict Flooding in sea level rise prone areas	Thesis	MSCE	Chair	2012
Yvel Rocher	The Correlations Between OSTDS Sites And The Pollution Of The Surface Water Bodies In Broward County	Thesis	MSCE	Chair	2014
Phonpornwithoon, P	Risk Of Injection Using Reclaimed Water For Aquifer Recharge Using Rotavirus As Surrogate Contaminant	Thesis	MSCE	Chair	2015
Neil Coffman	Recovering Titanium Dioxide (TiO <sub>2</sub> ) after its Use to Treat Leachate for Reuse on Future Leachate Flows	Thesis	MSCE	Committee	2015
Joseph Lakner	“Safe Discharge of Landfill Leachate to the Environment	Thesis	MSCE	Committee	2015

Student	Thesis or Project Area	From	Degree	Role	Date of Graduation
Robert Eustice	Do Per Capita Water Use Regulations Penalize Growing Urban Economies	Thesis	MSCE	Chair	2016
Mateja Vidovic	“Investigation of Odor Complaints at Landfills”	Thesis	MSCE	Committee	2017
Julia Roblyer	“Biosensor Development for Measuring Nuisance Odors”	Thesis	MSCE	Committee	2017
Rohan Sethi	“Beneficial Reuse of Organic Waste”	Thesis	MSCE	Committee	2018
Bishow Shaha	“Investigation of Leachate Management Solutions	Thesis	MSCE, PhD	Committee	2017, pending
Matt Ilse	“EMOH Technology for Algae Control”	Thesis	MSCE	Chair	2019
Luis Rico		non-thesis	MSCE	Chair	2019
Jared Weaver	Geomapping Island Communities for Flood Risk mitigation	Thesis	MSCE	Chair	2020
Gerardo Rojas	Development of surface water influenced Flood Risk model	Thesis	MSCE	Chair	2020
Fahim Salek	“Investigation of Electrochemical Oxidation of Landfill Leachate	Thesis	MSCE	Committee	2019
Sharmily Rahman	tbd	Thesis	MSCE	Committee	2020
Rakib Chowdhury	tbd	Thesis	MSCE	Committee	2020
Eva Suarez	tbd		PhD	Committee	2021

Student	Thesis or Project Area	From	Degree	Role	Date of Graduation
Bishow Shaha	“Effect of Electronic Water Treatment on Calcium Carbonate Scaling”	Thesis	PhD	Committee	2017, pending
David Cowan Jr.	“Experimental Evaluation Of Cement Stucco Surfacing Material (CSSM) Removal For Reducing Particulates In Air”	Thesis	BS/MS	Committee	2015
Alexandria Slater-Williams	“Filtration of Arsenic from Groundwater”	Thesis	MSME	Committee	2015

/01 to 12/05: University of Miami – Adjunct Faculty, Department of Civil, Architectural and Environmental Engineering; teaching introduction to environmental engineering, water and wastewater treatment, water treatment unit process design, engineering costs and economics, senior design to undergraduate and graduate students.

7/00 to date: President and owner, Public Utility Management and Planning Services Inc., a consulting firm dedicated to evaluation of water, sewer and stormwater utility systems, needs assessments, condition assessments, strategic planning, capital improvement planning, inter-local agreement recommendations, bond document preparation, consultant coordination, permitting and implementation of capital improvement construction. Contracts for which work has been done include: obtaining SRF loans, tracking SRF loans and documents, water, stormwater and wastewater facilities planning, relative risk assessment of wastewater disposal options, evaluation of effluent toxicity, investigation of endocrine disruptors in surface water and wastewater, set-up of utilities (water, sewer and stormwater), policy guidance, ocean environmental issues, water, sewer and stormwater utility finance

11/02 – 4/03: University of North Carolina at Chapel Hill; Institute of Government, guest lecturer on utility finance issues.

5/99 to 10/00: Director of Engineering, Operations and Planning, Florida Governmental Utility Authority, Dania Beach, Florida. Responsible for oversight of 5 utility systems totaling 25,000 customers in 6 Florida counties as a result of acquisition of utility systems from a private utility provider in Florida. FGUA has 23 water and wastewater treatment facilities. FGUA is a new organization and this position required the ability to initiate engineering, rate and operations contract processes, develop appropriate contract documents, policies, and procedures, oversee extensions to the systems and the appropriate documents, regulatory compliance oversight, supervision of \$12 million operations contract. Included in the duties of the position are the development and implementation of the strategic plan and capital improvement program, development of interlocal agreements and utility transition plans, financial analyses, utility

acquisition and evaluation services and general policy perspectives to non-elected Board of Directors.

9/94 to 5/99: Deputy Public Utilities Director, City of Hollywood, Florida. Responsible for oversight of \$100 million capital improvement program, including upgrades to 42 MGD wastewater treatment plant, 18 MGD membrane softening/reverse osmosis upgrade to 37.5 MGD water treatment plant, stormwater planning and upgrade designs, and installation of reuse system, permitting of facilities, regulatory compliance and utility planning. Direct supervision of 27 professional employees in 176 person department. Supervised analysis of rates and bulk users, including negotiations with Broward County for bulk sale of water and joint infrastructure construction. Evaluated creation of South Broward Utility District as regionalization initiative. Obtained SFWMD matching grant for salinity barrier pilot project using reclaimed water for barrier.

Completed the following: Financial plan and policy for the Public Utilities Department, including revised rate ordinances, impact fee ordinances and policy documents; Integrated Resource Plan, Salinity Barrier permitting, water and sewer extension ordinance; cross connection control policy; comparative water quality analysis; capital improvement project procedures manual; annual report of activities; chlorine hazard assessment analysis; and outsourcing of meter reading and billing programs; survey of utility customers for service.

6/89 - 9/94: Assistant Utilities Administrator, Collier County, Florida. Responsible for strategic master planning, private utility evaluation, utility acquisitions, implementation of \$100 million capital improvements program, including design and construction of new 12 MGD (expandable to 20 MGD) membrane softening water treatment plant, water transmission pipelines from 12 to 42 inches in diameter, wastewater treatment plant expansion and process conversion, master wastewater pumping stations, sewage force mains from 12 to 24 inches in diameter, effluent reuse program improvements (golf courses), water storage tanks and aquifer storage and recovery program (NaCo Award); oversaw management and budgeting of Engineering, Water, Wastewater and Finance Departments under Utilities Administrator; coordination of two bond sales (\$55 million and \$13 million), including presentations to rating agencies; wrote engineer's report for 1993 Series refunding issue (\$64.5 million) with associated discussions with rating agencies resulting in improved rating; negotiation of utility agreements with developers and private utilities for takeover and private/public partnership of infrastructure installations.

Completed the following: utility evaluations for Marco Island, Eagle Creek, Golden Gate City, Rookery Bay, Pelican Bay and North Naples utility systems (private sector utilities to be merged with the Collier County system - NACo Award); "How to Deal with Private Sector Utilities in Collier County" document indicating strategies for the Board of County Commissioners to work with or take over private sector utilities strategy for Marco Island private utility issues; transition of North Naples Utilities, Pelican Bay District and Naples Production Park utility systems to the County system; 1990 Rate Study (with consultant); water and sewer extension policy; backflow program description, ordinance, procedures manual and explanatory document for Board of County Commissioners; rewrite of water and sewer elements of Growth Management Plan; revised impact fee ordinances (with financing provisions - NACo Award) and methodology for collection; standardized professional service agreement (negotiated with private sector - NACo Award), standardized construction documents (NACo Award), standardized utility specifications (NACo Award), Capital Projects Procedures Manual; Sewer Use Ordinance; Lead and Copper Corrosion Control Study; Water Resource Management/Conservation Plan (NACo Award); Annual Report on Services of Utilities Division (NACo Award).



Initiated the following: Utilities Division Newsletter (NACo Award).

Designed the following: 24,100 feet of large diameter water mains; 3500 feet of roads; interim expansion to regional water treatment plant (NACo Award), 21,000 feet of large diameter water mains; finished water mixing study.

3/92 - 9/92: Management consultant to Collier Naplescape '90's, Inc., a not-for-profit private/public partnership dedicated to the landscaping of medians and public areas within Collier County and the City of Naples through capitalization of beautification projects that are maintained municipally; advised Executive Director in compilation of regional beautification plan, including identification of utility and roadway conflicts with proposed landscaping improvements.

1/92 - 6/92: Management Consultant to law firm of Nabors, Giblin and Nickerson, Tallahassee, Florida; performed evaluation of merger of City of Okeechobee and Okeechobee County water and sewer systems into a utility authority and recommended management options.

8/86 - 6/89: Director of Public Works/Administrator, Richlands, North Carolina; Chief Executive Officer responsible for daily operation of Town of Richlands, public works functions: water and sewer, engineering, planning, personnel administration, sanitation, budgeting and finance, and interaction with Board of Aldermen and advisory boards.

Completed the following: Five Year Capital Improvements Program; Water and Sewer Rate Study; extension of utility services outside corporate limits, Code of Ordinances; Personnel Policy, Purchasing Policy and Manual; standardized water and sewer technical specifications; standardized roadway specifications; two annexation reports and subsequent annexation of both areas; 2 Community Development Block Grant Applications (with consultant - both funded); 201 Study (with consultant); Beautification Ordinance (which led to Tree City USA awards); Loss Control and Safety Policy; water and sewer extension policy; annual budgets for FY 1986, 1987, 1988 and 1989; personally supervised the installation of 9400 feet of water lines, 1400 feet of sewer lines, curbing and drainage improvements.

Initiated the following: work order tracking system; purchasing system; standardization of Board of Aldermen agenda packets; Tree City USA program.

Designed the following: 11,400 feet of water main improvements; 10,700 feet of sewer line improvements.

7/87 - 12/87: Management consultant to Town of Swansboro, North Carolina; completed Five Year Capital Improvements Program and designed 1500 feet of water line improvements and appurtenances.

7/85 - 7/86: Town Manager, Erwin, North Carolina; Chief Executive Officer responsible for daily operation of Town of Erwin, including public works, water and sewer, engineering, planning, personnel administration, public safety, budgeting and finance, library, parks and recreation and interaction with Board of Commissioners and seven advisory boards.

Completed the following: Five Year Capital Improvements Program; Five Year Financial Plan and Forecast; personnel policy and comprehensive job classification/pay plan; standard water and sewer technical specifications; water and sewer extension policy; annexation reports for East Erwin/Wondertown area (annexation occurred in 1986), Gentry School area and industrial park

(annexations occurred in 1987); subdivision regulations; economic development study (jointly with NC Division of Community Assistance); mobile home ordinance; purchasing manual; annual budgets for 1985 and 1986.

Initiated: central request program (work orders); procedures for inspection of water and sewer lines; Tree City USA program.

8/83 - 7/85: Utilities Civil Engineer, Public Utilities Department, City of Jacksonville, North Carolina; supervised design and inspection of water and sewer lines constructed by both City and developers; responsible for contract administration on all city-funded water and sewer projects; revised standard water and sewer technical specifications; reviewed all utility improvement designs for conformance with City codes, policies and requirements; prepared cost estimates for all City projects and for letters of credit guarantees for developer funded infrastructure. Total responsibility of 50 projects with a value in excess of \$15 million.

Designed the following: 14,100 feet of water and sewer line improvements for installation by contractors or City crews.

## PROFESSIONAL MEMBERSHIPS

Advisory Committee on Water Information (ACWI – advises the United States Geological Survey) 2006 – 2015

American Water Works Association (1986 to date)

Water Resource Division Trustee (2003 to date -Vice Chair, 2004 to 2007, Chair 2007 – 2010, Chair Sustainable Water Sources Conference, Reno, 2008)

Groundwater Committee (1994 to date, Chair - 1994 to 1998, 2009 to 2013, 2018-date) – completed revision to M21 v. 3, v. 4, M63 v. 1, M73 v.1)

ASR Committee (1995 to date)

Annual Conference Program Committee (1996 to date)

Technical and Education Council (2007 – 2018),

TEC Education subcommittee (2007-2010, 2012-2018, Chair, 2010)

Water Distribution Design and Construction Committee (Chair 2016 – 2019)

Section Subcommittee for TEC (2010 - date)

University Student Activities Committee (2006- 2012)

Climate Change Committee (2010-date)

Florida Section American Water Works Association (1989 to date, Trustee, 2014 - 2017, Secretary 2017 - -2018, Vice Chair, 2019, Chair Elect, 2019)

Technical Program Chair (2004 - date)

Water Management District Review Committee (1995 to 1997)

Reuse Committee (1995 to 1997)

South Florida Water Management District

Utility Advisory Committee, SFWMD (1994 to 1999)

Chairman, 1997-1999  
Vice Chairman, 1996  
Reuse Subcommittee (Chairman, 1995 to 1997)

LEC Peer Review Sub-committee, SFWMD (1997 to 1999)  
SFWMD Alternative Water Supply Grants Committee (1996 to 1999)  
Lower West Coast Water Supply Committee - SFWMD (1992 to 1994)

Water Environment Federation (1988 to date)

American Society of Civil Engineers – Diplomate 2007

## LICENSES AND CERTIFICATES

Professional Engineer's License (North Carolina, Florida, South Carolina, Georgia, Utah, Colorado, Michigan and Ohio).  
North Carolina General Contractor's License (Public Utilities - #22775)  
LEED - AP  
Grade A Water Distribution System Certificate (North Carolina - #4138)  
Grade B Water Plant Operator's Certificate (North Carolina - #4138)  
Grade III Water Pollution Control Operator's Certificate (North Carolina - #8967)  
Grade 4 Collection System Operator's Certificate (North Carolina - # 13150)

## AWARDS

Presidential Award for Community Outreach – Florida Atlantic University, 2018

Change Agent of the Year Faculty Award, FAU, 2017

Distinguished Educator of the Year Award, Engineers, Council, 2017

Alan B. Robertson Award, FSAWWA 2015.

Florida Engineering Society Broward –Technical Service Award - 2015

FSAWWA Executive Committee Award - 2014

Oasis Award – AWWA – 2014

NCEES Student Profession Partnership Grand Award 2012

Talon Faculty Award for Leadership – Florida Atlantic University, 2012

Volunteer of the Year Award, American Water Works Association (inaugural), 2011

Robert Claudy Award, Florida Section, American Water Works Association, 2011

TIAA-CREF Leadership Award, Florida Atlantic University, 2010

Best Paper Award – FSAWWA Annual Conference 2006, 2008, 2010, 2015, 2016

MAC Council Best Chair Award (Chair of Technical Program FSAWWA conference), 2006

University of Miami – Fifth Annual Graduate Student Research and Creativity Forum –  
Engineering and Biomedical Division - 1st place for research, 2001

13 National Association of Counties (NACo) Achievement Awards (1990-1994):

Managing Consultants to Achieve Infrastructure Needs  
Managing Construction Contracts  
Impact Fee Financing  
Reducing Engineering Costs  
Managing Construction in Growth Environments  
Improved Customer Service via Better Employee  
Communication (Utilities Newsletter)  
Potable Aquifer Storage and Recovery  
4 MGD Split Treatment Expansion  
Water-Sewer District Annual Report  
North County Regional Water Treatment Plant design  
Evaluation of Private Sector Utilities in Collier County  
Water Resource Management/Conservation Plan

## PUBLICATIONS

### BOOKS:

1. Bloetscher, F. (2019), *Infrastructure Management*, JRoss, Plantation, FL.
2. Bloetscher, F. and Meeroff, D.M. (2015) *Practical Design Concepts for Capstone Engineering Design*, JRoss, Plantation, FL.
3. Bloetscher, F., Berry, L.; Moody, K. and Hammer, N.H., (2013) Chapter 6 Climate Change and Transportation in the Southeast USA, in. Eds: Ingram, K., K. Dow, L. Carter, J. Anderson, eds. 2013. *Climate of the Southeast United States: Variability, change, impacts, and vulnerability*. Washington DC: Island Press.
4. Bloetscher, F. (2011), *Utility Management for Water and Wastewater Operators*, AWWA, Denver, CO.
5. Bloetscher, F. editor (2010), *Sustainability Compendium*, AWWA, Denver, CO.
6. Bloetscher, Frederick (2009), *Water Basics for Decision Makers: What Local Officials Need to Know about Water and Wastewater Systems*, America Water Works Association, Denver, CO.
7. Bloetscher, Frederick; Muniz, Albert; Largey, John (2008), *Siting, Drilling and Constructing Wells*, AWWA, Denver, CO.
8. Tsang, C-F and Apps, J.A. eds. (2006). *International Symposium Underground Injection Science and Technology, Developments in Water Volume 52*, Elsevier, Amsterdam, Netherlands - Muniz, A.; Tobon, M.; And Bloetscher, F., two chapters, Chapter 4 and Chapter 8 - "Use of Class I Injection Wells Provide an Economical and Environmentally Sound Approach for Effluent and Concentrate Management," "How and When Will Impacts be Regulated?"
9. Bloetscher, Frederick; Muniz, Albert; and Witt, Gerhardt M. (2005), *Groundwater Injection: Modeling, Risks, and Regulations*, McGraw-Hill, New York, NY.
10. *Manual M-63 v. 1 – Aquifer Storage and Recovery* (2014 pub. date), primary author and editor for manual or practice, American Water Works Association, Denver, CO.
11. *Manual M-21 v. 4 – Groundwater* (2013), primary editor and author for manual or practice, American Water Works Association, Denver, CO.

12. *Manual M-21 v. 3 – Groundwater* (2003), primary editor and author of 4/11 chapters of book, American Water Works Association, Denver, CO.

#### PEER REVIEW

1. Bloetscher, F., Meeroff, D. E., Iles, M. and Sethi, R. ND. Effects of Electromagnetic Hydrolysis On Dissolved Oxygen Concentration In Warm, Stagnant Surface Water, *Current Environmental Engineering*, xx(9) *accepted*.
2. Shaha, B. Meeroff, D.M., Bloetscher, F., Esiobu, N., and Kari, R. ND. Characterization of biofilms and mineralogical scale in underground injection well disposal of landfill leachate, *GEP. Accepted*.
3. Meeroff, D. E., Bloetscher, F. and Shaha, B. 2020 Economics of Wastewater/Biosolids Treatment by Electron Beam Technology, *Radiation, Physics and Chemistry*, *accepted*
4. Frederick Bloetscher, and Daniel E. Meeroff, 2020. Is Our Water Safe To Drink? *Environmental Protection and Protection. Tbd, accepted*.
5. Bloetscher, F., Meeroff, D. E., and Phonpornwithoon, P. 2019 Assessing Risk of Injection of Reclaimed Water into The Biscayne Aquifer For Aquifer Recharge Purposes, *GEP. 7:184-201*.
6. Bloetscher, F. 2019. Using predictive Bayesian Monte Carlo- Markov Chain methods to provide a probabilistic solution for the Drake equation. *Acta Astronautica*, Volume 155, p. 118-130
7. Bloetscher, F. 2018. Risk and Economic Development in the Provision of Public Infrastructure, *Journal of Environmental Protection*, Vol.09 No.09(2018), Article ID:86955,18 pages. 10.4236/jep.2018.99061.
8. Bloetscher F., Meeroff, D.E., Roblyer, J. and Prymas, A. 2018. Algal Control in Warm Weather Pond Using EMOH Device, *Journal of Environmental Protection*, Vol.09 No.08(2018), Article ID:86316,13 pages 10.4236/jep.2018.98055
9. Bloetscher, F., Wander, L., Smith, G. and Dogon, N. 2017. Public Infrastructure Asset Assessment with Limited Data. *Open Journal of Civil Engineering*, Vol.07 No.03(2017), Article ID:79326,20 pages, 10.4236/ojce.2017.73032
10. Bloetscher, F. and Wood, M. 2016. Assessing the Impacts of Sea Level Rise Using Existing Data, *Journal of Geoscience and Environment Protection*, Vol.04, No.09(2016), Article ID:71043,25 pages 10.4236/gep.2016.49012.
11. Bloetscher, F.; Colin Polsky, William Schnabel, Billy Connor. 2016. Assessing Climate Vulnerability in Disparate Places—Alaska and South Florida. *Climate Change*, 2016, 2(8), 526-550
12. Bloetscher, F. and Robert J. Eustice, III, 2016 Do Per Capita Water Use Regulations Penalize Growing Urban Economies, *Current Urban Studies*, 4, 376-391.
13. Bloetscher, Frederick; Polsky, C.; Bolter, K.; Mitsova, D.; Pablicke Garces, K.; King, R.; Cosio Carballo, I.; and Hamilton, K. 2016, Assessing Potential Impacts of Sea Level Rise on Public Health and Vulnerable Populations in Southeast Florida and Providing a Framework to Improve Outcomes, *Sustainability*, 8, 315; doi:10.3390/su8040315.
14. Bloetscher, F. and Romah, T., 2015 Tools For Assessing Sea Level Rise Vulnerability, *Journal of Water and Climate Change* Vol 6 No 2 pp 181–190 © IWA Publishing 2015 doi:10.2166/wcc.2014.045.
15. Englehardt, J.D.; Uu, T.; Bloetscher, F.; Deng, Y.; Pisani, P.; Eilert, S.; Elmir, S.; Guo, T.; Jacangelo, J.; LeChevallier, M.; Leverenz, H.; Mancha, E.; Plater-Zyberk, E.; Sheikh, B.; Steinle-Darling, and Tschobanoglous, G. 2015, Net-Zero Water Management: Achieving Energy-Positive Municipal Water Supply, *Environmental Science - Water Research & Technology*, Published By The Royal Society of Chemistry (accepted 2016).
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1. F. Bloetscher, Meeroff, D.E.; Long, S.C.: and Plummer, J., Developing A Predictive Bayesian Dose-Response Relationship Using *Cryptosporidium Parvum*, *Risk Analysis*

Total Conference Papers and Articles:

300+

#### Training Developed

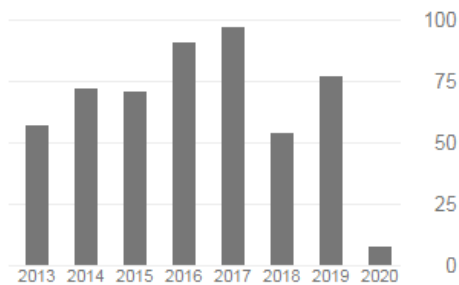
1. Management and Supervision Classes 1-11 (complete 9/1/2012), AWWA, Denver CO.
2. Local Officials Training Modules 1-3 (12 hrs - completion 1/15/08), AWWA, Denver, CO.

3. Water Treatment Plant Operators Levels 1-3 (60 hrs each) (completion 12/31/10), AWWA, Denver, CO.
4. Laws and Ethics, Florida Section AWWA, 2002.

## DATA RELATED TO RESEARCH CITATIONS

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