

Eric Rafael Rivera-Weaver

eweaver@mail.usf.edu

813-616-0164

EDUCATION

- Doctor's of Philosophy - Civil Engineering: Water Resources, USF, 2017.
- Master of Science - Leadership and Organization Effectiveness, USF, 2009.
 - Graduate Certificate in Building Sustainable Enterprise, 2009.
 - Graduate Certificate in Management, 2009.
- Master of Business Administration, USF, 2009.
 - Graduate Certificate in Entrepreneurship, 2007.
- Bachelor of Science - Civil Engineering, USF, 1997
- Bachelor of Science - Engineering, USF, 1988.

PROFESSIONAL CAREER

- 1999 - Pres Sole Proprietor, Tampa's local SWMM Expert.
Self-employed. Completed Stormwater Management Model (SWMM) flood studies for the preparation of permitting reports, construction plans, and expert witness testimony.
- 1984 - Pres Project Director, STARS USA Inc.
Self-employed. Founded public charitable corporation to facilitate service-learning.
Duties included inspiring members to create projects, proposals, grants, and businesses.
- 9/2019 - 4/20 VP Pre-Development Services, George F Young Engineering, St. Pete, FL.
Full-time. Specializes in comprehensive management issues and applying state-of-the-art technologies to address diverse SWMM issues. Developed and applied systems theory methodologies utilizing multiple community engagement tools.
- 1/2019 - 9/19 Engineer, Landis Evans Engineering, Tampa, FL.
Full-time. Completed the Manual on Uniform Traffic Control Devices (MUTCD) Curve Compliance data collection requiring re-surveying FDOT roadway horizontal curves. CARS (Curve Advisory Reporting Service) from RIEKER, Inc was used to provide uniform safe highway advisory signage inventory data for determining safe FDOT curve sign marking. Completed data collection efforts for 7th District, included peer QA/QC using simultaneously collected video recordings.
- 9/2016 - 5/17 Assistant to the Director, Office of Sustainability: Assistant Vice Provost Strategic Initiatives, University of South Florida. Work resulted in three annual Gold designations, establishing the Sustainability Task Force, and exploring a new campus Green Team for creating an innovation ecosystem campus wide.
- 2013 – 5/17 Research Associate, Patel College of Global Sustainability, USF, Tampa FL.
OPS Appointment. Compiled and submitted AASHE STARS Reports, Arbor Day Tree Survey, multiple videos, course projects development, grading, and student reviews.
- 1/13 - 5/13 Adjunct Instructor, Honors College USF, (26 students).
OPS Appointment to create Urban Agriculture Course. Course enabled students to support local community gardens. Responsible for the complete delivery of course, grading and maintaining communication with students.
- 8/12 - 12/12 Adjunct Instructor, College of Public Health (COPH) USF, (32 online students).
OPS Appointment for HSC 4631 Critical issues in Public Health. Responsible for the complete delivery of course, grading and maintaining communication with students.

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- 5/06 - 8/12 Editorial Assistant, Organization & Environment, USF Tampa FL.
Graduate Assistant, College of Business: Responsible for daily operation of peer-reviewed journal including contacts with authors, reviewers, editors, and publishers (Impact Factor 6.116 as of 2020).
- 9/11 - 8/12 Teaching Assistant, Health Policy Mgmt, CPH USF, Tampa FL.
Responsible for class grading, communication with students, and updating class websites.
- 9/08 - 9/11 Research Assistant, Health Policy Mgmt, CPH USF, Tampa FL.
Compiled research data for greenlight cameras, and separate motorcycle fatalities study.
- 2006 Research Assistant, College of Nursing, USF, Tampa FL.
Compiled pilot data for MSBR in Early-Stage Breast Cancer Recovery study and updated files for RO1 NCI/NIH National Cancer Institute grant application.
- 1994 - 1999 Engineer II, Hillsborough County Administration, Tampa, FL.
Completed Automation Plan 95-97 - Hillsborough County's Planning and Growth Management Department's plan was created to increase equipment budgets by over 41%. This included systems to directly transfer digital data to the County GIS, modeling and inventory systems. Technology and procedures were developed for CAD disk submittal for review and permitting construction in 1072 square mile county jurisdiction. This included staff training, first county laptop purchase, and first NT Server. Rewrote procedures for Natural Resource Regulations to support better enforcement. Hillsborough County Stormwater Management Manual was recompiled with new requirements developed from Florida State guidelines, other local cities and negotiations with engineering and builders' associations developing in the region.
- 1993 Sr Engineer, Hillsborough County Administration, Tampa, FL.
Contracted hire to reconfigure SWMM for resolving critical flooding issue. This required Board of County Commission vote for exemption to allow initial hire at above the existing professional consulting pay scales and simultaneous purchase the newest fastest computer. Developed SWMM Storm Water Management Model for Carrollwood Village Watershed Management Plan to reduce golf course flood stage requiring the installation a quarter mile of 48" RCP along Dale Mabry Highway right-of-way to match Sweetwater Creek inverts approximately 10' below grade.
- 1992 Engineer, Reynolds, Smith and Hills, Inc. Tampa, FL.
Compiled first Florida linked watershed waterbody model: Allen's Creek.
- 1991 Engineer, Dames & Moore, Inc. Tampa, FL.
Modeled Gaum Resort infrastructure & Calibrated Lake Seminole SWMM.
- 1990 Engineer, Site Engineering Group, Inc. 3502 Henderson Blvd., Tampa, FL
Developed AutoCad drafting team which moved to Dames and Moore.
- 1989 Engineer, Dyer, Riddle, Mills & Precourt, Inc. Tampa, FL
Completed stormwater engineering designs for subdivisions.
- 1988 Engineer, Delta Corporation, Tampa FL
Completed multimillion dollar redesign of the Gibsonton Phosphate Plant.

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WORKING PAPERS

- American Machine, present draft <http://www.starsusa.org/American%20Machine.pdf>
- An Analysis Framework and Scholarly Definition of Urban Agriculture, 2013
- Sustainable Neighborhood Redesign: ARC 5931: Sustainable Neighborhood Development, 2011
- Water Management Theories: Overcoming Obstacles in Watershed Leadership, 2011
- Florida's Total Maximum Daily Loads: GLY 6824: Ecohydrology, 2011
- Social Indicators in Water Policy: EVR 6216: Water Quality, Policy/Management, 2011
- Assessment Possibilities LEED 2009 EBOM Certification for Urban Transportation Research Center: CGN 6933: Green Infrastructure for Sustainable Communities, 2010
- Impending Environmental Crisis, 2008
- USF Sustainable Office Proposal, 2006
- GreenHorn Recycling Business Plan Development, 2006

PUBLICATIONS

- *Parameters sensitivities for sustainable urban infrastructure*. In Proceedings of the Institution of Civil Engineers-Municipal Engineer (Vol. 172, No. 2, pp. 73-82). Weaver, E. R., & Nachabe, M. H. (2019, June). Thomas Telford Ltd. Low-impact development (LID) is an important infrastructure method for improving urban drainage through stormwater best management practices. The parameterisation sensitivities for LID techniques are provided for the current Environmental Protection Agency (EPA) Stormwater Management Model (SWMM). This was completed with the measured LID quantity data from over a 10-year data sample that included pervious pavements and infiltration swales in the Florida Aquarium parking lots. Critical parameter sensitivities were analysed using the recently released EPA SWMM version 5.1.011.
- *Sustainable Development for People or Profit?* 2015 Suburban Sustainability (Vol. 3: Iss. 1, Article 2). As Earth's populations grow, will key planetary systems be pushed over the "tipping point" beyond Earth's carrying capacity for sustaining human life? The issues of the Planetary Boundaries are reviewed to support sustainable agriculture, while opposing multinational industrial agriculture corporations which continue to influence national environmental regulations.
- *Sustainable Development Through Urban Agriculture*. University of South Florida. Weaver, E. R. R. (2017).
- *AASHE STARS Report*. Compiled the Sustainability Tracking, Assessment & Rating System (STARS) report for the Preeminent Research University of South Florida, a large, public 4-year university with an annual budget of \$1.8 billion that is ranked 42nd in the nation for research expenditures among all public or private universities. The STARS Report required working directly with the Assistant Vice Provost for Strategic Initiatives and meeting with multiple department directors for the collection and review of data provided to expand and update the STARS sustainability report for the Tampa Campus. Work resulted in three annual Gold designations, establishing the Sustainability Task Force, and exploring a new campus Green Team for creating an innovation ecosystem.

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- *Anclote River South Prong*. Flood Plain Engineering Analysis and Site Data Report. Finished existing and proposed flooding conditions analysis report for the Anclote River, Tarpon Springs, Florida. The recompiled Stormwater Management Model (SWMM) was completed under contract with Burcaw & Associates Inc. for Hillsborough County, 2003. The Ledantec PMUD in the headwaters of these riverine systems required this.
- *Hillsborough River Central River Systems*. Proposed conditions basin study report for the three central tributary systems to the Hillsborough River were completed under contract with Ayers & Associates Inc. for Hillsborough County, 2001.
- *Alafia River - North Prong, South Prong and English Creek*. Existing conditions SWMM basin study report was completed under contract with Florida Engineering and Environmental Services Inc. for Hillsborough County, 2000.
- *Allen's Creek Watershed Management Plan*. This first Florida combined watershed-waterbody model report was established using an ArcInfo GIS database, SWMM and the Water Quality Analysis Program (WASP4) Model; completed while employed with Reynolds, Smith and Hills, Inc. for Pinellas County, 1992.
- *Gardinier Phosphate Plant*. Completed property drainage analysis and engineering design reports including the construction plans to resolve EPA Suit following 1988 phosphate plant spill in Alafia River; while employed with Delta Corporation, 1989.

REGULATIONS

- *Automation Plan 95-97*. Completed the Hillsborough County Planning & Growth Management Department's plan to increase computer equipment budget by over 41%. This included systems, written procedures and staff training to directly transfer digital data to the County GIS, modeling and inventory systems. Technology and regulatory procedures were developed for digital CAD submittals from the construction industries for permitting all new construction within the 1,266 square mile jurisdiction for the county.
- *Hillsborough County Stormwater Management Manual*. Established new construction permit requirements by compiling accepted procedures of other agencies. This included using Florida State guidelines, the publications for all the other local cities and negotiations with engineers and the Tampa Bay Builders Association developing in the region, 1997.

TEACHING ASSISTANT

- J Dorsey, IDS 6233 Concepts & Principles of Sustainability, Spring 14 (10 online & 30 inclass students).
- S Tsegaye, IDS 6234 Systems Thinking, Spring 14 (15 online & 26 inclass students).
- K Ghebremichael, IDS 6938 Water Resource Mgmt, Spring 14 (8 online & 14 inclass).
- K Ghebremichael, CGN 6933 Green Infrastructure for Sustainable Communities, Fall 13 (8 online students).
- J Wiltshire, PHC 6104 Management of Public Health Programs, Sum 2012, (40 online).
- J Barrington, PHC 6102 Principles of Health Policy and Management, Sum 2012 (214 online students).

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- A Abbott, PHC 6421 Public Health Law and Ethics, Fall 2011 (63 online students).
- BL Orban, PHC 6147 Managing Quality In Health Care, Fall 2011 (33 online students).
- BL Orban, PHC 6102 Principles of Health Policy and Management Sum 11 (32 online students), Fall 11 (140 online students), Sp 12 (83 online students).

FUNDED RESEARCH

- Pilot Study assessing the effects of MSBR in early-stage breast cancer recovery, for H. Lee Moffitt Cancer Center & Research Institute, with Cecile Lengacher, 12/31/2006 \$6,000.00. Primary responsibility was to compile data for analysis and publication.
- Effects of MSBR in Early-Stage Breast Cancer Recovery, for NCI/NIH National Cancer Institute, with Cecile Lengacher, 3/1/2006 \$303,050.00. Primary responsibilities were to rewrite procedures manual, compile data instruments and prepare all tools and publications for new patients.

AWARDS

- Reviewer's choice grant, Community Research Alliance, May 2012 \$165
- KINS Tampa Bay: Flow Funding, Rainwater Capture Greenhouse May 2012 \$300
- College of Public Health Outstanding Graduate Fellow, Spring 2008-11 \$8,500

INDEPENDENT GRANTS

STARS Service projects receiving outside funding include:

- Community Emergency Response Team, 2003 \$25,000
- Florida Office of Campus Volunteers, 1991 \$3500
- Scharai Zedek Cemetery, 1989 \$5500

PATENTS

- Rainwater Capture Greenhouse - USPTO Application No. 61/304,679
- Method for Converting Internet Messages For Pub - US Patent No. 7,421,476.
- Bicycle rack mounted to a vehicle trailer hitch sleeve - US Patent No. 6,460,745
- Continuously moving sidewalk transport system - US Patent No. 6,758,318

WEBSITES

- Proposed Doctoral Program: <http://www.starsusa.org/map.htm>
- SWMM Expert: <http://www.starsusa.org/resume/professional.htm>
- Project Director, STARS USA, Inc.: <http://www.starsusa.org/stars/>
- Mindfulness Based Stress Reduction Clinical Trials: <https://go.shr.lc/3AMeBo7>
- Editorial Assistant: <http://www.patelcenter.usf.edu/oe/journal.htm>
- Idea Weaver, Inc. S-Corp: <http://www.starsusa.org/resume/patents.html>
- Earth Charter Summits, 2004 <http://earthcharterus.org/>
- Original Achin Research Center, 1997
<http://www.starsusa.org/homestead/files/anchin/Default.htm>

VIDEOGRAPHY

- Open Summer Camps, 2019 <https://youtu.be/yDhzU0-fN5k>
- Smart Leadership Summer Camp, 2019 <https://youtu.be/U5tgcScuw4Q>
- The Flower of Life on Ebay; July 2019 <https://youtu.be/9HTTdrIQDUw>
- BE Extraordinary Event near you; June 2019 <https://youtu.be/I53BU8yQJkM>
- The Florida Interfaith Climate Actions; May 2019 <https://youtu.be/tqDsGfiGbZc>
- Clams Aquaculture in Manatee County; May 2017 <https://youtu.be/4ayJpD-wsRs>
- WEAP Model course project, Jan 31, 2017 <https://youtu.be/p-uisseOf-TQ>
- Honor Student's Flipped Course Project Site, March 29, 2016 <https://youtu.be/Qv-FR3HI5A0?t=89> Faith Church [GIFT Center Gardens](#)
- 23rd Annual Social Marketing Conference; June 2014 <http://youtu.be/Mo6J2Zx6NNc>
- USF Flood Study, SWMM Expert, 5/2014 <http://youtu.be/LMYHFfKXwgU>
- Dr. Pachauri IPCC Lecture, Patel College 4/2014 <http://youtu.be/hsztvPawiqM>
- Sustainable Service Lecture, Ernst & Young, 2014 <http://youtu.be/tLY1X1Ai-uM>
- Patel College of Global Sustainability, Energy Program; <http://youtu.be/ogzHPVXK7IQ>
- Tampa Bay and the World - World Café, 2/2014 <http://youtu.be/cwjOCcbV3vI>
- Climate Change Lecture, Mark Stewart, 1/2014 <http://youtu.be/KON7mwDDOmS>
- Craig's Happiness Day 23rd Social Marketing Conference, Aug 12, 2014 <https://youtu.be/ZV6bumRZVM4?t=47>
- Patel College of Global Sustainability, Pre-College 2013 <http://youtu.be/7AzL3Tg2Mzk>
- 22nd Annual Social Marketing Conference; 6/ 2012 <https://youtu.be/-PTStUu4Gi0>
- "KINS Tampa Bay: Flow Funding," 5/ 2012, under production
- Bike Rack Patent June 13, 2007 <https://youtu.be/-PTStUu4Gi0>
- "Mercury Lab Operations," USF, under production
- "The Glenn Boyles Home Improvement Show," David Hurd Prod's 2007
- "Albertsons Commercial," David Hurd Prod's 2007
- "Sustainability Symposium, HCC 2006," under production
- "Co-dependence to Interdependence," David Hurd Prod's & STARS '07
- "The Little Soul and the Sun," Harmony Center 2006
- "Day out of Time," Emissaries of Light, Ashland, OR 2003
- "Video Productions," Journey Class, Williams IB Middle School 2003
- "Necessity the Mother of Invention," Greco Teach-in, under production
- "ARCE Talent Search," STARS, Jones InterCable Public Access 1986
- "Dance Today," STARS, Jones InterCable Public Access 1986
- "USF NEWS," STARS, Jones InterCable Public Access 1986