



GARY F. GOFORTH, P.E., Ph.D.

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SUMMARY Gary Goforth, P.E., Ph.D. has more than 25 years of experience in water resources engineering, encompassing strategic planning, design, permitting, construction, operation and program management. For the last 17 years, his focus has been on large-scale environmental restoration programs in the Kissimmee-Okeechobee-Everglades ecosystem. He was the Chief Consulting Engineer during the design, construction and operation of the \$700 million Everglades Construction Project, containing over 41,000 acres of constructed wetlands. He is experienced in water quality treatment design and evaluation, engineering design and peer review, systems ecology, statistical hydrology, hydrologic and hydrodynamic modeling, environmental permit acquisition and administration, and public education.

PROFESSIONAL EXPERIENCE

Presently President and Principal Engineer, Gary Goforth, Inc.

1/97-12/2004 CHIEF CONSULTING ENGINEER, South Florida Water Management District (SFWMD). Responsible for strategic planning, design review, development of operational plans, and program management of Everglades restoration projects. Provided factual and expert witness testimony in State and Federal courts.

4/94-12/96 DIRECTOR, Everglades Program Management Division, Ecosystem Restoration Department, SFWMD. Developed and implemented a management system for over 50 projects comprising the Everglades Program, estimated value of approximately \$800 million. Responsible for state and federal coordination of Everglades Program implementation, including acquisition and administration of environmental permits.

12/88 - 4/94 DIRECTOR, Project Management Division, Construction Management Department, South Florida Water Management District. Responsible for coordinating the planning, engineering design, permitting and construction of capital facilities.

8/86 - 12/88 SR. WATER RESOURCES ENGINEER, Resource Operations Dept., South Florida Water Management District. Developed a functional prototype of a decision support system to aid in the operation of the agency's 250 major water control facilities.

12/83 - 7/86 RESEARCH ENGINEER, Dept. of Environmental Engineering Sciences, University of Florida. Evaluated the technical feasibility of using a large-scale centrifuge to investigate the movement of hazardous waste through soil. Appointment included



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assignment at the U.S. Army Engineer Waterways Experiment Station; provided engineering support in the design of dredged material containment areas.

- 6/81 - 11/83 **WATER RESOURCES ENGINEER**, Espey, Huston and Assoc., Inc., Austin, Texas. Participated in numerous water resources projects, including hydrologic modeling in support of stormwater management systems for lignite mines, numerous water quality studies and hydrodynamic modeling of thermal discharges on estuaries.
- 1/80 - 5/81 **GRADUATE RESEARCH ASSISTANT**, Dept. of Environmental Engineering Sciences, University of Florida. Conducted field sampling and analyzed the impacts of thermal discharges from a nuclear power plant on marsh productivity.
- 2/77 - 12/79 **RESEARCH ASSISTANT**, Dept. of Environmental Engineering Sciences, University of Florida. Conducted field sampling to determine the nutrient dynamics in a freshwater marsh receiving secondary waste effluent.

LEGAL TESTIMONY

- 1995 – 2006 Federal court, qualified as an expert in environmental engineering, water quality treatment and constructed wetlands
- 1996 State land condemnation hearing; qualified as fact witness in environmental permitting
- 1997 State of Florida administrative hearing; qualified as an expert in environmental engineering, water quality treatment and constructed wetlands
- 2003 State of Florida; factual testimony to the Environmental Regulation Commission during hearings to develop a Phosphorus Water Quality Standard for the Everglades

EDUCATION

- Ph.D. May 1986, Environmental Engineering Sciences, University of Florida, Gainesville, Florida; Dissertation: "Technical Feasibility of Centrifugal Techniques for Evaluation of Hazardous Waste Migration." Course work focused on soil physics, surfactant chemistry, groundwater hydrology and physical and computer modeling.
- M.E. June 1981, Environmental Engineering Sciences, University of Florida, Gainesville, Florida. Thesis: "Long-Term Performance of Stormwater Detention Facilities: A Comparison of Design Methodologies." Course work focused on applied and statistical hydrology, surface water hydraulics, operations research, and systems ecology.
- B.S.E. December 1979, Environmental Engineering Sciences, University of Florida, Gainesville, Florida. Course work focused on comprehensive environmental engineering curriculum.



PROFESSIONAL REGISTRATION

Registered Professional Engineer - Florida, No. 35525

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers
Society of Wetland Scientists

PUBLICATIONS – Proceedings, Peer-reviewed Reports and Refereed Journal Articles

Goforth, G., J. Heaney and W. Huber, 1981, "A Comparison of Design Methodologies for Stormwater Detention Facilities," Proceedings ASCE National Convention, St. Louis, Missouri.

Goforth, G., 1983, "An Advancement in Hydraulic Modeling of Porous Pavement Facilities," in Proceedings of Conference and Water Quality Model User Group Meeting, January, 1983.

Goforth, G., J. Heaney and W. Huber, 1983, "Comparison of Basin Performance Modeling Techniques," ASCE, Journal of Environmental Engineering, Vol. 109, No. 5, October 1983, pp. 1082 - 1098.

Goforth, G., 1984, "Evapoconsolidation in Fine-grained Material," in Proceedings, ASCE Waterway, Port, Coastal and Ocean Division, Specialty Conference on Dredging, Clearwater, Florida.

Goforth, G. 1987, "OASIS - The South Florida Water Management Advisor," presented at the Spring 1987 Conference of the American Geophysical Union, Baltimore Md.

Goforth, G., 1987, "OASIS: Florida's water management expert system," in AI Week, Applied Artificial Intelligence Reporter, November 1, 1987.

Goforth, G., "OASIS - The South Florida Water Management Advisor," Proceedings of the First Florida Artificial Intelligence Research Symposium, May 4-6, 1988.

Series of Articles Presented at the 1988 ASCE Water Resources Planning and Management Conference, Norfolk, Va., June 2, 1988:

"An Operations Advisor for Regional Water Management", with T. MacVicar.

"Design of the OASIS Advisory System," Goforth, G. F.

"What I Thought You Said When I Asked You What You Thought," with R. E. Slyfield.

"Knowledge Representation Within OASIS," Goforth, G. F.

"The OASIS Prototype," Goforth, G. F.



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- Goforth, G. F., 1988, "Advisory System for South Florida Water Management," proceedings of the 3rd Water Resources Operations Management Workshop, Ft. Collins, Colorado, June 1988.
- Goforth, G. F., J. S. Tongue, 1989, "OASIS - The South Florida Water Management Advisor," presented by J. Tongue at the 5th International Conference on Interactive & Processing Systems for Meteorology, Oceanography and Hydrology, January 1989, Anaheim, California.
- Floris, V., G. F. Goforth, 1990, "Planning the Development of the OASIS Advisory System," proceedings 17th Annual Water Resources Planning and Management Specialty Conf., ASCE.
- Goforth, G. F., and V. Floris, 1991, "OASIS: An Intelligent Water Management System for South Florida," in *AI Applications*, Vol. 5, No. 1, 1991, pp. 47-55.
- Goforth, G., F. Townsend and D. Bloomquist, 1991, "Saturated and unsaturated flow in a centrifuge," *Proceedings of Centrifuge 1991*, A. A. Balkema, pp. 497-502.
- Goforth, G., J. B. Jackson, L. Fink, 1994, "Restoring the Everglades," *Civil Engineering*.
- Guardo, M., L. Fink, T.D. Fontaine, S. Newman, M. J. Chimney, R. Bearzotti, and G. Goforth, 1995, *Large-Scale Constructed Wetlands for Nutrient Removal from Stormwater Runoff: An Everglades Restoration Project*. *Environmental Mgmt.* Vol. 19, No. 6, pp. 879-889.
- Redfield G., Chimney M., Goforth G. and Rizzardi K., 1999, Major Findings and Preliminary Implications, in *Everglades Interim Report*.
- Goforth G., 1999, Integrated Strategy to Achieve Water Quality Goals by 2006, Chapter 12 in *Everglades Interim Report*.
- Chimney M. and Goforth G., 2000, Environmental impacts to the Everglades ecosystem: A historical perspective and restoration strategies. In: *Proceedings 7th International Conference on Wetland Systems for Water Pollution Control*, University of Florida, Gainesville, Florida, pp. 159-168.
- Goforth G., 2000, Surmounting the engineering challenges of Everglades restoration, In: *Proceedings 7th International Conference on Wetland Systems for Water Pollution Control*, University of Florida, Gainesville, Florida, pp. 697-705.
- Goforth G. and Piccone T., Baseline Data Sets for the Basin-Specific Feasibility Studies, May 2000.
- Redfield G., Chimney M., Goforth G. and Rizzardi K., 2000, Introduction to the 2000 Everglades Consolidated Report, Chapter 1 in *2000 Everglades Consolidated Report*.



- Chimney M., Nungesser M., Newman J., Pietro K., Germain G., Lynch T., Goforth G., Moustafa Z., 2000, Stormwater Treatment Areas – Status of Research and Monitoring to Optimize Effectiveness of Nutrient Removal and Annual Report on Operational Compliance, Chapter 6 in *2000 Everglades Consolidated Report*.
- Redfield G., Chimney M., Goforth G. and Rizzardi K., 2000, Major Findings and Preliminary Implications of the 2000 Everglades Consolidated Report, Chapter 15 in *2000 Everglades Consolidated Report*.
- Redfield G., Goforth G. and Rizzardi K., 2001, Introduction to the 2001 Everglades Consolidated Report, Chapter 1 in *2001 Everglades Consolidated Report*.
- Goforth G. and Piccone T., Updated Baseline Data Sets for the Basin-Specific Feasibility Studies, May 2001.
- Redfield G., Goforth G. and Rizzardi K., 2002, Introduction to the 2002 Everglades Consolidated Report, Chapter 1 in *2002 Everglades Consolidated Report*.
- Goforth G., Bechtel T., Germain G., Rumbold D., Fink L., Bearzotti R., Iricanin N., Meeker R., 2002, STA Performance and Compliance, Chapter 4A in *2002 Everglades Consolidated Report*.
- Goforth G., 2002, Achieving Long-Term Water Quality Goals, Chapter 8A in *2002 Everglades Consolidated Report*.
- Goforth, G., 2002, Foundation For Success: The Everglades Construction Project, in proceedings Watershed 2002.
- Goforth, G. and T. Piccone, 2002, Evaluation Methodology for Water Quality Improvement Strategies for the Everglades.
- Redfield G., Burns K. and Goforth G., 2003, Introduction to the 2003 Everglades Consolidated Report, Chapter 1 in *2003 Everglades Consolidated Report*.
- Goforth G., Bechtel T., Germain G., Rumbold D., Fink L., Bearzotti R., Iricanin N., Larson N., Meeker R., 2003, STA Performance and Compliance, Chapter 4A in *2003 Everglades Consolidated Report*.
- Goforth G., Piccone T., Van Horn S., Pescatore D., Mo C., 2003, Achieving Long-Term Water Quality Goals, Chapter 8A in *2003 Everglades Consolidated Report*.



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- Redfield G., Goforth G. and Burns K., 2004, Introduction to the *2004 Everglades Consolidated Report*, Chapter 1 in *2004 Everglades Consolidated Report*.
- Goforth G., Pietro K., Germain G., Iricanin N., Fink L., Rumbold D., Bearzotti R., 2004, STA Performance and Compliance, Chapter 4A in *2004 Everglades Consolidated Report*.
- Piccone T., Goforth G., Van Horn S., Pescatore D., Germain G., 2004, Achieving Long-Term Water Quality Goals, Chapter 8A in *2004 Everglades Consolidated Report*.
- Abteu W., G. Goforth, and G. Germain, 2004, Stormwater Treatment Areas: Constructed Wetlands for Phosphorus Removal in South Florida Surface Waters, Proceedings of the 2004 World Water and Environmental Resources Congress, June 27 – July 1, 2004.
- Goforth G., Cypress Trees: Demonstrating the Utility of Swamps, in *Ecological Modelling*, Volume 178, Issues 1-2, Pages 1-292 (15 October 2004); Through the MACROSCOPE: the legacy of H. T. Odum.
- Redfield G., K. Burns and G. Goforth, 2005, Introduction to the 2005 South Florida Environmental Report - Volume I, Chapter 1 in *2005 South Florida Environmental Report*.
- Payne G., K. Weaver, G. Goforth, and T. Piccone, 2005, Status of Phosphorus and Nitrogen in the Everglades Protection Area, Chapter 2C in *2005 South Florida Environmental Report*.
- Goforth G., Pietro K., M. Chimney, J. Newman, T. Bechtel, G. Germain, and N. Iricanin, 2005, STA Performance, Compliance and Optimization, Chapter 4 in *2005 South Florida Env. Report*.
- Piccone T., and G. Goforth, 2005, Implementation of the Long-Term Plan for Achieving Water Quality Goals in the Everglades Protection Area, Chapter 8 in *South Florida Environmental Report*.
- Chimney M. and Goforth G. 2006. History and Description of the Everglades Nutrient Removal Project, a Subtropical Constructed Wetland in South Florida (USA), *Ecological Engineering* (2006) 268-278, Elsevier Press.



TECHNICAL REPORTS

- Goforth, G., 1979 Annual Report to Florida Power Corporation: Metabolism Measurement at the Crystal River, Florida Nuclear Power Plant, Dept. of Env. Eng. Sci., Univ. of Florida, 3/80.
- Goforth, G., Critical Parameters in Construction and Reconstruction of Freshwater Wetlands: Hydrology, The Center for Wetlands, University of Florida, Florida, June 1980.
- Huber, W.C., Brezonik, P.L., Heaney, J.P., Cullum, M.G., Polmann, D.J. and G.F. Goforth, An Environmental Study of Hogtown Creek in Gainesville, Florida, Publication No. 59, Florida Water Resources Research Center, University of Florida, Gainesville, June 1981, 150 pp.
- Goforth, G., Long-Term Performance of Stormwater Detention Facilities: A Comparison of Design Methodologies, Pub. No. 58, Florida Water Resources Research Center, Univ. of Florida, 1981.
- Goforth, F., Preliminary Report - Field Survey of Somerville Lake, EH&A Doc. No. 81350, 1981.
- Stubblefield D., J. Cromer and G. Goforth, Assessment of Surface Water Impact, Fayette County Lignite Surface Mine, EH&A Doc. No. 81403, August 1981.
- Goforth, G., Wastewater Facility Needs, Upper Guadalupe River Basin, EH&A Doc. No. 81579, December 1981.
- Goforth, G. and D. Carlyle, Summary Report, Water Quality Studies, Nueces River Basin, EH&A Doc. No. 82034, February 1982.
- Goforth, G., Lake Corpus Christi Chloride Budget Study, EH&A Doc. No. 8160, March 1982.
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- Goforth, G., Assessment of Surface Water Impact, Powell Bend Lignite Surface Mine, EH&A Doc. No. 82282, July 1982.
- Goforth, G., Design of Data Collection Program, Longview Urban Runoff Program, EH&A Doc. No. 82115, July 1982.
- Goforth, G., Overview and Results of the Baseline Water Quality Monitoring Program for Motorola's Oak Hill Site, EH&A Doc. No. 82443, September 1982 - October 1983.



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- Goforth, G., Statistical Characterization of Rainfall, Cross Lake Watershed Study, EH&A Doc. No. 83106, March 1983.
- Goforth, G., Hydrologic Evaluation of Concrete Overflow Dam Hurst Creek MUD Dams Nos. 1 and 2, EH&A Doc. No. 83156, March 1983.
- Goforth, G., E. Diniz and J. Rauhaut, Stormwater Hydrological Characteristics of Porous and Conventional Paving Systems, EPA Grant No. R806338-01-2 with City of Austin, Texas, EH&A Doc. No. 82336, April 1983, also EPA-600/S2-83-106, February 1984.
- Goforth, G., Thermal Simulation of the P.H. Robinson Discharge, EH&A Doc. No. 83618, Nov. 1983.
- Goforth, G., The Theory of Evapoconsolidation in Fine-grained Material Containment Areas, U.S. Army Engineer Waterways Experiment Station.
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- Goforth G., Settlement Agreement Load Reductions, June 2002
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- Abteu W., G Goforth, and G. Germain, 2004, Stormwater Treatment Areas: Constructed Wetlands for Phosphorus Removal in South Florida Surface Waters, January 2004, Technical Paper #414.
- Goforth, G. F. 2005, Summary of STA Vegetation Management Practices, prepared for the South Florida Water Management District, February 2005.
- Goforth, G., 2005, Preliminary Estimates of Loads to the Refuge After STA-1E is in Operation, May 2005.
- Nearhoof Frank, K. Weaver, G. Goforth, and S. Xue. 2005. Test for Determining Achievement of 50 ppb Phosphorus Initial TBEL For Everglades Stormwater Treatment Areas. August 2005.
- Pietro, K. and G. Goforth, 2005, C-51W Sub-basin Updated Analysis of Flow and Phosphorus Data. June 2005. Technical Publication ERA #430.



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Goforth, G., April 2005, Compilation of Florida's TMDL Program Information, for the South Florida Water Management District.

Goforth, G., August 2005, Operation Plan for the Taylor Creek/Grassy Island Stormwater Treatment Area, prepared for the South Florida Water Management District.

Goforth, G. and R. Meeker, August 2005, Vegetation Management Plan for the Taylor Creek/Grassy Island Stormwater Treatment Area, prepared for the South Florida Water Management District.

Goforth, G., August 2005, Performance Plan for the Taylor Creek/Grassy Island Stormwater Treatment Area, prepared for the South Florida Water Management District.

Goforth, G., November 2005, Operation Plan for the Nubbin Slough / New Palm Stormwater Treatment Area, prepared for the South Florida Water Management District.

Goforth, G., November 2005, Performance Plan for the Nubbin Slough / New Palm Stormwater Treatment Area, prepared for the South Florida Water Management District.

Goforth, G., January 2006, Operation Plan for the Ten Mile Creek Water Preserve Area, prepared for the South Florida Water Management District.

Goforth, G., January 2006, Performance Plan for the Ten Mile Creek Water Preserve Area, prepared for the South Florida Water Management District.

Goforth, G., January 2006, Interim Operation Plan Stormwater Treatment Area 1 East, prepared for the South Florida Water Management District.

Goforth, G., February 2006, Integrated Operation Plan Stormwater Treatment Areas 5 and 6, prepared for the South Florida Water Management District.

Goforth, G., February 2006, Integrated Pollution Prevention Plan Stormwater Treatment Areas 5 and 6, prepared for the South Florida Water Management District.

Goforth, G., February 2006, Updated Operation Plan Stormwater Treatment Area 2, prepared for the South Florida Water Management District.

Goforth, G., February 2006. Updated Pollution Prevention Plan Stormwater Treatment Area 2, prepared for the South Florida Water Management District.



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Goforth, G. October 2006, Preliminary Sizing Analysis of the Proposed EAASR STA - Final Draft, prepared for the South Florida Water Management District.

Goforth, G., August 2006. Conceptual-level Sizing Analysis of the Proposed EAA Storage Reservoir STA, prepared for the South Florida Water Management District.

Goforth, G., July 2006. Lake Okeechobee Regulation Schedule Study - Evaluation of the Base Condition and the Tentatively Selected Plan on the Performance of STA-3/4, prepared for the South Florida Water Management District.

Goforth, G., June 2006. Five-Year Summary Of Operations Affecting WCA-1, prepared for the South Florida Water Management District.

Goforth, G., February 2006. STA-3/4 Phosphorus Loading Performance Measure, prepared for the South Florida Water Management District.

ACADEMIC HONORS AND AWARDS

Tau Beta Pi University of Florida - 1979

Phi Kappa Phi University of Florida - 1979

Government Engineer of the Year (1998), awarded by Palm Beach Branch American Society of Civil Engineers

President's Award, presented by the Florida Association of Environmental Professionals, Treasure Coast Chapter, September 2005

Outstanding Technical Achievement 2005-2006, awarded by Palm Beach Chapter, Florida Engineering Society, April 2006