

**Florida Water Resources Research Center
University of Florida, Department of Civil and Coastal
Engineering**

**Annual Technical Report
2018**

General Information

Products

Funding supported the following:

2 Ph.D. Dissertations

1 Master's Thesis

8 Refereed Journal Publications (listed below)

Bidhyananda Yadav, Kirk Hatfield. 2018. Stream network conflation with topographic DEMs, *Environmental Modelling & Software*. Volume 102, Pages 241-249. <https://doi.org/10.1016/j.envsoft.2018.01.009>.

Charles E. Schaefer, David R. Lippincott, Harald Klammler, Kirk Hatfield. 2018. Evidence of rock matrix back-diffusion and abiotic dechlorination using a field testing approach, *Journal of Contaminant Hydrology*, Volume 209, Pages 33-41. <https://doi.org/10.1016/j.jconhyd.2018.01.004>.

Connelly, E.B., Allen, C.R., Hatfield, K. et al. *Environ Syst Decis* (2017) 37: 46. <https://doi.org/10.1007/s10669-017-9634-9>

David Spelman, John J. Sansalone. 2017. Methods to model particulate matter clarification of unit operations subject to unsteady loadings. *Water Research*, Volume 115, Pages 347-359. <https://doi.org/10.1016/j.watres.2017.02.053>.

Hua Liu, John Sansalone. 2019. CFD and physical models of PM separation for urban drainage hydrodynamic unit operations. *Water Research*, Volume 154, Pages 258-266. <https://doi.org/10.1016/j.watres.2019.01.057>.

Linkov, I., Fox-Lent, C., Read, L., Allen, C. R., Arnott, J. C., Bellini, E., Coaffee, J., Florin, M., Hatfield, K., Hyde, I., Hynes, W., Jovanovic, A., Kasperson, R., Katzenberger, J., Keys, P. W., Lambert, J. H., Moss, R., Murdoch, P. S., Palma-Oliveira, J., Pulwarty, R. S., Sands, D., Thomas, E. A., Tye, M. R. and Woods, D. (2018), Tiered Approach to Resilience Assessment. *Risk Analysis*, 38: 1772-1780. doi: 0.1111/risa.12991.

Spelman David, Sansalone John J., 2018. Is the Treatment Response of Manufactured BMPs to Urban Drainage PM Loads Portable? *Journal of Environmental Engineering*. Vol 144, Issue 4. [https://doi.org/10.1061/\(ASCE\)EE.1943-7870.0001326](https://doi.org/10.1061/(ASCE)EE.1943-7870.0001326).

Spelman, David W., and John J. Sansalone. 2018. Toward Fundamental Pollutant Routing Within Stormwater Control Measures Using Computational Fluid Dynamics. *Journal of Water Management Modeling* 26:C459. doi: 10.14796/JWMM.C459. <https://www.chjournal.org/Content/Files/C459.pdf>

Information Transfer Program

During the review period, the Florida WRRC actively supported the transfer of water resources research findings and results to the scientific and technical community that addresses Florida's water resource problems. The Center provided support for preparation and presentation of 8 peer-reviewed journal articles, 2 Ph.D. Dissertations, and 1 Master's Thesis.

WRRC Website: The Center maintains a website (<http://wrrc.essie.ufl.edu/>) which is used to provide timely information regarding applied water resources research within the state of Florida. The Center website provides information regarding ongoing research supported by the WRRC, lists research reports and publications that are available, and provides links to other water-resources organizations and agencies, including the five water management districts in Florida and the USGS.

WRRC Digital Library: The Center maintains a library of technical reports that have been published as a result of past research efforts (Dating back to 1966). Several of these publications are widely used resources for water policy and applied water resources research in the state of Florida and are frequently requested by others within the United

States. As part of the WRRC information and technology transfer mission, the library was converted to digital form and is maintained free to the public through the WRRC Digital Library which is housed on the center website <http://wrrc.essie.ufl.edu/reports/>.

Student Support

4 Ph.D. Students
1 Master's Student
1 Post-Doc

Notable Achievements and Awards

UCOWR Best Dissertation Award: Dr. Nathan Reaver's dissertation, Linking Landscape Hydrologic Processes to Spring Ecosystem Dynamics was selected as the first place recipient of the 2019 UCOWR Ph.D. Dissertation Award in the category of Natural Science and Engineering. (This was the fourth time in five years that a University of Florida student supported by the Florida WRRC has won this award).

